

NATIONAL CLASSIFICATION OF OCCUPATIONS-2015

(Occupational Description)



सत्यमेव जयते

Vol II - B

Government of India

Ministry of Labour & Employment

Directorate General of Employment

www.ncs.gov.in

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FOREWORD

National Classification of Occupation (NCO) plays a very vital role in maintaining standards of occupation in the country and is regularly used in the network of employment exchanges that constitute the Public Employment Service for Classification of Occupations, job postings and job search. This classification is used in all types of censuses and sample surveys conducted in India especially in data collection, processing, analysis and presentation of survey results besides its wide range of applications in policy formulation and policy analysis. The Directorate General of Employment, Ministry of Labour & Employment, Government of India is responsible for maintaining and updating the National Classification of Occupation in India aligned with the corresponding International Standard Classification of Occupations (ISCO) of ILO. The first classification was NCO-1946 followed by NCO-1958, NCO-1968, NCO-2004 and now the current series NCO-2015. The National Classification of Occupations-2015 (NCO-2015) is aligned with International Standard Classification of Occupations-2008 (ISCO-2008).

2. NCO is a classification of occupations which describes and assigns codes to the various occupations in the country and aligns it with the ISCO. These codes are reviewed and updated periodically to reflect developments in the labour market, particularly with the emergence of new occupations, as well as to align with changes in the international standard. These codes also help in promoting international comparability of statistical data relating to occupations. These occupational standards follow a scientific and hierarchical approach having major, minor and unit groups of classification which has evolved over the years to capture the structural changes in the employment market and current work practices and work environment.

3. The NCO-2015 is a compendium for occupational information available in the Indian economy. The document gives an insight into the occupational framework, nature of duties involved and the level of skill requirement to perform the activities in a real time work situation. The users of NCO may make use of the information for vocational guidance, career counselling and various surveys and studies undertaken by user agencies. The NCO-2015 has also been mapped with the National Industrial Classification (NIC) and Qualification Packs-National Occupational Standards (QP-NOS) to cater to the structural changes in the labour market. Furthermore, NCO-2015 framework is dynamic enough to capture and reflect the newly emerging occupations in the industry.

4. The current volume of NCO details out the job description of 3600 civilian occupations covering 52 sectors, as compared to the earlier series of NCO i.e. NCO-2004, which contained the job descriptions for 2945 occupations. The NCO-2015 has 8 digit coding structure which was mapped and aligned to ISCO-2008 with the addition of 2 digits. There is one to one correspondence between ISCO-2008 and the NCO-2015 with the first digit representing the Division (Major Group), second digit representing Sub-Division (Sub-Major Group), third digit representing the Group (Minor Group) and the fourth digit representing the Family (Unit Group), a decimal is introduced after the first four digits in order to create a distinction between the Families and individual Occupations. The NCO-2015 is in two Volumes viz. Vol I & II (A& B) where Vol I gives the abstract of Occupations along with their concordance to the earlier NCO-2004. Vol II gives the detailed descriptions of the occupations.

5. The Ministry is implementing the National Career Service (NCS) Project as a Mission Mode Project for modernising and transforming the network of employment exchanges and Model Career Centres are being set up in collaboration with States. The NCS Portal is operational at www.ncs.gov.in and aims to link job seekers with employment opportunities along with rich career content. The NCO Codes are integrally enmeshed in the NCS initiative and facilitates efficient job matching. The NCO Codes may be used by varied stakeholders in making information in the employment market more transparent and objective. Soft copies of the publication is available on the NCS portal.

6. The NCO-2015 series has been evolved along with career content to contribute to the knowledge repository of career options. More details on the classification, as well as the principles, scope and structure of the classification are available on the National Career Service (www.ncs.gov.in) platform. This knowledge repository provides career related information for use by career counsellors and job aspirants across the country and aims at supporting policy makers, students, job seekers, persons returning to the labour force, investors and employers in making better labour market decisions.

7. I am confident that the publication will prove useful in classifying occupations for official work, survey and research work, international comparisons on the demand and supply of workforce and many more such areas. I place on record my appreciation for all the stakeholders who have contributed their valuable inputs in the publication. I also take this opportunity to extend my thanks to the members of the Expert Group on the career content who have examined and vetted the contents of this publication/documents. I also extend my thanks to the officers of the Directorate lead by Mr. Pravin Srivastava, Deputy Director General (Employment) for timely coordination with all the stakeholders involved in this initiative.



(P.P. Mitra)

**Principal Labour & Employment Advisor
and Director General Employment**



शंकर अग्रवाल, आई०ए०एस०
भारत सरकार के सचिव
SHANKAR AGGARWAL, I.A.S.
Secretary to Govt. of India

MINISTRY OF LABOUR & EMPLOYMENT
SHRAM SHAKTI BHAVAN
NEW DELHI - 110001

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नई दिल्ली-110001
Tele : 91-11-23 71 02 65
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D.O. No. DGE-11/01/2016-VG/OI

Dated: 17/5/2016

Subject: Release of the National Classification of Occupation (NCO), 2015 series.

Dear Secretary,

The Directorate General of Employment (DGE) is responsible for revising and maintaining the National Classification of Occupations (NCO) on the lines of International Standard Classification of Occupations (ISCO) of the ILO. The codes are used for classification of occupations by the employment exchanges and census/survey organisations of the Central and State government. These codes are revised from time to time to capture the changes in occupational patterns and structural changes in the economy. The codes also help in promoting International comparability of statistical data relating to occupations. The first set of occupation standards (ISCO) was brought out by the International Labour Organisation (ILO) in 1958 and revised from time to time, the latest being the 2008 series. The corresponding series in the Indian National Classification of Occupation (NCO) were 1958, 1967 and 2004. These occupational standards follow a scientific and hierarchical approach having major, minor and unit groups of classification which has evolved over the years to capture the structural changes in the employment market. The NCO codes are extensively used by the employment exchanges and other data/survey collection agencies like the Ministry of Statistics & PI (NSSO, CSO), Census Commissioner & RGI, NITI Aayog, IAMR, State Governments, Academic Institutions etc.

2. The current national series (NCO-2004) was based on the ISCO-1988 series and required updation to capture information on the new occupations that have emerged, especially on account of liberalisation and globalisation. In the meanwhile, the Ministry began implementing the National Career Service as a Mission Mode Project for modernising and transforming the network of employment exchanges and 100 Model Career Centres are being set up in collaboration with States. The NCS Portal is operational at www.ncs.gov.in and aims to link job seekers with employment opportunities along with rich career content.

The NCO Codes are integrally enmeshed in the NCS initiative and facilitates efficient job matching. The NCO - 2015 code is in 2 volumes, the first giving the abstract occupations along with their concordance to the earlier NCO-2004 series and the second volume giving the detailed occupational description. A hard copy of the first volume is enclosed for ready reference. It is requested that the NCO Codes may be used by all stakeholders in making information in the employment market more transparent and objective. Soft copies of these publications are available on the attached CD and also on the NCS portal.

3. I request that information about the publication be circulated to the various Departments and other users and its usage may be ensured by sending various statistical returns using these revised codes. We look forward to suggestions for improvement in the NCO codes and these may kindly be sent at feedback.dget@nic.in.

With regards

Encl: As above.

Yours sincerely,



(Shankar Aggarwal)

To,

All Secretary, GOI Ministries and Departments
(As per list attached)



सत्यमेव जयते

शंकर अग्रवाल, आई०ए०एस०
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With regards

Encl: As above.

Yours sincerely,


27/4
(Shankar Aggarwal)

To,

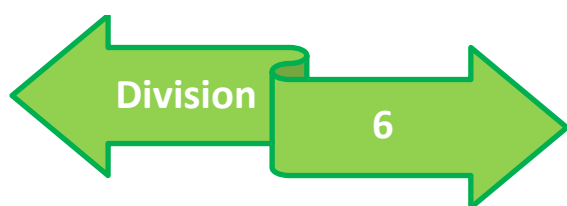
All Secretary, GOI Ministries and Departments
(As per list attached)

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Skilled Agricultural, Forestry and Fishery Workers

Skilled agricultural, forestry and fishery workers grow and harvest field or tree and shrub crops, gather wild fruits and plants, breed, tend or hunt animals, produce a variety of animal husbandry products, cultivate, conserve and exploit forests, breed or catch fish and cultivate or gather other forms of aquatic life in order to provide food, shelter and income for themselves and their households.

Tasks performed by skilled agricultural, forestry and fishery workers usually include: preparing the soil; sowing, planting, spraying, fertilising and harvesting field crops; growing fruit and other tree and shrub crops; growing garden vegetables and horticultural products; gathering wild fruits and plants; breeding, raising, tending or hunting animals mainly to obtain meat, milk, hair, fur, skin, sericulture, apiarian or other products; cultivating, conserving and exploiting forests; breeding or catching fish; cultivating or gathering other forms of aquatic life; storing and carrying out some basic processing of their produce; selling their products to purchasers, marketing organizations or at markets. Supervision of other workers may be included.

Occupations in this Division are classified into the following Sub Divisions:

61	Market Oriented Skilled Agricultural Workers
62	Market Oriented Skilled Forestry, Fishery and Hunting Workers
63	Subsistence Farmers, Fishers, Hunters and Gatherers

Sub Division 61 Market Oriented Skilled Agricultural Workers

Market-oriented skilled agricultural workers plan, organize and perform farming operations to grow and harvest field or tree and shrub crops and produce a variety of animals and animal products for sale or delivery on a regular basis to wholesale buyers, and marketing organizations or at markets

Tasks performed by workers in this sub-major group usually include: preparing the soil; sowing, planting, spraying, fertilising and harvesting field crops; growing fruit and other tree and shrub crops; growing garden vegetables and horticultural products; raising, breeding and tending animals mainly to obtain meat, milk, hair, fur, skin, sericulture, apiarian or other products; storing and carrying out some processing of t produce; selling their products to purchasers, marketing organizations or at markets. Supervision of other workers may be included.

Occupations in this Sub Division are classified into the following Groups:

611	Market Gardeners and Crop Growers
612	Animal Producers
613	Mixed Crop and Animal Workers

Group 611 Market Gardeners and Crop Growers

Market gardeners and crop growers plan, organize and perform operations to grow and harvest field crops, to grow fruit and other tree and shrub crops, to grow garden vegetables and medicinal and other plants, and to produce horticultural and horticultural nurseries products, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

Occupations in this Group are classified into the following Families:

6111	Field Crop and Vegetable Growers
6112	Tree and Shrub Crop Growers
6113	Gardeners, Horticultural and Nursery Growers
6114	Mixed Crop Growers
6115	Medicinal and Aromatic Plant Cultivators
6116	Agriculture Information Management

Family 6111 Field Crop and Vegetable Growers

Field crop and vegetable growers plan, organize and perform farming operations to grow and harvest various types of field crop such as wheat and other cereals, rice, beetroot, sugar-cane, ground-nuts, tobacco, reed or other field crops and potatoes, cabbages or other field vegetables, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

6111.0100 Cultivator, General

Cultivators, General; Farmer, General; grows crops, vegetables, fruits, etc. depending upon soil, irrigation facilities, market, etc., and sells produce. Determines crops to be grown depending on nature of soil, climate, irrigation and marketing facilities. Selects and purchases good seed, fertiliser, implements and other items of farm equipment including machinery. Clears field of stones, grass, shrubs, trees etc., using hand tools. Prepares plots by raising 'bund' (earthwork) around them for retention of water. Tills land using plough or tractor and breads loads. Sows seeds and levels earth. Makes channels connecting land to source of water for irrigation. Conducts weeding and hoeing to conserve moisture. Prepares manure by collecting and storing farmyard refuse into ditch and covering it with earth. Sprays insecticides, evolves measures to protect crops from destruction by plant diseases and wild animals and nurses growing crops by picking wild growth. Harvests matured crops using sickle etc. Collects harvested crop into bundles and carries it to the threshing ground when completely dried by sun. Threshes harvested crop by treading bullocks or machine. Separates grain from straw by winnowing. Bags corn, bundles straw and stores corn in godown. Sells produce in market. Hires labourers when necessary and supervises their work. Maintains equipment, building, fences etc. in good order. May operate tractor, winnowing, threshing and other machines. May breed animals. May do share cropping or take land on lease for cultivation.

ISCO 08 Unit Group Details:

Code 6111

Title Field Crop and Vegetable Growers

6111.0101**Paddy Farmer**

Paddy Farmer cultivates paddy as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic conditions to achieve the yields as per the genetic potential of a given variety and sell the produce in the market.

Qualification Pack Details:

QP NOS Reference	AGR/Q0101
QP NOS Name	Paddy Farmer
NSQF Level	4

ISCO 08 Unit Group Details:

Code	6111
Title	Field Crop and Vegetable Growers

6111.0200**Cultivator, Crop**

Cultivator, Crop; Farmer, Crop grows field crops of wheat, paddy, cotton, sugar cane etc., according to type of land and irrigation facilities available. Determines type of crop to be grown according to nature of soil, climatic conditions, irrigation and marketing facilities in that area. Selects and purchases seeds, fertilises and other items of farm equipment including machinery. Clears land of grass, stones etc. using spades and other tools. Divides farm into easy portions (fields) and raises boundary round them for retention of water. Ploughs land or breaks it by means of tractor or other implements to soften earth and increase fertility. Connects land with source of water by digging channels for irrigation as required. Sows by broadcasting seeds in field and levelling up with wooden plough. Conducts weeding and hoeing to conserve moisture. Fences farm using barbed wire or thorny

bushes to prevent destruction of crops by animals and trespassing. Sprays insecticides and evolves measures to protect crop from plant diseases, insects and pests. Nurses growing crops by careful watch and harvests matured crops using sickle or other harvesting implements or machines. Collects and preserves seeds. Collects harvested crop into bundles and removes to threshing floors. Dries harvested crop in sun. Threshes crop and winnows to separate grain from chaff. Bags and transports yield by carts for storage and sale in market. Hires labourers if required and supervises their work. Prepares manure by collecting and storing cow dung into ditch. Keeps equipment, building, fences etc. in good order. May operate tractor, winnowing, threshing and other machines, May breed animals.

ISCO 08 Unit Group Details:

Code	6111
Title	Field Crop and Vegetable Growers

6111.0201**Wheat Cultivator**

Wheat Cultivator cultivates wheat as per the package of practices recommended for a particular agro climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference	AGR/Q0102
QP NOS Name	Wheat Cultivator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	6111
Title	Field Crop and Vegetable Growers

6111.0301**Maize Cultivator**

Maize Cultivator undertakes the cultivation of maize crop at the farm level. The individual is also responsible for harvesting the maize crop. The maize cultivator needs to adapt recommended practices for a particular agro climate zone, type of soil, rainfall pattern and climatic conditions to achieve the best possible yield

Qualification Pack Details:

QP NOS Reference AGR/Q0103
 QP NOS Name Maize Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.0401**Pulses Cultivator**

Pulses Cultivator undertakes the cultivation of pulses at the farm level. The individual is also responsible for harvesting the pulses. The pulses cultivator needs to adapt recommended practices for a particular agro climate zone, type of soil, rainfall pattern and climatic conditions to achieve the best possible yield

Qualification Pack Details:

QP NOS Reference AGR/Q0104
 QP NOS Name Pulses Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.0501**Soya bean Cultivator**

Soya bean Cultivator undertakes the cultivation of oilseeds at the farm level. The individual is also responsible for harvesting the soya bean. The Soya bean Cultivator needs to adapt recommended practices for a particular agronomic climate zone, type of soil, rainfall pattern and climatic conditions to achieve the best possible yield

Qualification Pack Details:

QP NOS Reference AGR/Q0201
 QP NOS Name Soya bean
 Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.0601**Cotton Cultivator**

Cotton Cultivator undertakes the cultivation of cotton crop at the farm level. The individual is also responsible for harvesting the cotton crop. The Cotton Cultivator needs to adapt recommended practices for a particular agro climate zone, type of soil, rainfall pattern and climatic conditions to achieve the best possible yield.

Qualification Pack Details:

QP NOS Reference AGR/Q0202
 QP NOS Name Cotton Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.0701**Sugarcane Cultivator**

Sugarcane Cultivator undertakes the cultivation of sugarcane crop at the farm level. The individual is also responsible for harvesting the sugarcane crop. The Sugarcane Cultivator needs to adapt recommended practices for a particular agro climatic zone, type of soil, rainfall pattern and climatic conditions to achieve the best possible yield.

Qualification Pack Details:

QP NOS Reference	AGR/Q0203
QP NOS Name	Sugarcane Cultivator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	6111
Title	Field Crop and Vegetable Growers

6111.0800**Cultivator, Fruit**

Cultivator, Fruit: Farmer, Fruit grows varieties of nuts and fruits depending on type of soil, climate, irrigational and transport facilities. Determines type of nuts or fruits to be grown based on nature of soil, climatic conditions and irrigational facilities. Selects and purchases seeds, seedlings, cutting, etc. fertilizer and agricultural equipment required for cultivation. Prepares land for planting by ploughing, manuring, levelling, etc. Plants seedlings and cuttings or sow seeds and irrigates fields. Arranges regular supply of water by digging channels to source of water. Prepares manure for use in cultivation by storing farm yard refuse to get converted into usable manure. Weeds and hoes grass and prunes branches of fruit plants by hand tools to facilitate better growth and yield. Sprays insecticide

and evolves measures to protect fruits from wild animals, etc. Checks maturity of fruits and plucks ripe fruits by hand at appropriate time. Develops different varieties of trees by grafting, budding, etc. Transports plants and fruits by carts or automobile and sells them. Hires labourers when needed and supervises their work. Keeps fences, building and agricultural tools and implements in good condition. May prepare seedbeds and raise seedlings for own use and for sale. May specialize in cultivating any particular type of fruit. May arrange preservation of fruits in cold storage. May specialize in grafting or budding.

ISCO 08 Unit Group Details:

Code	6112
Title	Tree and Shrub Crop Growers

6111.0851**Coconut Grower**

Coconut Grower cultivates coconut as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic conditions to achieve the coconut yields as per the genetic potential of a given variety and sell the products as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference	AGR/Q0503
QP NOS Name	Coconut Grower
NSQF Level	4

ISCO 08 Unit Group Details:

Code	6112
Title	Tree and Shrub Crop Growers

6111.0852**Friends of Coconut Tree**

Friends of Coconut Tree has to climb coconut palms with the help of a climbing machine. He has to identify tender/mature nuts, harvest it and handle them with care and also clean the crown of the coconut palms. He should be able to identify the types of pests and diseases of coconut and apprise and help farmers to adopt Integrated pests and disease management practices. He will look into various aspects of coconut crop management and should be able to apprise farmers regarding needed improvement.

Qualification Pack Details:

QP NOS Reference AGR/Q0504
 QP NOS Name Friends of Coconut
 Tree
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Growers

6111.0901

Banana Farmer

Banana Farmer cultivates banana as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0201
 QP NOS Name Banana Farmer
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Growers

6111.1001

Mango Grower

Mango Grower cultivates mangoes as per the recommended practices for a given agro economic zone and achieve the expected yield. He is also responsible for hygienic harvest and post-harvest of the mango crop and ensuring sale of the same.

Qualification Pack Details:

QP NOS Reference AGR/Q0402
 QP NOS Name Mango Grower
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Growers

6111.1101

Citrus Fruit Grower

Citrus Fruit Grower cultivates citrus fruit as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0403
 QP NOS Name Citrus Fruit Grower
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Growers

6111.1200

Viniculturist

Viniculturist; Grape Cultivator cultivates grapes for commercial use. Determines varieties of grapes to be grown, according to soil, weather and market conditions. Selects and purchases vine stock, fertilizer and farm machinery. Hires workers to prepare soil, layout new plantings and train young stock. Operates farm machinery and directs workers to apply fertilizer and pesticides to crop. Decides when and how to bud, graft, prune, cultivate, and harvest crop. Arranges with buyers for sale of crop.

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Growers

6111.1300

Cultivator, Vegetables

Cultivator, Vegetables; Farmer, Vegetables grows variety of vegetables according to soil, season and demand. Determines vegetables to be grown taking into consideration nature of soil, irrigation facilities, climatic conditions, consumption and market values. Selects and purchases seed, fertilisers and other items of farm equipment including machines. Ploughs land adopting indigenous methods or breaks land by tractor. Divides land into small plots by raising small bunds (earthwork) around for retention of water and manure. Clears land by removing grass, stones, etc. by hand. Mixes manure with soil, sows seeds by spreading over ground and levelling or plant cutting and irrigates field as required, by digging out drains and connecting them to source of water. Fences farm if required with barbed wire or thorny bushes for protection. Spray insecticides and takes other protective measures against plant diseases and destruction by wild animals, pests etc. Hoes and weeds fields to

conserve moisture. Harvests matured vegetables by cutting with knife or pulling or digging out from ground using hand tools. Transports vegetables to market place for sale. Hires labourers on cultivation if required and supervises their work. Keeps buildings, fences and other agricultural equipment in good repairs. Collects farmyard refuse to convert it into manure. May operate tractor for preparing fields. May arrange to keep vegetables in cold storage. May specialize in growing any particular kind of vegetable like peas, potatoes, etc.

ISCO 08 Unit Group Details:

Code 6111

Title Field Crop and Vegetable Growers

6111.1401

Bulb Crop Cultivator

Bulb Crop Cultivates bulb crops as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0501

QP NOS Name Bulb Crop Cultivator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111

Title Field Crop and Vegetable Growers

6111.1501

Solanaceous Crop Cultivator

Solanaceous Crop Cultivator Cultivates solanaceous crop as per the package of practices recommended for a particular

agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0502
 QP NOS Name Solanaceous Crop
 Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.1601

Tuber Crop Cultivator

Tuber Crop Cultivator cultivates tuber crop as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0503
 QP NOS Name Tuber Crop
 Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.1801

Chillies Cultivator

Chillies Cultivator cultivates chillies as per the package of practices recommended for a particular agronomic climate zone,

type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0901
 QP NOS Name Chillies Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.1901

Coriander Cultivator

Coriander Cultivator cultivates coriander as per the package of practices recommended for a particular agronomic climate zone, type of soil, rainfall pattern and climatic condition to achieve the yield as per the genetic potential of given variety and sell the produce as per the competitive market prices without distress sale.

Qualification Pack Details:

QP NOS Reference AGR/Q0902
 QP NOS Name Coriander Cultivator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6111
 Title Field Crop and Vegetable Growers

6111.2000

Field Man, Agriculture

Field Man, Agriculture; Mate Agriculture distributes and controls labour of Agricultural or Horticulture farm and supervises ploughing, sowing, harvesting, etc. under directions of superiors. Checks

attendance of labour. Allots work to each worker. Collects seeds, fertilisers and equipment from stores and distributes them to workers. Controls workers engaged in ploughing, manuring, sowing, irrigating, gap filling, harvesting, weeding, threshing, winnowing etc. Collects from workers at close of day all implements distributed to them in morning and deposits them in stores. Reports progress of work to superior and arranges payment of wages by superior. Attends to any other job assigned by superior.

ISCO 08 Unit Group Details:

Code 6111

Title Field Crop and Vegetable Growers

6111.9900

Field Crop and Vegetable Growers, Other

Field Crop and Vegetable Growers, other include those who plan and carry out the necessary operations to grow and harvest various types of field crops such as wheat and other cereals, rice, beetroot, sugar-cane, ground-nuts, tobacco, reeds or other field crops and potatoes, cabbages or other field vegetables, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6111

Title Field Crop and Vegetable Growers

Family 6112

Tree and Shrub Crop Growers

Tree and shrub crop growers plan organize and perform farming operations to grow and harvest trees and shrubs, such as fruit and nut trees, tea and coffee

bushes, grape vines, berry-bearing bushes, cocoa trees and rubber trees and to collect sap, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

6112.0100

Pruner, Tea Gardens

Pruner, Tea Gardens prunes branches of tea plants to produce better yield. Observes plant and decides extent of pruning needed. Cuts branches using pruning knife at desired point and disposes them off by spreading at bottom of plant or by removal. May prepare land for planting tea plants. May spray insecticides. May perform low skilled manufacturing tasks in factory during heavy harvest months.

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Growers

6112.0200

Tapper, Palm Juice

Tapper, Palm Juice makes cuts in trunks of palm-trees and gathers oozed out sap (palm juice). Climbs palm-tree with pot and knife tied with his waist through belt. Cleans space at top of tree-trunk preparatory to tapping. Cuts narrow 'V' shaped opening in tree-trunk at specified spot with knife to permit flow of sap. Fastens pot on tree trunk with rope and ensures that palm-juice drops into pot. Adjusts pot, if necessary, to avoid waste. Empties full pot into bucket next day and re-fixes empty pot at adjacent place on tree trunk for further collection. Repeats process for collection of juice from other trees.

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Growers

6112.0201**Neera Technician**

Neera Technician has to manually climb coconut palms. He has to identify the inflorescence and prepare it for tapping by beating it with right force and rhythm. He performs this twice in a day for two weeks. He has to cut the tip of the inflorescence, wrap it up, apply clay and place a can for Neera to flow into it. He has to perform this activity twice a day. He has to store this Neera under suitable temperature and hygienic environment, in order to prevent any microbial contamination. He should be able to handle freshly harvested Neera, have knowledge about transportation for Neera to processing centres and primary processing of Neers and Neera based products. They also clean the crown of the coconut palms. He should be able to identify the types of pests and disease management practices. He will look into various aspects of coconut crop management and should be able to apprise farmers regarding needed improvement.

Qualification Pack Details:

QP NOS Reference AGR/Q0505

QP NOS Name Neera Technician

NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Growers

6112.0300**Tapper, Rubber**

Tapper, Rubber cuts channel grooves on trunk of rubber trees at prescribed angle on specified area and gathers excluded

latex. Fastens spout and cup below lowest end of cut to collect oozed out latex. Adds preservatives or anticoagulants into cup where specified. Repeats process on other trees under his charge and empties cups when full or when oozing stops, into bucket. Scraps coagulated latex from scars on trees before making fresh cutting. Ensures that cups and spouts are clean and tapping cuts are of uniform length and depth, without causing injury to tree-trunk. Repeats process on tapped trees next morning. May sharpen tapping knife and carry latex to reception station for weighing and further processing.

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Growers

6112.0400**Budder**

Budder buds field-grown rose plants with hybrid buds during rose-growing season: Crouches over rows of rose plants to reach plant rootstock. Cuts T-shaped incision on rootstock and opens incision, using budding knife. Slices hybrid bud from scion wood and inserts bud into incision. Observes tying of buds to ensure quality of tie. Repeats procedure, rapidly, throughout work period to maintain production.

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Growers

6112.0501**Tea Plantation Worker**

Tea Plantation Worker is responsible for carrying out the ground level activities in a tea plantation right from nursery preparation to harvesting and storage.

Qualification Pack Details:

QP NOS Reference AGR/Q0204
 QP NOS Name Tea Plantation
 Worker
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Grower

6112.0601**Coffee Plantation Worker**

Coffee Plantation Worker is responsible for carrying out the ground level activities in a coffee plantation right from nursery preparation to harvesting and storage.

Qualification Pack Details:

QP NOS Reference AGR/Q0203
 QP NOS Name Coffee Plantation
 Worker
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Grower

6112.0701**Bamboo Grower**

Bamboo Grower is responsible for cultivating bamboo as per the recommended practices for a given agro economic zone and achieve the expected yield. He is also responsible for hygienic harvest and post-harvest of the bamboo and ensuring sale of the same.

Qualification Pack Details:

QP NOS Reference AGR/Q1101
 QP NOS Name Bamboo Grower
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Grower

6112.0801**Rubber Nursery Worker-Budder**

Rubber Nursery Worker-Budder carries out all the labour oriented nursery activities specialized in bud grafting work. He is responsible for the timely completion of bud grafting and all seasonal activities assigned to him facilitating smooth running of the nursery and production of quality planting materials as envisaged by the organization

Qualification Pack Details:

QP NOS Reference RSC/Q0935
 QP NOS Name Rubber Nursery
 Worker-Budder
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Grower

6112.0802**Rubber Nursery Worker-General**

Rubber Nursery Worker carries out all the labour oriented nursery activities. He is responsible for the timely completion of all seasonal activities facilitating smooth running of the nursery and production of quality planting materials as envisaged by the organization.

Qualification Pack Details:

QP NOS Reference RSC/Q0936
 QP NOS Name Rubber Nursery
 Worker-General
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6112
 Title Tree and Shrub Crop Grower

6112.9900

Tree and Shrub Crop Growers, Other

Tree and Shrub Crop Growers, other include those who plan and carry out the necessary operations to grow and harvest trees and shrubs not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6112

Title Tree and Shrub Crop Grower

Family 6113

Gardeners, Horticultural and Nursery Growers

Gardeners, horticultural and nursery growers plan organize and perform operations to cultivate and maintain trees, shrubs, flowers and other plants in parks and private gardens, and to produce saplings, bulbs and seeds, or grow vegetables and flowers by intensive cultivation techniques, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

6113.0100

Planter

Planter manages plantation on own account to grow plantation crops such as tea, coffee, rubber, etc. Arranges to procure seed according to type of crop such as tea, coffee, rubber, etc. Determines kinds of crop to be grown. Gets land cleared and prepared for growing crops by digging, ploughing, harrowing etc. Organizes and supervises various farm operations, sowing, manuring, weeding, spraying insecticide, and protection of crop from destruction by wild animals. Arranges harvesting of

crop and supervises plucking, tapping and threshing of leaves, etc. Ensures proper maintenance and development of plantation estate. Supervises recruitment and welfare of labour employed. Maintains records relating to cost of production, sale and other accounts. May conduct research and organize demonstration. May arrange preservation of produce and partially process them prior to marketing. Is designated as Planter, Tea; Planter, Coffee; Planter, Cinchona; Planter, Cocoa; Planter, Rubber according to type of crop grown.

ISCO 08 Unit Group Details:

Code 6113

Title Gardeners, Horticultural and Nursery Growers

6113.0200

Nurseryman

Nurseryman; Mali, Nursery manages nursery on own account, or on behalf of employer to grow trees, plants, flowers, shrubs, creepers, seeds, bulbs etc. in open air or green houses for sale to customers. Decides kind and number of plants to be grown and method of planting, cultivating and treatment based on soil, climatic conditions, irrigation facilities etc. Selects and purchases seeds, fertilizers, insecticide. Equipment and machinery and other items. Plans preparation of beds and method of planting, depending on type of plants to be grown. Prepares bed by various processes such as breaking soil, mixing fertilizers, etc. sows seeds, plants, seedlings, cuttings or propagates plants by grafting, budding and other methods and makes water channels. Watches growth of sapling, seedlings, grafts and plants. Hoes and prunes excess growth and off-shoots of plants, dusts and sprays pesticides and takes other measures to protect plants

from pets, wild animals, etc. Observes development of plants. Develops methods of grafting and budding./ Collects and preserves seeds for sale. Hires labour if necessary and undertakes planting, weeding, pruning etc. as required. Supervises their work and trains them. Maintains buildings and equipment in good condition. Keeps records of cost and production statement. Sells seedling, seeds, bulbs etc. May specialize in landscape planting.

ISCO 08 Unit Group Details:

Code 6113

Title Gardeners, Horticultural and
Nursery Growers

6113.0301

Gardener, General

Gardener, General; Mali General grows flowers, trees, shrubs, seedlings, vegetables, etc. in public or private gardens. Prepares soil and sows seeds, plants, seedlings etc. Waters seed-beds and growing plants. Weeds and hoes garden and prunes hedges and bushes. Sprays and dusts pesticides and evolves other measures to protect plants from diseases and wild animals. Prepares soil and lays lawn. Waters mows and levels lawns. Prepares paths and ensures their proper up-keep. Collects and preserves seeds for sowing. Supervises labourers engaged for assistance. Keeps implements etc. in good working order. May maintain green house for display. May cultivate vegetables and fruit trees. May specialize in ornamental gardening. May work in nursery for improving variety of plants from seeds, cuttings, grafting or budding and be designated as MALI, NURSERY. May sell plants, buy seeds, fertilizers, insecticides, etc. May pay wages to labourers employed.

Qualification Pack Details:

QP NOS Reference AGR/Q0202

QP NOS Name Gardener

NSQF Level 4

ISCO 08 Unit Group Details:

Code 6113

Title Gardeners, Horticultural and
Nursery Growers

6113.0400

Groundsman

Grounds man; Grounds Keeper prepares and keeps up recreation and sports grounds in proper condition for various games. Grades and selects site. Supervises breaking of soil, removal of weeds and foreign matters and retains required type of grass if necessary. Plans drainage, checks final preparation of soil bed, mixes fertilizers with chemicals like sulphate of iron to improve growth and colour of turf and sows required type of grass seeds. Lays turf for preparing different types of grounds and sports fields such as hockey, tennis, cricket, football, golf, etc. Gives necessary treatment to fields according to type of ground and pitch required such as turf wicket, matting wicket, golf course etc. Dresses turf with nitro-chalk, ammonium sulphate and other chemicals at regular intervals to prevent invasion of earth worms and diseases and adopts measures against ruinous actions of rabbits, field mice etc. Top dresses turf by moving grass cutting and rolling. Investigates causes of bad lawns and takes appropriate steps to renovate neglected lawns, fields and grounds. Measures and marks playing grounds, tracks etc., with chalk line, sets up goal posts and performs related tasks. Supervises work of men engaged in upkeep of fields May prepare annual calendar to facilitate progress. May trim hedges and maintain flowerbeds and pathways.

ISCO 08 Unit Group Details:

Code 6113
 Title Gardeners, Horticultural and
 Nursery Growers

6113.0501**Green House Fitter**

Green House Fitter is responsible for the installation of greenhouse structure as per the structural layout and bill material prepared by the supplier which will meet up the exact requirement for the crops to be grown under.

Qualification Pack Details:

QP NOS Reference AGR/Q 0302
 QP NOS Name Green House Fitter
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6113
 Title Gardeners, Horticultural
 and Nursery Growers

6113.0601**Floriculturist- (Open Cultivation)**

Floriculturist- (Open Cultivation) performs the duties of a flower crop cultivator in the open field

Qualification Pack Details:

QP NOS Reference AGR/Q 0205
 QP NOS Name Floriculturist- (Open
 Cultivation)
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6113
 Title Gardeners, Horticultural and
 Nursery Growers

6113.0602**Floriculturist- (Protected Cultivation)**

Floriculturist- (Protected Cultivation) performs the duties of a flower crop cultivator in the green houses.

Qualification Pack Details:

QP NOS Reference AGR/Q 0206
 QP NOS Name Floriculturist-
 (Protected
 Cultivation)
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 6113
 Title Gardeners, Horticultural and
 Nursery Growers

6113.9900**Nursery Workers and Gardeners, Other**

Nursery Workers and Gardeners, other include all other nursery workers and gardeners engaged in growing flowers, seeds, bulbs, vegetables etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6113
 Title Gardeners, Horticultural and
 Nursery Growers

**Family 6114
 Mixed Crop Growers**

Mixed crop growers plan organize and perform farming operations to grow and harvest specific combinations of field crops, field vegetables, tree and shrub crops, and garden, horticultural and nursery products, for sale or delivery to wholesale buyers, marketing organizations or at markets.

6114.9900**Mixed Crop Growers, Other**

Mixed Crop Growers, other include those who plan and carry out the necessary operations to grow vegetables and harvest specific combinations of field crops, field vegetables, trees, shrub crops and garden, horticultural and nursery products not elsewhere classified.

ISCO 08 Unit Group Details:

Code	6114
Title	Mixed Crop Growers

Family **6115**

Medicinal and Aromatic Plant Cultivators

Medicinal and aromatic plant growers plan, organize and perform operations to cultivate plants that are used in traditional medical practices such as Unani, Ayurveda etc. and for cosmetic use.

Family **6116**

Agriculture Information Management

The agriculture information workers enhance the farmers' knowledge about crop techniques and help them to increase production by sharing the latest technical knowhow with the farmers.

6116.0101**Agriculture Extension Executive**

Agriculture Extension Executive works with R&D team to market and transfer the technology, products, knowledge and information to the farmers, acting as a bridge between the company and farmers increasing their productivity and

profitability. The person is responsible for working with Research and Development team in agriculture industries (including seed, fertilizer, pesticides, and micro irrigation industries) to satisfy the farmer needs. They understand and market the technology to be transferred to farmers by way of demonstrations and training. They also co-ordinate and motivate the farmers to adapt to modern methods for good returns.

Qualification Pack Details:

QP NOS Reference	AGR/Q7602
QP NOS Name	Agriculture Extension Executive
NSQF Level	6

ISCO 08 Unit Group Details:

Code	6114
Title	Mixed Crop Growers

6116.0102**Agriculture Extension Service Provider**

Agriculture Extension Service Provider is responsible for speedy transfer of information and technology to farmers. He reduces the time lag between generation of technology and its transfer to the farmers for increasing production, productivity and income from agriculture and allied sectors on a sustained basis. An agriculture extension service provider gives talks, guidance and actual demonstrations on latest technologies related to agriculture. He also works with other experts in agriculture to learn more or even develop new methods that could advance production.

Qualification Pack Details:

QP NOS Reference	AGR/Q7601
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QP NOS Name	Agriculture Extension Service Provider
NSQF Level	4

Occupations in this Group are classified into the following Families:

6121	Livestock and Dairy Producers
6122	Poultry Producers
6123	Apiarists and Sericulturists
6129	Animal Producers, Not Elsewhere Classified

ISCO 08 Unit Group Details:

Code	6114
Title	Mixed Crop Growers

6116.0112

Community Service Provider

Community Service Provider (CSP)/VLE is an individual selected from within a village/area to act as a touch point between the business and the customer to run the CSC. A VLE educates villagers on 26 Types OF G2C services and scores of other services related to daily lives of rural population. The VLE then sells products and services offered by the corporate and the Government through CSC.

Qualification Pack Details:

QP NOS Reference	AGR/Q7603
QP NOS Name	Community Service Provider
NSQF Level	3

ISCO 08 Unit Group Details:

Code	6114
Title	Mixed Crop Growers

Group 612 Animal Producers

Animal producers plan, organize and perform farming operations to breed and raise domesticated animals, poultry, insects and non-domesticated animals for the production of meat, dairy products, honey, skins, textiles and other products or for use as working, sporting or recreational animals, for sale or delivery to wholesale buyers, marketing organizations or at markets.

Family 6121 Livestock and Dairy Producers

Livestock and dairy producers plan, organize and perform farming operations to breed and raise domesticated animals (excluding poultry), such as cattle, sheep, pigs, goats, horses and camels, for the production of meat, milk and other dairy products, skins, and wool or for use as working, sporting or recreational animals for sale or delivery to wholesale buyers, marketing organizations or at markets.

6121.0100

Farmer, Livestock

Farmer, Livestock manages farm on own account for raising and breeding different kinds of livestock. Selects and purchases animals, arranges sheds, stables etc. to shelter animals from weather and gets enclosures put up for their safety. Determines amount of basic feed required to feed animals and stock fodder and other feeding material through purchases. Arranges grazing of livestock on available pastures and ensures by constant watch that animals do not go astray or get lost. Restrains them from drinking polluted water. Examines and treats animals for minor injuries and infection. Arranges proper medical aid in serious cases. Trains to cultivate desirable habits in animals. Selects and pairs pedigree animals for breeding. Gets animals bred by artificial

insemination if necessary. Tends animals during birth and protects and guards young animals. Performs tasks connected with milking. Markets milk, and animals for meat, breeding etc. Gets animals inoculated and vaccinated in time and adopts preventive measures in case of outbreak of epidemic. Keeps records of feed consumed, milk and other items produced and stock sold or purchased. Attends to all correspondence, accounts and administration of farm. Ensures proper cleaning of sheds and stable, flaying of skins and hides of fallen animals, disposal of carcasses etc. as necessary. May raise particular breeds of animal. May raise and exhibit show animals. May grow and cultivate feed for animals.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0201

Farmer, Dairy/Dairy

Farmer/Entrepreneur

Farmer, Dairy owns and breeds milk cattle for production of milk, butter, ghee, etc. and arranges for their marketing. Selects and buys cattle. Makes proper arrangements for housing and feeding them and gets them inoculated and vaccinated in time to prevent diseases. Buys and stores feeding supplies. Determines amount of basic feed required and prepared it by mixing oil cakes, roughages and minerals (salt and lime) in desired quantity. Gives regulated diet to animals. Arranges their grazing on available pastures. Ensures guarding of animals from wandering and being lost, eating poisonous and harmful plants, drinking polluted water and mating with stray animals. Selects and pairs animals for breeding. Tends animals during birth

and protects and guards the young animals. Arranges proper and regular cleaning of animals, sheds and surroundings. Treats animals for minor diseases and injuries and arranges proper medical aid in serious cases. Arranges cleaning and massaging of udder, milking of animals in hygienic manner by hand or machine, preserving milk, transporting milk to various dairies and customer or selecting and selling animals etc. as required. Records feed consumed and milk and other products sold. Adopts appropriate measures to quarantine animals in case of epidemic. May get milk pasteurised before sale. May grow and cultivate feed for animals. May raise and exhibit show animals. May brand animals with identifying marks. May separate cream from milk and prepare other milk products like butter, ghee and cheese.

Qualification Pack Details:

QP NOS Reference AGR/Q 0502

QP NOS Name Dairy Farmer/Entrepreneur

NSQF Level 4

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0300

Livestock Worker, General

Livestock Worker, General performs any combination of following tasks to bed, feed, water, load and unload, weigh, mark and segregate livestock awaiting slaughter in ranch, sales or slaughter yard or in transit. Drives livestock into pens, killing or loading trucks or railway waggons. Weighs animals separately or in truck lots and segregates them according to weight, age, colour, and physical condition. Tags, paints or tattoos identifying marks on livestock to signify ownership or grade of

animal. Records weights and grades for each animal processed. Scatters bedding material such as saw dust or straw in pens and maintains supply of water in watering tanks. Feeds livestock with hay, grain, or other prepared feed as required. Cleans pens, using hose, fork, shovel or rake. May apply liniment or other remedies to livestock when illness or injury is detected. May be designated according to task performed.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0400

Herdsman

Herdsman; Grazier takes cattle and other domestic animals out for grazing on own or employer's behalf. Collects animals every morning from different houses. Takes them out to available pastures for grazing in field. Keeps watch over them from being lost or strayed. Guards them from eating poisonous and harmful plants or drinking polluted water and indiscriminate mating with stray animals. Identifies animals in heat and arranges for pairing. Collects and counts them in evening and drives them back to their respective places. Ties them at fixed places or hands them over to owners. May render first aid and assist in treating minor injuries of animals. May be designated as SHEPHERD if engaged in grazing and herding sheep and goats.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0500

Livestock Workers/Other Livestock Workers

Livestock Worker cleans pens, feeding, watering and taking care of livestock. May be designated as FURB EARING ANIMAL WORKER if engaged in looking after furbearing animals.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0601

Dairy Farm Worker, General/Dairy Worker

Dairy Farm Worker, General attends to dairy farm livestock of resident and non-resident owner. Attends to herd of feeding cows and buffaloes and aiding in calving, dehorning and vaccination. Keeps, barns, stalls, containers and dairy equipment in clean and sanitary condition. Milks cows and buffaloes as required by hand or by machine. May mix and blend feed for farm livestock and keep dairy records such as feed consumed, individual milk production, gestation periods of cows and buffaloes etc. May perform other tasks as directed.

Qualification Pack Details:

QP NOS Reference AGR/Q 0501

QP NOS Name Dairy Worker

NSQF Level 2

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0700

Milker

Milker; Dairy Attendant; Gowala milks, and cleans milk cattle, collects various feeds mixes them and feeds animals before milking. Regulates timing of milking. Cleans and disinfects buckets and other containers used in milking in sun or

vacuum. Ties hind legs of animals and washes hind quarter with chlorinated water. Cleans udder with plain chlorinated water and massages them by hand. Disinfects hand by washing with chlorinated water. Adjusts buckets between own legs below udder. Presses udders alternatively with fingers to extract milk from them into bucket. Stimulates flow of milk from udder by repeated supply of feed. Repeats pressing of udders to extract maximum milk. Carries bucket containing milk to specified place of storing. Treats udder and other minor injuries by applying antiseptic powder, ointment, etc. May sell milk. May prepare ghee, butter and cream.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.0800

Milker, Machine

Milker; Machine; Milking Machine Operator tends machine to milk dairy cows and buffaloes. Guides cows and buffaloes into stanchion and cleans teats and their udder with disinfectant. Squeezes teats to collect sample of milk in strainer cup and examines sample for curd and blood. Starts milking machine and attaches cups of machine to teats of cows and buffaloes. Removes cups when required amount of milk is obtained. Dips cups of machine into disinfectant solution after each animal is milked. Empties milk receptacles and cleans and sterilizes equipment.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.1000

Stableman

Stableman, Syce grooms, feeds and looks after horses, camels, mules etc., in stables. Grooms animals by brushing, currying, washing them and trimming their manes and tails using hair and metal brushes, clippers and scissors. Waters feeds and exercises animals. Sweeps out stalls and spreads fresh straw. May treat sick or injured animal according to his knowledge or may report their condition to Veterinarian and follow his medical advice. May harness or saddle animals. May repair and recondition harness. May train animals for riding or for pulling carts, tongas, etc. May take animals out for grazing.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.1100

Elephant Keeper

Elephant Keeper tends and looks after feeding, washing and exercising of tame elephants and supervises general cleanliness of their stables. Tethers elephants to ground anchor with chains, fastened round front and hind legs. Leads elephants to watering places and scrubs their hide to remove dirt, ticks and parasites. Inspects them for sickness or injuries and reports uneasiness or ailments to Mahout or Veterinarian. Treats elephants as directed by them. Gathers fodder and feeds animals with masalas (Special food mixture). Files foot nails and sweeps refuse from stables. Straps howdah (riding arrangement) on its back and prepares elephant for ride, when desired. May polish and maintain 'howdahs' and paint forehead and trunk of elephant with attractive design on

ceremonial occasions. May act as guide and answer queries of visitors. May cut off excessive growth of tusk by sawing under guidance of Mahout. May assist in training wild elephants and tending young calves. May ride elephants in absence of Mahout.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.1200

Shearer, Sheep

Shearer, Sheep collects sheep at shearing yard. Shears wool closely from sheep, clipping carefully to avoid cutting or nicking its skin. Gathers black and white wool in separate piles. Keeps clippers sharpened. May deliver wool to storing yard.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.1300

Shearer, Animal, Other/Shearer, Other Animals

Shearer Animals cuts with scissors or clippers hair or bristles of its skin. Gathers black and white wool in horses, camels, pigs and other animals, not elsewhere classified. Ties and immobilises animal before clipping. Selects suitable clipping instrument and closely clips hair or bristles taking care not to cut or nick its skin. Maintains and sharpens tools. May sort bristles according to size and quality.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.1400

Grass Cutter

Grass Cutter cuts grass from fields and gardens with sickle or other grass cutting implements, for feeding cattle or other animals. Mixes different varieties of grass to make feed palatable to animals. Carries grass to stable or to market for sale. Keeps tools sharp. May feed grass to animals. May cut hay and other fodder into small pieces with hand or mechanically operated chopper.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

6121.9900

Dairy and Livestock Producers, Other

Dairy and Livestock Producers, other include those who plan and carry out the necessary operations to breed, raise and tend livestock to be used as working, sporting, or pet animals, as well as for meat, milk, hair, hides and other products for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6121

Title Livestock and Dairy Producers

Family 6122

Poultry Producers

Poultry producers plan, organize and perform farming operations to breed and raise chickens, turkeys, geese, ducks and other poultry to produce meat, eggs and

breeding stock for sale or delivery to wholesale buyers, marketing organizations or at markets.

6122.0101

Farmer, Poultry/Broiler Farm Supervisor

Farmer, Poultry owns and manages poultry farms to raise fowls, chicken, ducks, etc. for eggs and table use, and sells produce. Determines varieties of poultry to be raised. Selects and buys fertile eggs, incubators, feed, chicken, ducks, etc. Constructs brooder houses for chickens and pan for adult birds. Provides heating arrangements, as required by different types of stock. Gets poultry area cleaned. Treats minor disease of birds and arranges medical aid in serious cases. Gets them vaccinated at proper ages. Isolates and treats or properly disposes of failing birds and takes measures against spread of epidemic. Determines amount of basic feed required, prepares it or gets it done and feeds birds at prescribed hours. Adopts measures to avoid feed waste, water contamination, protection from wild animals and thieving. Provides them fresh water to drink, prevents them from wandering and being lost and from eating poisonous stuff or drinking polluted water. Rears young stock carefully. Hatches eggs through natural process of providing heat for specified period by stock themselves and through incubators. Keeps record of breeding. Estimates cost on feed and other items of expenditure on poultry farm and fixes selling prices for eggs of different grades and stock of different grades and stock of different ages and pedigree. Packs and prepares stock of eggs for transportation. May operate both kerosene and electrical incubators. May raise and exhibit select stock. May specialize in breeding any

particular type of poultry stock. May grow and cultivate feed.

Qualification Pack Details:

QP NOS Reference	AGR/Q4301
QP NOS Name	Broiler Farm Supervisor
NSQF Level	5

ISCO 08 Unit Group Details:

Code	6122
Title	Poultry Producers

6122.0200

Farmer, Poultry Breeding

Farmer, Poultry Breeding raises purebred chickens or other fowls. Purchases stock fowl according to egg production, size, prizes won, or other reasons. Selects and pairs birds for breeding or breeds them by artificial insemination. Arranges with buyers for sale of pedigreed eggs and pedigreed chicks.

ISCO 08 Unit Group Details:

Code	6122
Title	Poultry Producers

6122.0301

Poultry Farm Worker, General/Broiler Farm Worker

Poultry Farm Worker, General attends to poultry stock to raise hens, chickens, turkeys and other poultry for egg production and sale as meat. Feeds poultry, cleans cages, nests and brooder houses. Sprays poultry houses with disinfectants and observes poultry for indications of diseases such as fowl pox, bronchitis and coccidiosis. Places vaccines in drinking water, injects vaccines into poultry or dusts air with vaccine powder to vaccinate poultry against diseases. Maintains feed and production records.

May incubate fertile eggs. May kill and dress poultry.

Qualification Pack Details:

QP NOS Reference AGR/Q4302
 QP NOS Name Broiler Farm
 Worker
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 6122
 Title Poultry Producers

6122.0401

Hatchery Operator/Hatchery In Charge

Hatchery Operator; Hatchery Man operates incubators to hatch eggs. Sets and adjusts mechanism of incubators to maintain required degree of temperature at different stages of incubation. Marks ownership and dates of setting eggs. Sets them on tray and places it into incubator. Inserts and places nursery tray after filling hot water into water channels provided in it (nursery tray) for creating humidity. Adopts disinfection technique to avoid contamination of hatchery. Turns eggs everyday in different positions for specified period. Removes newly born chicks to Foster-mother (chamber containing two parts having one burning lamp beneath to provide required extent of heat). Keeps and maintains breeding records. May operate electrical incubator having automatic devices of controlling temperature and turning eggs. May raise select poultry and sell quality eggs. May demonstrate operations of various types of hatchery plants to develop hatching of eggs. May suggest effective measures to employer for better results.

Qualification Pack Details:

QP NOS Reference AGR/Q4401
 QP NOS Name Hatchery In Charge

NSQF Level 5

ISCO 08 Unit Group Details:

Code 6122
 Title Poultry Producers

6122.9900

Poultry Farm Workers, Other

Poultry Producers, Other include all other workers engaged in hatching eggs and poultry farming operations, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6122
 Title Poultry Producers

Family 6123

Apiarists and Sericulturists

Apiarists and sericulturists plan, organize and perform operations to breed, raise and tend insects such as honey bees, silkworms, and other species to produce honey, beeswax, silk and other products for sale or delivery to wholesale buyers, marketing organizations or at markets.

6123.0101

Bee-keeper

Bee-Keeper rears honey bees for production of honey, bee-wax, bee-venom, royal jelly, pollination of crops etc. Selects suitable place for rearing bee-colonies. Purchases complete beehive box provided with frames for forming honeycombs. Purchases and affixes foundation wax in half portion of each frame and places them in beehive boxes. Catches and induces bees into box and

transfer bees from oversubscribed beehives. Creates beehive colony consisting of queen-bee, worker-bees and drones. Inspects hives to locate formation of surplus queen-shells. Catches or destroy surplus queen-shells. Remains vigilant to catch swarming queen and bees with help of swarming net and keeps them in hives to start new colonies. Cleans hives and remove dirt. Detects and removes wax moth before it spreads into different combs. Feeds bees with sugar solution when necessary. Keeps hives on stools with their legs dipped in water bowls to prevent ants from attacking hive. Covers hives with wire nets for protection against birds. Wears hand gloves and bee-veil while at work to protect self against bee-stings. Watches flow of honey into upper chamber and frequently checks process of sealing of frames. Removes honey filled frames from upper chamber of beehive box and replaces fresh unfilled ones periodically depending on flow of honey. Brushes bees surrounding comb and removes seal of comb using knife. Places cut comb into honey extractor. Presses extractor on honey filled comb to extract honey into its chambers. May apply crude method of extracting honey from beehives located on roof or tree by keeping off bees with help of fire smoke, gaining access to hive and opening comb with knife for extracting honey.

Qualification Pack Details:

QP NOS Reference	AGR/Q4801
QP NOS Name	Bee-keeper
NSQF Level	3

ISCO 08 Unit Group Details:

Code	6123
Title	Apiarists and Sericulturists

6123.0201

Rearer, Silkworm/Sericulturist

Rearer, Silk Worm rears silk worms to raise cocoons for production of silk. Selects and purchases eggs of silk worms for hatching. Arranges equitable conditions of temperature and humidity in rearing room. Spread eggs on cards in trays and incubates them in temperature controlled room. Transfers worms from egg cards on bed of tray by gently striking them with finely cut mulberry or castor leaves. Cuts adequate supplies of selected thin, medium and coarse mulberry or castor leaves, as necessary into small pieces with knife and sprinkles them evenly over worms for feeding. Repeats process of feeding for about one month. Changes feed from thin to medium and medium to coarse leaves as worms grow. Removes un-consumed leaves from tray. Observes development of worms and periodically arranges their proper spacing in tray. Watches process of shedding or casting skin of which takes place four times in one month. Detects diseased worms and takes measures to remove and destroy them quickly. Watches development and maturity of larva, shaping into spinning cocoon round its body. Collects cocoons formed out of cross breed larva for production of silk and allows larva of pure race to develop into moth for multiplying breed Grades. May sell cocoons. May cultivate mulberry or castor plants. May keep complete record of laying and hatching of eggs. May conduct research and demonstrate experiments. May develop high breed worms. May rear tussor and muga silk worms outdoor.

Qualification Pack Details:

QP NOS Reference	AGR/Q4701
QP NOS Name	Sericulturist
NSQF Level	4

ISCO 08 Unit Group Details:

Code	6123
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Title Apiarists and Sericulturists

6123.9900

Apiarists and Sericulturists, Other

Apiarists and sericulturists, other include all other who plan and carry out the necessary operations to breed, raise and tend insects, for sale or delivery of honey, beeswax, silk cocoons, on a regular basis to wholesale buyers, marketing organizations or at markets not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6123
Title Apiarists and Sericulturists

Family 6129

Animal Producers, Not Elsewhere Classified

This unit group covers market-oriented animal producers not classified elsewhere in the group 612, Animal producers. For instance, the group includes those engaged in breeding, raising and tending non-domesticated mammals, game and other birds (except poultry), snails, snakes and other reptiles, as well as various insects and animals used for laboratory tests, for sale or delivery on a regular basis to wholesale buyers, marketing organizations, zoos and circuses, or at markets.

6129.0100

Farmer, Fur-Bearing Animals

Farmer, Fur-bearing Animal manages farm to breed and raise fur-bearing animals for their pelts. Buys or captures breeding stock. Breeds and raises animals in surroundings simulating their habitat. Feeds and waters animals and cleans their pens and yards. Kills animals in their prime

and removes their hides. Packs hides in crates and transports them for processing, treating and preservation. Arranges with buyers for sale of hides. May treat and preserve hides at farm. May breed stock animals and be designated according to type of animal breed or raised.

ISCO 08 Unit Group Details:

Code 6129
Title Animal Producers Not Elsewhere Classified

6129.0200

Mixed Animal Producers

Mixed animal producers plan and carry out the necessary operations to breed, raise and tend different types of livestock, such as cattle, sheep, pigs, goats and horses, as well as poultry, and to produce apiarian and sericultural products, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

ISCO 08 Unit Group Details:

Code 6121
Title Livestock and Dairy Producers

6129.9900

Animal Producers and Related Workers, Other

Market-Oriented Animal Producers and Related Workers, other include those which involve looking after and training of animals in animal reserves, stables, zoos, circuses, research organizations, animal homes, and similar institutions not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6129
Title Animal Producers Not Elsewhere Classified

Group 613

Mixed Crop and Animal Workers

Mixed crop and animal producers plan, organize and perform farming operations to grow and harvest field, tree and various other crops, as well as to breed, raise and tend animals and to produce a variety of animal husbandry products, for sale or delivery to wholesale buyers, marketing organizations or at markets.

Occupations in this Group are classified into the following Families:

6130 Mixed Crop and Animal Workers

Family 6130

Mixed Crop and Animal Workers

Mixed crop and animal producers plan, organize and perform farming operations to grow and harvest field, tree and various other crops, as well as to breed, raise and tend animals and to produce a variety of animal husbandry products, for sale or delivery to wholesale buyers, marketing organizations or at markets.

6130.0100

Artificial Breeding Technician

Artificial-Breeding Technician collects and packages bull semen for artificial insemination of cows: Attaches rubber collecting sheath to genital organ of tethered bull, and stimulates animal's organ to excite ejaculation. Examines semen, using microscope, to determine density and motility of gametes, and dilutes semen with prescribed diluents according to formulas. Transfers required amount of semen to container, using

titration tube, and labels it with identifying data, such as date taken, source, quality, and concentration, and records similar data on file cards. Packs container of semen in dry ice or liquid nitrogen for freezing and storage or shipment. May inseminate cows

ISCO 08 Unit Group Details:

Code 6130

Title Mixed Crop and Animal Workers

6130.0201

Seed Grower/Quality Seed Grower

Seed Grower propagates and grows horticultural-specialty products and crops, such as seeds, bulbs, rootstocks, sod, ornamental plants, and cut flowers: Plans acreage utilisation and work schedules, according to knowledge of crop culture, climate and market conditions, seed, bulb, or rootstock availability, and employable work force and machinery. Attaches farm implements, such as disk and fertiliser spreader, to tractor and drives tractor in fields to till soil and plant and cultivate crop. Inspects fields periodically to ascertain nutrient deficiencies, detect insect, disease, and pest infestations, and identify foreign-plant growth, and selects, purchases, and schedules materials, such as fertilisers and herbicides, to ensure quality control. Hires field workers; assigns their duties according to scheduled activities, such as planting, irrigating, weeding, and harvesting; and oversees their activities. Maintains personnel and production records. Arranges with customers for sale of crop. May oversee activities, such as product cleaning, grading, and packaging. May provide customer services, such as planning and building planters, walls, and patios, and planting and caring for landscape and display arrangements. May

bud or graft scion stock on plantings to alter growth characteristics. May develop new variations of species specialty to produce crops with specialized market-appeal. May cultivate out-of-season seedlings and crops, using greenhouse. May cultivate cover crop, such as hay or rye, in rotation with horticultural specialty to rejuvenate soil. May drive and operate self-propelled harvesting machine. May lubricate, adjust, and make minor repairs on farm machinery and equipment.

Qualification Pack Details:

QP NOS Reference	AGR/Q7101
QP NOS Name	Quality Seed Grower
NSQF Level	4

ISCO 08 Unit Group Details:

Code	6112
Title	Tree and Shrub Crop Growers

6130.0202

Seed Processing Worker

Seed Processing Worker cleans seeds of extraneous and undesirable materials, takes samples for testing, dries seeds to optimum moisture levels, treats, packages and stores them in appropriate manner for distribution

Qualification Pack Details:

QP NOS Reference	AGR/Q7102
QP NOS Name	Seed Processing Worker
NSQF Level	3

ISCO 08 Unit Group Details:

Code	6112
Title	Tree and Shrub Crop Grower

6130.9900

Mixed Crop and Animal Workers, Other

Market Oriented Crop and Animal Producers, other include those who plan and carry out the necessary operations to grow and harvest field, tree and various other crops, as well as to breed, raise and tend animals and to produce a variety of animal husbandry products, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets not elsewhere classified.

ISCO 08 Unit Group Details:

Code	6112
Title	Tree and Shrub Crop Grower

Sub Division 62

Market Oriented Skilled Forestry, Fishery and Hunting Workers

Market-oriented skilled forestry, fishery and hunting workers plan, organize and perform operations to cultivate, conserve and exploit natural and plantation forests, breed and raise fish, harvest and catch fish and hunt and trap animals, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

Tasks performed by workers in this sub-major groups usually include: renting or investing, equipment and machinery and purchasing supplies; planning and undertaking forestry, aquaculture, fishery and hunting operations; maintaining buildings, tanks, machinery, and other equipment; delivering or marketing products; supervising and training other workers

Occupations in this Sub Division are classified into the following Groups:

621	Forestry and Related Workers
622	Fishery Workers, Hunters and Trappers

Group 621 Forestry and Related Workers

Forestry and related workers plan, organize and perform operations to cultivate, conserve and exploit natural and plantation forests.

Occupations in this Group are classified into the following Families:

6210	Forestry and Related Workers
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Family 6210 Forestry and Related Workers

Forestry and related workers plan, organize and perform operations to cultivate, conserve and exploit natural and plantation forests.

6210.0100 Forester

Forester; Forest Range Assistant develops nurseries, raises plantations and supervises duties of Forest Guard and Forest Fire Watcher and assists Forest Ranger in development of forest and exploitation of its produce. Raises nurseries of various plants required for afforestation. Raises plantations from replanted seedlings. Arranges for weeding, marking and felling of trees within his block and issues transit and other passes. Supervises fire-fighting operations and protects forest produce

from theft and poaching. Maintains records of timber felled for sale. Enquires and reports occurrence of theft, fire, illegal cultivation, etc. to higher authorities. Supervises work of mazdoors engaged in forest work, maintains their muster roll and arranges payment of their wages. May estimate quality and volume of wood available in his section. May collect grazing fees and compensation for offences.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0200 Forest Guard

Forest Guard; Forest Beat Guard patrols allotted beat in forest area for preservation of forest and games. Supervises preparation of nursery beds, sowing of seeds, and nursing of growing plants. Patrols forests to detect fires, eliminate fire hazards and theft of forest produce. Cuts climbers with bill-hook to prevent damage to plants. Apprehends offenders of forest laws and reports to superiors. Supervises work of mazdoors engaged in forest work and maintenance of forest roads, paths and fire lines in his beat. May estimate volume of timber and grade trees according to quality. Is designated as DEPOT GUARD if engaged at sale depot.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0300 Forest Fire Watcher

Forest Fire Watcher; Reserve Watcher patrols specified forest area to detect,

prevent and control forest fires. Clears fire lines in forest to localise fire within limited areas and keeps watch for outbreak of fires. Summons local people and fights forest fire by cleaning areas, digging trenches, spraying water, sand, etc. Reports, occurrence of forest fire to Forest Guard or Forester as required. Clears trees of climbers with bill-hook and keeps paths swept of leaves and twigs. May extinguish fire by chemicals if available.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0400

Foresters and Related Workers

Foresters and Related Workers perform various miscellaneous tasks in preservation of forests extension of forest and include occupations such as those relating to collecting, preparing and storing of seeds; raising seedlings; transplanting seedlings in afforestation area; protecting trees from insects, diseases and animals; marking felled trees etc.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0500

Gatherer Lac

Gatherer, Lac; Lac Cultivator infects host-trees with lac insects and collects matured lac from them by scrapping or clipping off lac-bearing sheets. Ties brood-lac to fresh host-trees with young shoots for transferring lac infection and allows larvae to grow on trees for specified period to attain maturity. Scrapes and collects

matured lac from infected trees using knife, allowing part of lac to remain fixed, with trees for further growth of larvae. Stores collected lac in godown for further processing.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0600

Gatherer, Medicinal Herbs

Gatherer, Medicinal Herbs collects leaves, fruits, roots etc. of herbs or other plants for preparation of different kinds of medicines. Visits gardens, forests and jungles and collects samples of dried fruits, leaves, seeds and roots of medicinal plants. Cleans foreign matter from herbs by washing them with water and gets them examined by Chemists, Hakim or Vaid. Collects green herbs and dries them in sun for storage and supply.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0700

Gatherer, Firewood

Gatherer, Firewood cuts and collects wood from forests or fields for sale in market as fuel. Visits forest or fields and picks pieces of dried wood from ground and piles them in heaps. Pulls down dry and weak branches of trees using small axe, sickle or large knife. Cuts decayed branches and trunks of trees using axe and hand-saw. Digs out roots of fallen trees using shovel and axe; Ties collected wood into small faggots and carries them on head or transports them in cart to market for sale. May assist in cutting large trunks of dry trees using saw and axe.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0800**Cane Cutter**

Cane Cutter cuts mature sugar cane in fields using broad bladed knife or sickle. Examines sugar cane plant by sight and by feel of hand to ascertain its maturity and required pliability. Cuts matured plant at base using sickle or knife and pulls off side leaves of cane stalk with hook and cuts its unusable top portion with knife. Places cut stalks in piles for loading into carts. May load cane in carts or carry stalk on head for weighing.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.0900**Thatch Cutter**

Thatch Cutter cuts straw or rushes in grass land or forest for roofing of huts and other uses. Cuts matured green straw using sickle or scythe. Ties cut green straw into sheaves of convenient thickness and allows them to dry in sun and shuffles stacks once or twice to allow green sheaves at bottom to get dried. Removes by hand or through cart dried straw from field to safe place for storage. May cut and collect fodder for cattle.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1000**Log Feller**

Log Feller; Tree Feller cuts down tree using axe, saw, etc. for timber and fire wood. Inspects tree to determine mode of felling such as cutting through stem, digging out root from earth, etc. Climbs tree and lops off branches, using axe, bill hook, and hand saw. Cuts stem from bottom using axe and saw. Determines direction to which tree should fall, considering vacant ground, slope of land inclination of stem etc. Fastens one end of rope on top of stem and gets free end pulled by others while cutting at root. May dig up root from ground using spade. May fell small trees by uprooting them. May fill and level space from where trees are removed. May plant new tree.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1100**Wood Cutter**

Wood Cutter cuts felled trees into logs of required size. Trims branches of fallen tree using axe and handsaw. Cuts stem into beams, billets or logs of required size. Separates usable timber from fuel wood with axe and saw. May split remaining portion of log to small sizes for fuel.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1200**Marker, Log**

Marker, Log measures and determines volume of timber in each log. Measures girth, diameter and length of log using tape to determine volume of log. Marks

length and diameter on log ends with ink, coloured chalk or paint.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1300

Sandal Wood Extractor

Sandal Wood Extractor extracts sandal wood from sandal wood trees by felling trees and removing sap wood from trunks, branches and roots using axe, adze and saw. Cuts off thin branches and twigs from tree trunk using axe or saw. Removes bark and sap wood of tree trunks, branches and roots carefully by chipping with adze or bill hook ensuring not to cut through heart wood. Cuts trunks, roots, branches into billets of suitable length using hand saw. Removes carefully layer of sap wood from billets using axe or hand adze ensuring to protect heart wood from being damaged or cut through. Delivers finished sandal heart wood billets to superior. Collects sandal wood dust from floor and accounts for it separately.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1400

Estimator, Timber

Estimator, Timber; Enumerator, Timber estimates volume of standing timber in enumerated trees by surveying forest, examining and measuring sample trees, etc. Studies list of enumerated trees supplied by forest department. Visits enumeration plots in forest and measures length and girth of selected sample trees to estimate cubic content of available

timber. Inspects enumerated trees to grade them according to quality of timber by making sample cuts. May identify type of timber visually.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1500

Sorter, Timber

Sorter, Timber sorts out and grades timber according to quality of wood. Examines cut timber and separates decayed or damaged wood for fuel. Grades selected timber according to quality, maturity and size. May estimate volume of wood. May auction sale fuel wood to retail or wholesale dealers.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1600

Log Driver

Log Driver drives logs downstream from logging sites to mills. Rolls logs from landing into river, using cant hook or stout lever fitted with strong spike. Guides logs around obstruction and into current of stream from bank, boat, or floating logs using pike pole. Pulls or rolls key logs from jams to release logs from obstruction using stout lever with spike or pike pole. May collect logs in booms or rafts to retain logs at mill.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1700**Charcoal Burner, Wood**

Charcoal Burner, Wood operates kiln at wood felling site to convert wood into required quality and type of charcoal by slow burning process. Stacks wood in convenient sizes in kiln. Places kindling in kiln to start fire. Seals top of kiln when desired heat is reached with mud plaster. Observes colour of smoke as it emits through draught holes in kiln bottom to determine proper burning of charcoal. Regulates formation of charcoal by opening and closing draught holes as required. Smothers fire when charcoal has been formed by sealing cracks and draught holes with mud plaster. Removes charcoal with shovel when kiln cools down.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1800**Digester Operator, Wood**

Digester Operator, Wood operates digester to extract crude turpentine, quinine, catechu (Kachu), etc. from wood-chips or barks of specific species of trees by boiling them in water. Gets digester filled with wood chips or bark, chemicals and water. Releases steam into digester. Adjusts temperature and pressure at specified level by manipulating steam valves. Cooks wood-chips or barks for required time. Tests samples by titration or standard colour test to determine completion of cooking process. Drains liquid from digester into drums for further processing. May do minor repairs to equipment. May operate simple devised wet plant. May operate wood chipper.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.1900**Distiller, Turpentine and Eucalyptus**

Distiller, Turpentine and Eucalyptus; Distillery Operator operates still to refine crude turpentine or eucalyptus oil obtained from wood or leaves. Operates manipulating valves and charges still with crude turpentine or eucalyptus oil at regulated rate of flow. Connects outlet tubes of still to receiving jars or containers. Closes openings and inlets of still. Sees that cold water is circulating inside condensing unit. Manipulates steam injection valves to allow still to be heated up to prescribed degree of temperature. Checks meter reading and maintains heating at required temperature for prescribed period. Allows oil vapour to pass through coolers to get condensed into oil and water. Observes oil and water being collected in different containers. Directs pumping of primary bulk oil to overhead measuring tank for further processing. Watches progress and manipulates valves at proper time during processing to extract oil from coils. May operate still to extract essential and other medicinal oils. May fill bottles with distilled oil in prescribed quantities.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.2000**Lac Treater**

Lac Treater; Lac Worker treats or processes raw lac by grinding, washing and drying to make pure or seed lac for making lac polish, varnish, sealing, wax,

etc. Washes raw lac in water and chemicals to remove impurities, dead insects and dye matter. Dries washed lac (seed lac) in open. Dissolves seed lac in spirit and linseed oil or in any one of them in prescribed proportion. Filters solution through cloth bags or filters and collects filtered liquid called lac varnish or polish in containers. Boils bag waste in water with washing soda. Collects wax floating on water and cools it to become lac wax. Makes powder of seed lac, rosin, chemicals and colour compound in prescribed quantities. Heats mixture to prescribed temperature. Adds turpentine to heated mixture or molten solution. Pours molten composition into special moulds with cooling arrangement. Removes moulded sealing wax from mould after specified period.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

6210.9900

Forestry and Related Workers, Other

Loggers and Forestry Workers, Other perform number of miscellaneous tasks in forest and include workers not elsewhere classified such as those engaged in sawing, weeding, collecting felled trees, transporting logs, repairing forest road, etc. and are usually known as FOREST LABOURERS.

ISCO 08 Unit Group Details:

Code 6210

Title Forestry and Related Workers

Group 622 Fishery Workers, Hunters and Trappers

Fishery workers, hunters and trappers breed and raise fish, harvest and catch fish and hunt and trap animals, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

Occupations in this Group are classified into the following Families:

6221	Aquaculture Workers
6222	Inland and Coastal Waters Fishery Workers
6223	Deep-Sea Fishery Workers
6224	Hunters and Trappers

Family 6221 Aquaculture Workers

Aquaculture workers breed and raise fish and cultivate mussels, oysters and other forms of aquatic life, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

6221.0101 Shrimp Farmer

Shrimp Farmer purchases seeds from hatcheries on deciding the type of species to harvest, constructs a pond and harvest the shrimp by giving it a healthy feed and maintaining quality to sell in the market.

Qualification Pack Details:

QP NOS Reference	AGR/Q4902
QP NOS Name	Shrimp Farmer
NSQF Level	4

ISCO 08 Unit Group Details:

Code 6221

Title Aquaculture Workers

6221.0102

Hatchery Production Worker

Hatchery Production Worker produces the post larval in hatcheries after producing seed in reproduction and maturation stage, which is then transferred to the final grow-out stage for shrimp farming, considering labour and capital as major factors

Qualification Pack Details:

QP NOS Reference	AGR/Q4901
QP NOS Name	Hatchery Production Worker
NSQF Level	5

ISCO 08 Unit Group Details:

Code	6221
Title	Aquaculture Workers

Family **6222** Inland and Coastal Waters Fishery Workers

Inland and coastal waters fishery workers, alone or as members of fishing-vessel crews, catch fish or gather other forms of aquatic life in inland or coastal waters, for sale or delivery on a regular basis to wholesale buyers, marketing organizations or at markets.

6222.0100

Fisherman, Inland Water

Fisherman, Inland Waters fishes in inland waters, rivers, tanks, channels, creeks etc. using different types of nets and other fishing gears according to type of fish to be caught. Goes singly or with other fishermen in boats, dinghies or canoes with necessary equipment. Throws or fixes different types of fishing nets and gears such as gill nets, cast nets, drag

nets, bag nets, long lines etc. in area to be fished. Drags nets and gears and other equipment of boat. May salt fish for preservation. May operate power driven boats. May repair boats. May catch fish with hook and line using bait or artificial lures.

ISCO 08 Unit Group Details:

Code	6222
Title	Inland and Coastal Water Fishery Workers

6222.0200

Fisherman, Estuaries, Coastal and Back Water

Fisherman, Estuaries, Coastal and Backwater fishes in estuaries, coastal and back waters using different types of nets and gears according to nature of fish to be caught and type of fishing area. Goes in boat, canoe or catamaran with fishing nets and gears. Lays either singly or with other fishermen different types of fishing nets and gears such as drag nets, stake nets, basket traps, dip nets in coastal and back waters. Pulls or drags net or gear to surface of water after some time to collect fish caught and puts catch in hold (storage space) of boat. May stand on shore or rock and pull net to shore to collect fish. May operate power driven boats. May repair boats. May use torch and spear or harpoon to catch fish (torch fishing).

ISCO 08 Unit Group Details:

Code	6222
Title	Inland and Coastal Water Fishery Workers

6222.9900

Inland and Coastal Water Fishery Workers, Other

Inland and Coastal Water Fishery Workers, other include those who alone or as members of fishing-vessel crews, catch fish or gather other forms of aquatic life in inland or coastal waters, for sale or delivery, on a regular basis to wholesale buyers, marketing organizations or at markets not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6222
Title Inland and Coastal Water Fishery Workers

Family 6223 Deep-Sea Fishery Workers

Deep-sea fishery workers, as skippers or members of fishing vessel crews, catch deep-sea fish, for sale or delivery to wholesale buyers, marketing organizations or at markets.

6223.0101 Fisherman, Deep Sea/Marine Capture Fisherman

Fisherman, Deep Sea catches fish in deep sea or in shore and off-shore waters using different types of fishing gears and nets depending on type of fish to be caught. Sets sail in boat or canoe and goes with other fishermen long distances on sea. Selects area to be fished and lays different types of nets or fishing gears such as gill net drift net, drag net, hook and line with bait or artificial lures, etc. Drags net or hook and line to surface and collects fish caught in it. Puts fish in hold (storage space) of boat. Repairs or mends nets as necessary and maintains fishing gears. May salt and dry them for preservation. May sail in trawlers and operate power driven boats.

Qualification Pack Details:

QP NOS Reference AGR/Q5001
QP NOS Name Marine Capture Fisherman
NSQF Level 4

ISCO 08 Unit Group Details:

Code 6223
Title Deep Sea Fishery Workers

6223.9900 Deep Sea Fishery Workers, Other

Deep-sea Fishery Workers, other include all those who as members of fishing vessel crews, catch deep-sea fish, for sale or delivery, on a regular basis to wholesale buyers, marketing organizations or at markets not elsewhere classified.

ISCO 08 Unit Group Details:

Code 6223
Title Deep Sea Fishery Workers

Family 6224 Hunters and Trappers

Hunters and trappers catch and kill mammals, birds or reptiles mainly for meat, skin, feathers and other products. They also catch animals and birds for treatment and tagging.

6224.0300 Trapper

Trappers catches birds or wild animals alive by means of traps, snares and nets for treatment and tagging. Selects location, sets bait and camouflages traps. Removes captured animal.. May specialize in catching particular type of animal or birds. May prepare nets, cages and other snares for trapping animals and birds.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.0400**Tracker**

Tracker; locates rest places and hide outs of wild animals by finding their pug marks, kills, remain of meals etc. and following clues to track down their hide-outs. Observes foot prints and marks on ground, water hole, grass, foliage, twigs, remains of meals etc. and identifies animals. Selects sites and erects machans (observation post) in trees for observation. May be familiar with use of weapons such as fire arms, spears, knives, etc. May locate wild animals to save them from natural calamities.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.0500**Fish Overseer**

Fish Overseer; Fish Cultural Officer; Extension Officer, Fisheries; Sub-Overseer, Fisheries maintains fish collection centres fish farms, etc. and advises people in proper methods of fish culture. Looks after fish collection centres, fish farms, etc. and ensures their proper maintenance. Demonstrates correct methods of fish farming, fish culture, etc. to public to achieve improvements in these fields. May assist Fisheries Inspector in transporting fish seed to different fishery stations.

ISCO 08 Unit Group Details:

Code 6224

Title Hunters and Trappers

6224.0600**Fisheries Inspector**

Fisheries Inspector; Fisheries Sub-Inspector demonstrates, supervises and controls work of staff engaged in fish collection, sale, curing and demonstration centres. Demonstrates to public proper methods of fish culture and storing. Supervises sale of fish to public and proper maintenance of fish curing yards. Issues licences to Fishermen for fishing in State Waters(including back waters), use of china net, stake net, lime shell gathering etc. and conducts regular patrol to prevent illicit fishing. Surveys area under jurisdiction for fish breeding, stocking, etc. and to assess potentiality of water area. Executes development schemes such as mechanisation of fishing crafts, financial assistance to Fishermen, training of Fishermen etc. Guides preparation of fish meal. Determines chemical ingredients necessary for fish culture in ponds, tanks, rivers etc. and arranges for supply and transport of fish seed and fingerlings to Fishermen and other areas under proper conditions. Performs other official duties such as collection of revenue, sending reports for publication in gazette, etc. as necessary. May listen to grievances of Fishermen and take necessary measures to remove them.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.0700**Field Man, Fish**

Field Man, Fish; Supervisor, Fish arranges transport of fish to different places and supplies, fish seed to purchasers for

growth in tanks, wells, rivers, etc. Breeds fish in special tanks or ponds and collects fish seeds and fingerlings. Transports them to areas where required. Sells fish caught in rivers, lakes, sea, etc. to public and maintains necessary records.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.0800

Yard Officer

Yard Officer; Petty Yard Officer; Yard Master; Yard Manager (Fish) guides and ensures curing of fish according to prescribed standards. Checks weight of fish received for curing. Issues prescribed quantity of salt for curing and guides curing as necessary. Ensures that salted fish are dried in sun in curing yards for prescribed period and that they are properly packed. Directs preparation of fish meal, etc. Maintains technical laboratory and supervises working of its staff. May collect fish statistics in his area.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.0900

Fish Hatcher

Fish Hatcher hatches fish in small tanks and releases hatched fish or fingerlings into public tanks, rivers, etc. for growth. Observes habits of fish in artificial ponds and creates favourable natural conditions as far as possible by planting of weeds and plants in water, keeping water at required temperature etc. for hatching of fish. Transfers fish seeds to different ponds for hatching and growth. Changes water in pond or tank periodically as guided by

Pisciculturist. Collects fingerlings or fish seed of different sizes and varieties and puts them in water in metal containers. Transports containers to desired areas and releases fingerlings in public rivers, tanks, ponds, etc. Assists Pisciculturist in experimental farms in transporting and releasing fish in water, feeding them etc. May sell fish caught in public waters, if necessary.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.1000

Fish Curer

Fish Curer salts, cures and preserves fish to prevent putrefaction and for use over long periods. Washes fish with water and cuts off head, fins, tail etc. as necessary. Opens out stomach with knife and removes viscera, gills etc. to prevent putrefaction. Applies salt to cleaned fish either one by one or in lot to preserve them. Stacks salted fish for required period and shuffles them as necessary at specified intervals. Takes fish out of stack and washes them if necessary. Spreads fish in open on mats or bamboo to dry them in sun. May pack fish for transporting them to other areas. May dry fish in sun with or without cleaning and salting particularly in case of seeds and small fingerlings.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.1100

Fish Meal Maker

Fish Meal Maker makes fish meal powder by dehydration, drying and grinding

processes for use as food for poultry, etc. Feeds fresh fish into hand press to remove water and oil. Dries pressed fish in sun. Cuts dried fish into small pieces and grinds them to powder by machine. Packs fish meal powder in containers.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.1200

Rock Pilot

Rock Pilot leads pearl and chank divers see and points out area for chank and pearl fishing. Acquires knowledge and condition of sea by intuition, heredity, state of rock formation, etc. Goes out in boats to sea with Divers. Points out area where pearls sea, inland and off-shore fishing.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.1300

Man Duck

Man Duck helps Pearls and Chank Divers in various diving operations, connected with pearl and chank fishing. Rows boats to distant places in sea. Releases rope with heavy weight attached above and held by Diver to dive into sea. Hauls Pope to surface when Diver, reaches sea-bed and releases it. Throws rope to Diver, by hand, if he gets separated for away from boat to enable him to catch it and reach boat. Receives pearl oysters or chanks gathered by Divers and deposits them in baskets. May fish in deep sea or inland waters using different types of nets and tackles.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.1400

Net Maker

Net Maker makes fishing nets and mends torn or worn out ones using wooden needle and thread. Fabricates nets to required measurements to catch different types of fish. Removes weeds entangled in nets during fishing and spreads them on shore for drying. Examines nets for torn or worn out parts and sews them with wooden needle and nylon, cotton or hemp threads using different knots as required. Ties new floats or weights to nets. May tan and preserve nets. May fish in deep sea or inland waters using different kinds of nets. May assist Fishermen in dragging net with catch or boat to shore after fishing.

ISCO 08 Unit Group Details:

Code 6224
Title Hunters and Trappers

6224.9900

Hunters and Trappers, Other

Fishermen, Hunters, Trappers and Related Workers, other perform varieties of routine and low-skilled tasks in cutting and washing fish, boiling fish liver, preparing fish manure, etc. and are designated: Fish Cutter cuts open fish using knives, saws etc. for fish curing. Removes fins, head. Large bones etc. of fish by cutting them away with knife, saw etc. Cuts fish with hand knife to suitable sizes for curing. Fish Cutter and Washer removes fish gut and liver and washes fish for curing. Cuts with knife along abdomen. Removes liver, viscera, gills and gut of fish. Washes fish in water to remove blood and

impurities. Fish Liver Boiler boils shark liver in water to collect shark liver oil. Collects liver from sharks. Cuts liver to small bits and washes them in clean water. Puts parts of liver in boiling water. Skims off oil floating in boiling water. Collects oil in containers and sends it for refining. Fish Manure Maker prepares fish manure by dumping fish in compost pits and removing them after decomposition. Digs pits of different sizes, dumps fish into pit and closes it with earth. Allows fish to decompose. Opens it after specified period and removes fish manure from pit.

ISCO 08 Unit Group Details:

Code

Title

Sub Division 63

Subsistence Farmers, Fishers, Hunters and Gatherers

Subsistence farmers, fishers, hunters and gatherers grow and harvest field or tree and shrub crops, vegetables and fruit, gather wild fruits, medicinal and other plants, tend or hunt animals, catch fish and gather various forms of aquatic life in order to provide food, shelter and a minimum of cash income for themselves and their households.

Tasks performed by workers in this sub-major group usually include- preparing the soil; sowing, planting, tending and harvesting field crops; growing vegetables, fruit and other tree and shrub crops; gathering wild fruits, medicinal and other plants; breeding, tending and feeding animals and poultry mainly to obtain meat, eggs, milk, hair, skin or other products; hunting or trapping animals; catching fish and gathering other forms of aquatic life; fetching water and gathering firewood; storing produce for later use

and carrying out some processing of produce; building and maintaining houses and other shelters; making tools, clothes and utensils for use by the household; selling or bartering some products at local markets.

Occupations in this Sub Division are classified into the following Groups:

631	Subsistence Crop Farmers
632	Subsistence Livestock Farmers
633	Subsistence Mixed Crop and Livestock Farmers
634	Subsistence Fishers, Hunters, Trappers and Gatherers

Group 631 Subsistence Crop Farmers

Subsistence crop farmers grow and harvest field or tree and shrub crops, vegetables and fruit, in order to provide food, shelter and a minimum of cash income for themselves and their households.

Occupations in this Group are classified into the following Families:

6310	Subsistence Crop Farmers
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Family 6310 Subsistence Crop Farmers

Subsistence crop farmers grow and harvest field or tree and shrub crops, vegetables and fruit, in order to provide food, shelter and a minimum of cash income for themselves and their households.

6310.0100 Tree Trimmer and Pruner

Tree Trimmer and Pruner cuts away dead or excess branches from trees or shrubs to maintain right-of-way for roads, sidewalks, or utilities, or to improve appearance, health, and value of tree. Prunes or treats trees or shrubs using handsaws, pruning hooks, sheers, and clippers. May use pruning hooks, sheers, and clippers. Climb struck-mounted lifts and power pruners. May fill cavities in trees to promote healing and prevent deterioration. Cuts away dead and excess branches from trees, using handsaws, trees, using climbing hooks and belts, or climbs ladders to gain access to work area. Prunes, cuts down, fertilizes, and sprays trees as directed by tree surgeon. Uses truck-mounted hydraulic lifts and pruners and power pruners. Scrapes decayed matter from cavities in trees and fills holes with cement to promote healing and to prevent further deterioration. Applies tar or other protective substances to cut surfaces to seal surfaces against insects.

ISCO 08 Unit Group Details:

Code 6310
Title Subsistence Crop Farmers

6310.9900

Subsistence Crop Farmers, Others

Subsistence Agricultural and Fishery Workers, other include those who grow and harvest field or tree and shrub crops, grow vegetables and fruit, gather wild fruits, medicinal and other plants, tend or hunt animals, catch fish and gather other forms of aquatic life in order to provide food, shelter and a minimum of cash income for themselves and their households not elsewhere classified. CRAFT AND RELATED TRADES WORKERS Craft and related trades workers apply their specific knowledge and skills in the

fields of mining and construction, form metal, erect metal structures, set machine tools, or make, fit, maintain and repair machinery, equipment or tools, carry out printing work as well as produce or process foodstuffs, textiles, or wooden, metal and other articles, including handicraft goods. The work is carried out by hand and by hand powered and other tools, which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of all stages of the production process, the materials and tools used, and the nature and purpose of the final product. Most occupations in this division require skills at second skill level.

ISCO 08 Unit Group Details:

Code 6310
Title Subsistence Crop Farmers

Group 632

Subsistence Livestock Farmers

Subsistence livestock farmers breed, raise and tend livestock in order to provide food, shelter and a minimum of cash income for themselves and their households.

Occupations in this Group are classified into the following Families:

6320 Subsistence Livestock Farmers

Family 6320

Subsistence Livestock Farmers

Subsistence livestock farmers breed, raise and tend livestock in order to provide food, shelter and a minimum of cash

income for themselves and their households.

Group 633

Subsistence Mixed Crop and Livestock Farmers

Subsistence mixed crop and livestock farmers grow and harvest field or tree and shrub crops, vegetables and fruit, gather wild fruits, medicinal and other plants, tend or hunt animals, and/or catch fish and gather various forms of aquatic life in order to provide food, shelter and a minimum of cash income for themselves and their households.

Occupations in this Group are classified into the following Families:

6330 Subsistence Mixed Crop and Livestock Farmers

Family 6330

Subsistence Mixed Crop and Livestock Farmers

Subsistence mixed crop and livestock farmers grow and harvest field or tree and shrub crops, vegetables and fruit, gather wild fruits, medicinal and other plants, tend or hunt animals, and/or catch fish and gather various forms of aquatic life in order to provide food, shelter and a minimum of cash income for themselves and their households.

Group 634

Subsistence Fishers, Hunters, Trappers and Gatherers

Subsistence fishers, hunters, trappers and gatherers gather wild fruits, medicinal and other plants, hunt and trap animals, catch fish and gather various forms of aquatic life in order to provide food, shelter and a minimum of cash income for themselves and their households.

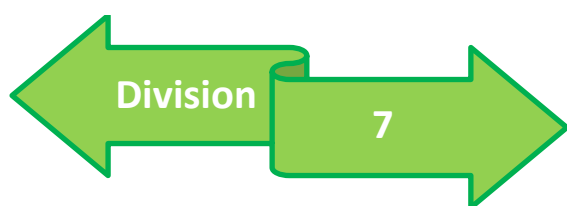
Occupations in this Group are classified into the following Families:

6340 Subsistence Fishers, Hunters, Trappers and Gatherers

Family 6340

Subsistence Fishers, Hunters, Trappers and Gatherers

Subsistence Fishers, Hunters, Trappers and Gatherers gather wild fruits, medicinal and other plants, hunt and trap animals, catch fish and gather various forms of aquatic life in order to provide food, shelter and a minimum of cash income for themselves and their households.



Craft and Related Trades Workers

Craft and related trades workers apply specific knowledge and skills in the fields to construct and maintain buildings, form metal, erect metal structures, set machine tools, or make, fit, maintain and repair machinery, equipment or tools, carry out printing work produce or process foodstuffs, textiles, or wooden, metal and other articles, including handicraft goods. The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of all stages of the production process, the materials and tools used, and the nature and purpose of the final product.

Tasks performed by craft and related trades workers usually include: constructing, maintaining and repairing buildings and other structures; casting, welding and shaping metal; installing and erecting heavy metal structures, tackle and related equipment; making machinery, tools, equipment, and other metal articles; setting for operators, or setting and operating various machine tools; fitting, maintaining and repairing industrial machinery, including engines and vehicles, as well as electrical and electronic instruments and other equipment; making precision instruments, jewellery, household and other precious-metal

articles, pottery, glass and related products; producing handicrafts; executing printing work; producing and processing foodstuffs and various articles made of wood, textiles, leather and related materials. Supervision of other workers may be included.

Occupations in this Division are classified into the following Sub Divisions:

71	Building and Related Trade Workers (Excluding Electricians)
72	Metal, Machinery and Related Trades Workers
73	Handicraft and Printing Workers
74	Electrical and Electronics Trades Workers
75	Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers

Sub Division 71 Building and Related Trade Workers (Excluding Electricians)

Building and related trades workers construct, maintain and repair buildings, erect and repair foundations, walls and structures of brick, stone and similar materials, shape and finish stone for building and other purposes, and extract and work solid minerals from underground or surface mines or quarries. The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of the work organization, the materials and tools used, and the nature and purpose of the final product.

Tasks performed by workers in this sub-major group include: constructing, maintaining and repairing buildings and other structures using traditional and/or modern building techniques; constructing and repairing foundations, walls and structures of brick, stone and similar materials; breaking quarried stone into slabs or blocks; cutting, shaping and finishing stone for building, ornamental, monumental and other purposes; erecting reinforced concrete frameworks and structures as well as finishing and repairing cement surfaces; cutting, shaping, assembling and maintaining wooden structures and fittings; performing miscellaneous construction and building maintenance tasks. Supervision of other workers may be included.

Occupations in this Sub Division are classified into the following Groups:

711	Building Frames and Related Trades Workers
712	Building Finishers and Related Trades Workers
713	Painters, Builders, Structure Cleaners and Related Trades Workers

Group **711** **Building Frames and Related Trades Workers**

Building frame and related trades workers construct, maintain and repair buildings, erect and repair foundations, walls and structures of brick, stone and similar materials, shape and finish stone for building and other purposes, and perform miscellaneous construction and building maintenance tasks

Occupations in this Group are classified into the following Families:

7111	House Builders
7112	Bricklayers and Related Workers
7113	Stonemasons, Stone Cutters, Splitters and Carvers
7114	Concrete Placers, Concrete Finishers and Related Workers
7115	Carpenters and Joiners
7119	Building Frame and Related Traders Workers, Not Elsewhere Classified

Family **7111** **House Builders**

House builders erect, maintain and repair houses and similar small buildings using either traditional or modern techniques and materials.

7111.0100 **Hut Maker**

Hut Maker; Cottage Maker; Shanty Maker erects huts, cabin or similar dwellings with wooden planks poles, logs, bamboos, hay, straw, reeds, dry leaves, etc., collects necessary materials required for construction. Measures ground using pegs and ropes and marks outline of hut by digging earth along lines. Digs earth at marked points using spade, shovel etc. and fixes bamboo or wooden posts securely in pits to serve as supports and pillars. Places poles horizontally on top of pillars and ties ends with strings or ropes. Fixes rafters to roof of hut in slanting position to set hay straw or leaf as roofing material. Covers sides of structure with straw, hay and plans of coconut, mango trees, or others allowing space for doors and windows. Places rafters as required to

secure and strengthen structure. Levels floor by ramming it with mixture of paste of mud, water and straw dust, using hand ramming wooden blocks and makes it smooth and habitable. May thatch huts. May set tiles for roofing huts.

ISCO 08 Unit Group Details:

Code	7111
Title	House Builders

7111.0200

Thatcher

Thatcher constructs roofs of huts and cottages from straw rashes, reeds or dry palm leaves using shears or trimming knife. Collects straw, dry leaves, reeds and bamboos of required length. Spreads leaves, grass or reed as roofing material over rafters or bamboos frame and securely ties them with twin rope as required. Covers openings with extra straw or leaf to make it waterproof. Trims edges uniformly to make sides look even. Places thatched frame over roof of hut with assistance of others and positions it securely by fastening it with rafters and beams. May construct straw huts and small dwellings. May do rethatching of cottage and hut roofs.

ISCO 08 Unit Group Details:

Code	7111
Title	House Builders

7111.9900

Builders, Traditional Materials, Other

Builders, Traditional Materials, other include all those workers who erect, maintain and repair small and large buildings and other structures by using traditional building techniques and materials such as bamboo, hay, straw,

reeds, mud, planks, poles or leaves not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7111
Title	House Builders

Family 7112

Bricklayers and Related Workers

Bricklayers and related workers lay bricks, pre-cut stones and other types of building blocks in mortar to construct and repair walls, partitions, arches and other structures.

7112.0100

Stone Mason

Stone Mason; Stone Setter; Stone Fixer builds stone walls, pillars and other structures by sizing and setting dressed or undressed stones. Receives instructions regarding nature and type of work to be done. Cuts stones to required size prior to setting by chipping with chisel and other cutting tools and gets them dressed or dresses them if necessary. Gets mortar prepared by labourers and spreads it with trowel bit by bit over area where stones are to be fixed. Fixes stones manually one by one in position and sets them by tapping with hammer. Checks vertical and horizontal alignments of set stones with plumb bob, ensures correct setting by alterations if necessary and fills in gaps in between stone slabs with stone chips and mortar. Removes excess mortar with trowel to smoothen joints and stones to raise structure as required. May dismantle masonry and reset girders if necessary. May do plastering, repairing and ornamental work. May lay stones on levelled ground to construct floors pavements, streets, etc. May erect scaffolding for construction work.

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.0200**Bricklayer, Construction**

Bricklayer, Construction; Brick Mason lays brick with mortar, and other construction material to construct and repair building-walls, arches, chimneys, floors, pillars and other structures. Receives instructions regarding nature and type of work to be done. Directs Labourers to prepare mortar in required proportions and water bricks. Spreads mortar by trowel over foundation or laid bricks and lays bricks by hand in horizontal rows or designs and shapes per approved specification. Taps bricks with trowel to embed them firmly in mortar and ensures correct vertical and horizontal alignment of brick setting by sight or with string and plumb bob. Closes gaps in between bricks by filling with half bricks and mortar and by tapping with trowel. Fixes wooden frames, lay lime concrete over roofing and sets girders in position. May dismantle masonry for reconstruction or facility of work. May do plastering, decoration pointing and repair work. May erect scaffolding.

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.0201**Plumbing Mason**

Plumbing Mason is responsible for making masonry manholes, laying pipes in masonry works and other earth work related to plumbing.

Qualification Pack Details:

QP NOS Reference PSC/Q0106

QP NOS Name Plumbing Mason

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.0300**Bricklayer, Refractory**

Bricklayer, Refractory builds and repairs furnaces, ovens, kilns, fireboxes, fire places and other high temperature structures by laying and setting firebricks and refractory blocks, using chemical heat resistant cement, fireclay, mortar etc. with hand tools. Receives instructions from appropriate authority regarding nature and type of work to be done. Spreads minimum possible fireclay mortar evenly over furnace with trowel and lays and taps fire bricks or refractory blocks in position in correct alignment according to specification. Seals joints with fireclay mortar or chemically resistant cement to bind bricks together making provision for expansion of joints in furnace in linings. Prepares support to proper curvature to replace arched roofs of furnaces or to construct new ones as directed or specified. Patches portions of furnaces with fireclay, as necessary and removes excess of mortar. May specialize in building and repairing particular type of high temperature construction. May replace linings of ladles or tapping sports of furnaces. May build new smoke tunnels.

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.0400**Paviour**

Paviour lays bricks and stone on levelled ground to make floors, pavements, streets etc. Receives instructions regarding type of pavement, floor or street to be laid and other specifications and collects materials required. Directs Labourers to level surface for laying bricks and stones for required construction. Lays stone slabs or bricks in line on levelled ground, by sizing them if necessary with brick hammer and trowel and tapes them to get set firmly in position. Checks alignment while laying using straight edge and spirit level and fills gaps in between with chips, bricks bits, cement etc.; May do pre-stressed and R.C. (reinforced concrete) work.

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.0500

Tar Supervisor

Tar Supervisor; Bitumen Supervisor supervises and guides laying of asphalt (complex mixture of hydrocarbons) or other bituminous (inflammable mineral substance) material over roads, roofs, etc. for surfacing and water-proofing. Gets drums filled with asphalt and other bituminous material heated on fire and ensures proper melting and mixing of contents. Directs workers to place "templates" (pattern of wood, iron etc. used as guide for levelling) on road or roof for proper laying and setting of asphalt and other material. Puts on thin padding or rubber gloves to protect remain protected from burns, guides pouring of molten material or base and spreads it uniformly over set area with mop brush or other device. Ensures uniformity and even spreading of tar or bituminous materials on surface and applies subsequent coating if needed. Lays tar over angles and

corners with special care and directs workers to apply sealing coat (spreading of gravel or sand over tar coating). Removes template and allows laid material to dry in sun before use. Is designated as BITUMEN SPRAYER if engaged in spraying hot liquid bitumen on road surface with spray gun connected with supply hose to tar heating tank. May use special thermometer to ensure required temperature of molten tar.

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.0601

Assistant Mason

Assistant Mason needs to work as semi-skilled category tradesman and perform tasks under instruction and close supervision of Mason Level-3 as Assistant Mason. He is expected to carry out the setting and layout, laying of bricks and blocks, rendering coat plastering, finishing of concrete, fixing doors and windows in a room/cubical while effectively engaging and supervising the Helper Mason under him for all trade relevant tasks. He should ensure trade specific compliance to environment, health and safety aspects

Qualification Pack Details:

QP NOS Reference CON/Q0102

QP NOS Name Assistant Mason

NSQF Level 2

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

7112.9900

Bricklayers, Other

Brick Layers, Stone Masons and Tile Setters, Other include all other workers engaged in brick laying, tile setting, stone masonry and like tasks, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7112

Title Bricklayers and Related Workers

Family 7113 Stonemasons, Stone Cutters, Splitters and Carvers

Stonemasons, stone cutters, splitters and carvers cut and shape hard and soft stone blocks and slabs for the construction and maintenance of stone structures and monumental masonry, and carve designs and figures in stone.

7113.0200

Stone Cutter, Hand

Stone Cutter, Hand cuts and shapes building and monumental stone from rough blocks or slabs of granite, marble etc. using pneumatic and hand tools. Places rough stone blocks or slabs in working position with aid of crane, hoist or other means. Marks out dimensional lines for cutting according to specifications. Cuts block to required size, shape and other specifications by drilling, chipping, splitting and chiselling stone with pneumatic and hand tools. Checks size and shape frequently to ensure accuracy and prevent deep cutting.

ISCO 08 Unit Group Details:

Code 7113

Title Stonemasons Stone Cutters,
Splitters and Carvers

7113.0300

Stone Dresser, Hand

Stone Dresser, Hand chips and chisels stone to required size and shape and joins surface using hand tools. Examines and selects blocks of granite, marble or other stone according to prescribed specifications. Places it in working position, measures it with measuring instruments such as scale, calliper-compass, etc. and marks it out according to specification for cutting. Chips off unwanted portion, sprinkles water over stone to serve as coolant and gradually finishes it to required size and shape. Checks size and shape frequently while chipping. May cut decorative designs on stone surfaces. May drill holes in stone if required.

ISCO 08 Unit Group Details:

Code 7113

Title Stonemasons Stone Cutters,
Splitters and Carvers

7113.0400

Stone Carver

Stone Carver carves out figures, letters and artistic designs on stone blocks, slabs or pillars to be erected or laid for construction of buildings, temples, monuments etc., using hand tools. Studies drawings, designs, models, nature of carving and artistic features to be carved on stone. Selects appropriate stone such as granite, green stone, soap stone, marble, etc. as required. Places stone in working position and lays out figures, designs, artistic features etc. on surface of stone with chalk, pencil or ochre solution by freehand sketching with drawing instruments and tracing papers or by taking measurements from model. Applies thin layer of oil, if using granite stone and

carves out roughly along outline using hand hammer and chisel of different shapes and sizes. Files rough surfaces and brushes off dust as necessary while working. Sprinkles water on rough carving if working on stone other than granite and continues carving using small hammer and fine chisels. Drills holes with hand drill, as designed, using water as lubricant and smoothens object to desired finish by rubbing with stones. Checks work frequently against sketch or model while carving to ensure accuracy. May cut deep slits using saw blades. May carve out letters and figures and inlay them with lead or stone of different colours. May first make clay model of carving to be done.

ISCO 08 Unit Group Details:

Code 7113

Title Stonemasons Stone Cutters,
Splitters and Carvers

7113.0500

Stone Polisher, Hand

Stone Polisher, Hand; Stone Finisher polishes and finishes surface of stone by rubbing it evenly with block of stone or other abrasives. Places stone in working position on floor or working bench with aid of helpers, hoist or crane. Sprinkles water and Chambal sand on surface of stone and rubs it with different kinds and grades of powder pumice or other abrasives, pours water frequently on surface thoroughly with water to remove abrasives. Rubs surface of stone with polishing powder and cloth pad after primary rubbing to obtain lustrous finish. May specialize in polishing particular kind of stone, such as marble or granite and be designated accordingly. May use portable polishing machine.

ISCO 08 Unit Group Details:

Code 7113

Title Stonemasons Stone Cutters,
Splitters and Carvers

7113.9900

Stone Splitters, Cutters and Carvers, Other

Stone Splitters, Cutters and Carvers, other include those stone splitters, cutter and carvers not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7113

Title Stonemasons Stone Cutters,
Splitters and Carvers

Family 7114

Concrete Placers, Concrete Finishers and Related Workers

Concrete placers, concrete finishers and related workers erect reinforced concrete frameworks and structures, make forms for moulding concrete, reinforce concrete surfaces, cement openings in walls or casings for wells, finish and repair cement surfaces and carry out terrazzo work.

7114.0100

Concrete Moulder

Concrete Moulder; Cement Block Moulder moulds and finishes cement concrete blocks of various shapes and sizes such as sills, beams, railing, flower vases and other construction and decoration articles. Examines drawings and other specifications and draws approximate estimates of material required. Selects wooden mould of required size and pattern. Mixes cement, sand, lime etc. and prepares cement concrete mortar by adding requisite quantity of water to

them. Places and fixes required number of sized iron rods into mould and pours cement concrete mortar into it. Rams concrete with iron rods to make it compact. Levels surface of mould by filling with concrete and smoothens it with trowel and wooden smootheners. Allows concrete to settle for specified period in mould for hardening. Removes shuttering, soaks it in water for curing and gets it dried in shades. May cut artistic designs on cast material before it gets hard.

ISCO 08 Unit Group Details:

Code 7114

Title Concrete Placers, Concrete Finishers and Related Workers

7114.0200 Cement Finisher

Cement Finisher finishes surfaces of concrete structures and smoothens surfaces of freshly poured concrete sections. Cuts ridges, bumps and projecting wire from concrete surface with chisel and hammer. Patches holes and broken corners by wetting them, spreading mortar into them and smoothing surface with trowel or float. Removes blemishes from and smoothens surface by wetting or applying liquid mixture of sand, cement and water and rubbing with abrasive black. Finishes surface by wiping it with damp brush. Levels, smoothens and shapes surfaces of freshly poured concrete sections with straight edge and float for fine finish and edging tool to shape corners. May specialize in particular type of concrete finishing work and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7114

Title Concrete Placers, Concrete Finishers and Related Workers

7114.9900 Concrete Placers, Concrete Finishers and Related Workers, Other

Concrete Placers, Concrete Finishers and Related Workers, other include all other workers who erect reinforced concrete frameworks and structures, make forms for moulding concrete, reinforce concrete surfaces, cement openings in walls or casings for wells, finish and repair cement surfaces and carry out terrazzo work not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7114

Title Concrete Placers, Concrete Finishers and Related Workers

Family 7115 Carpenters and Joiners

Carpenters and joiners cut, shape, assemble, erect, maintain and repair various types of structures and fittings made from wood and other materials.

7115.0100 Carpenter, General

Carpenter, General makes, assembles, alters and repairs wooden structures and articles according to sample or drawing using hand or power tools or both. Studies drawing on sample to understand type of structure or article to be made and calculates quantity of timber required. Selects timber to suit requirements. Marks them to size using square, scribe etc. Saws, chisels and planes wooden pieces to required sizes and makes

necessary joints such as half lap, Tenon mortice, dove-tail etc. using saws, planes, mortising, chisels, drills and other carpentry hand or power tools as required. Checks parts frequently with square, foot rule, measuring tape etc. to ensure correctness. Assembles parts and secures them in position by screwing, nailing or doweling. Checks assembled structure with drawing or sample; rectifies defects if any, and finishes it to required specifications. Alters, repairs or replaces components in case of old structures or articles in similar manner. May glue parts together. May smoothen and finish surface with sand paper and polish. May fix metal fittings to structure and polish. May fix metal fittings to structure or article made. May calculate cost of furniture. May sharpen his own tools.

ISCO 08 Unit Group Details:

Code	7115
Title	Carpenters and Joiners

7115.0200

Carpenter, Construction

Carpenter, Construction; Carpenter Building makes, assembles, alters and repairs doors, windows, frames and other wooden fixtures of building using hand or power tools or both. Studies drawings or samples and calculates quantity of timber required. Saws over size pieces by power or hand tools or collects lumbers for making various components. Plans two sides of above pieces, marks off dimensions using tri-square, scribe, pencil etc., and reduces them to required sizes by adzing, sawing and planning. Marks off different members, cuts them as required and shapes and makes Tenon and mortise, half lap and other joints by sawing, chiselling, drilling and filling. Checks pieces frequently while sizing and

shaping to ensure correctness. Assembles framework step by step by gluing, cramping, dowelling, nailing and screwing as required. Examines finished article for accuracy. Fits metal rods, hinges etc., to wood work where necessary and rectifies defects in fittings if any. Sharpens his own tools. May erect scaffoldings if necessary.

ISCO 08 Unit Group Details:

Code	7115
Title	Carpenters and Joiners

7115.0201

Assistant Shuttering Carpenter

Assistant Shuttering Carpenter works as semi-skilled category tradesman and performs tasks under instructions and close supervision of Shuttering Carpenter Level-3 as an Assistant Shuttering Carpenter. He is expected to make, assemble, erect and dismantle conventional/system formwork for all type of in situ and pre-cast RCC work, reading drawings, setting and layout. He should ensure trade specific compliance of environment, health, safety aspects and should engage and supervise the Helper Shuttering Carpenter under him for all relevant tasks.

Qualification Pack Details:

QP NOS Reference	CON/Q0302
QP NOS Name	Assistant Shuttering Carpenter
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7115
Title	Carpenters and Joiners

7115.0300

Carpenter, Structural

Carpenter, Structural builds, erects and repairs wooden structures such as

building frames, stage and studio fixtures, roofs, walls, wooden shingles etc., using hand or power tools or both. Studies drawing or sample or receives instructions regarding structure to be built and calculates quantity of timber required. Selects required type of timber and marks them for dimension using measuring tape, square, pencil, etc. Sizes different parts from oversize pieces by sawing, adzing and smoothing using power or hand tools. Makes necessary joints such as Tenon and mortise, scraf, half-lap etc., for joining different members. Checks pieces with square, measuring tape, foot rule etc., to ensure correctness. Assembles different parts or panels step by step to form complete structure. Sharpens his own tools. May carve designs and polish structures.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.0400

Carpenter, Village

Carpenter, Village makes and repairs country ploughs, carts, doors, windows, frames and such other agricultural and domestic articles by simple carpentry processes using hand tools. Studies sample and selects required type of timber and other materials. Cuts oversize pieces, as required by sawing, adzing, chiselling and smoothing. Marks with pencil, marking gauge or line and reel. Shapes different pieces and makes necessary joints by smoothing, drilling, chiselling etc. Assembles them part by part by nailing dowelling or screwing as necessary. Fits metal tyres to rim, blades to ploughs, hinges and hasps and staples to doors etc., and ensures their proper functioning. Sharpens his own tools. May

fit wooden wedges to tighten joints. May perform simple blacksmithy tasks.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.0500

Joiner, Wood

Joiner, Wood joins and assembles prefabricated wooden-plank boards, building-fixtures, etc. using hand or power tools or both. Collects prefabricated planks of required sizes. Joins required number of planks with double ended nails to form sides of structure. Assembles framework step by step by nailing or screwing. Sharpens his own tools. May fit strengthening band or mild steel hoop by nailing or screwing for strengthening boxes and cases, if necessary. May make crate for packing. May be designated as WOODEN BOX MAKER; CARPENTER, PACKING CASES if engaged in making wooden boxes or packing cases of specified dimensions.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.0600

Lofts Man, Ship Building

Lofts Man, Ship Building develops full size measurements from drawings to prepare templates for manufacture of shell plates and other parts of ship. Studies drawings, considers elevation and draws full scale drawings with chalk on scribe board (wooden board on which various measurements are marked to enable drawing of shell, shell plate, margin plate etc. for ship, to develop full scale templates to be prepared) for making

templates. Draws full size lines of ship body on scive board, ensures that plans of drawings of adjacent components agree and fit accurately and draws them to full scale on it using scale contours, chalks etc. Instructs Carpenter in preparation of templates according to dimensions drawn on scive board and marks instructions on them with ink for guidance of fabrication section. Issues templates to concerned section, explains details of measurements for fabrication of steel panels to form various components of ship body and receives them back after use. Stores templates in prescribed place for further use and maintains their account.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.0700 Shipwright

Shipwright erects props and temporary structures to stabilize and support ship during, construction and repairs in shore. Aligns ship structure according to designed centre line and angle of declivity and plots and marks reference points and lines on building dock or way to maintain alignment of vessel during construction or repairs, using transit, plumb bob, tapes and levels. Builds keel blocks, bilge blocks, cradles and shoring for supporting slip in dry dock, building docks etc. using power and hand wood-working tools. Positions and secures blocking and other structures on dock platform according to ship's blue-prints. Aligns vessel over blocks and establishes reference points and lines on ship's hull for locating machinery and other equipment in accordance with ship's alignment and shape. Fabricates and installs furring pieces (timber strips of

constant width but varying depth), aprons, uprights and other wood framing in ship according to specifications and shapes and finishes them. Nails or bolts metal fittings, plates and bulk heads to wooden parts of ship using brace, drill bits, augers, spanners etc. and ensures correct alignment of hull, frame and fittings. Levels ground ways, runners, wooden blocks etc., erects props, fastens standing ways by wire ropes, fits launching triggers and performs related tasks to prepare entire launching ways to launch a ship. Gets all material and timber salvaged after launching for use in subsequent operation.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.0800 Lascar Stager, Ship Building

Lascar Stager, Ship Building erects temporary wooden structures and scaffoldings for placing staging planks inside and outside ship under construction or repairs to facilitate work. Erects steel or tubular uprights and ledgers or cross bars for resting staging planks as guided by Serang and keeps them secure from strong winds and accidents. Assists Shipwright, Wood as directed and dismantles scaffoldings and other wooden structures to arrange launching of ship. Is designated as SERANG, SHIP BUILDING if engaged in building and supervising erection and removal of wooden structures and scaffoldings and related tasks. May assist Shipwright in aligning ship structure and perform other tasks as guided.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.1100**Carpenter Worker, Boat Building**

Carpenter Worker, Boat Building designs boats and guides Carpenters, Boat Building, Wood Sawyers, Hand etc. in constructing them according to specifications. Designs small boats and rafts; watches construction of templates, ribs, planking etc.; and guides construction at every stage of checks; laying of keel, setting of templates, fitting of ribs etc. and corrects them if necessary. Checks broken ribs and prescribes dimensions for fitting new ones. Examines planks for 'grains', instructs carpenters to insert small pegs where 'knots' are found and ensures correct riveting of planks on ribs. Draws 'mould loft' (full scale drawing) based on design on platform and guides Carpenters in engine, davit (side crane), winch and other installations, shaft alignment, rudder fitting, copper-sheet fitting, cabin fixture settings, etc. on boats. May supervise workers in saw mill attached to boat-building yard if required.

ISCO 08 Unit Group Details:

Code	7115
Title	Carpenters and Joiners

7115.1200**Carpenter, Boat Building**

Carpenter, Boat Building constructs and repairs boats, launches dredgers, barges etc. according to prescribed specifications by various carpentry processes. Lays keel on wooden fixtures and fits stem, stern and templates as to keel with bolts and nuts. Places cut planks on skeleton of boat to ascertain suitability and remodels their shape, if required, with hand tools. Seasons planks and ribs (wooden reapers) either with steam in masonry steam box (gutter) or by applying oil over articles,

heating them on fire and bending them lightly with hand as required. Fixes planks on templates with brass screws, nails ribs on bull with copper nails and rivets planks and ribs together as specified. Fits wooden clamps, mounts and fixes stringers (thick wooden planks) knee (wooden block between wooden clamps and built joints inside hull) etc. as required. Removes templates from completed boat. Bores holes over required part of hull, fixes engine foundation, lowers engine on foundation by chain block and secures it in position with bolts and nuts. Determines propeller shaft alignment and bolts shaft to engine coupling. Hoists and fixes decks, chains, mast, booms etc. on boat as per requirements. Fits copper sheeting over outer portion of hull with copper nails and fixes rudder, rudder-shoe, exhaust pipe and such other accessories on boat as specified. Performs all wood work repairs to boats, larges etc. under guidance of Carpenter Mistry, Boat Building. May construct wooden accessories for boats such as engine foundation, templates, ribs etc.

ISCO 08 Unit Group Details:

Code	7115
Title	Carpenters and Joiners

7115.1300**Caulker, Boat Building**

Caulker, Boat Building caulks seams of deck, hull and keel of boat with caulking material, using hand tools. Mixes caulking materials such as caulking cotton and oakum in coconut oil or pitch in castor oil. Makes clearances with chisel on seams and plank joints where required. Inserts caulking material by hand and blunt chisel inside clearances made and beats with hammer to push caulking material lightly

into them. Observes caulked portions to ascertain defective caulking and rectifies them by inserting further layers of material, if necessary. Melts rosin and vep oil in fire and strains and mixes it (mixture) with required quantity of quick-lime to make Putty. Applies putty by hand over caulked portions on boat. Examines and applies final touch as putty where necessary. May prepare putty with paint, chalk and linseed oil to apply it over portions above water level and where copper sheeting are not provided.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

7115.9900

Carpenters and Joiners Operatives, Other

Carpentry and Joinery Operatives, other perform variety of routine and low skilled tasks such as sawing, cleaning, rough planning, drilling etc., and may be designated as Carpenter Mate, Carpenter Helper, Joiner Helper, etc.

ISCO 08 Unit Group Details:

Code 7115
Title Carpenters and Joiners

Family 7119

Building Frame and Related Traders Workers, Not Elsewhere Classified

This family covers building frame and related trades workers not classified elsewhere in group 711, Building frame and related trades workers. For instance, the group includes steeplejacks, scaffolders and demolition workers.

7119.0100

Well Digger

Well Digger digs wells to obtain water and for constructing base for structural columns and pillars. Examines earth to select digging implements such as shovel, hammer, etc. Locates area and marks outline on ground. Digs pit by excavating earth with pick axe and shovel and bails out excavated earth using basket. Fixes tripod structure over well to facilitate digging and bailing out of mud from depth and repeats process of digging and excavating earth to required depth. Sets baked earthen or prefabricated cement concrete rings from water level up to surface in well to prevent caving of surrounding soil into it. Raises surface structure around well by securely setting some more cement or earthen rings or gets cover wall constructed around it up to suitable height to prevent accidental fall into it. May get brick wall gradually constructed and sunk around total depth of dug earth in well, particularly in areas having soft soil. May pump out water through bucket or hand pump. May blast rocks with dynamite.

ISCO 08 Unit Group Details:

Code 7119
Title Building Frame and Related Traders Workers, n.e.c.

7119.0200

White Washer

White Washer applies white or colour wash in wall ceiling etc. using hand brush. Studies colour scheme and estimates material required. Selects lime or colour according to specification and prepares colour or white lime solution mixing it with water. Strains mixture and visually tests its density and shade. Makes end of washing brush soft and uniform. Scrapes

and cleans surface to be white washed and washes wall or ceiling with lime or colour using hand brush. Examines washing after drying and applies second coat on defective patches to make it look uniform. May do minor plastering repairs.

ISCO 08 Unit Group Details:

Code 7119
Title Building Frame and Related Traders Workers, n.e.c.

7119.0301

Assistant Scaffolder

Assistant Scaffolder is able to put up scaffold, rigs, guard rails and planks securely and fix the items at heights by observing and ensuring all safety and security measures. The main task of scaffolder is to erect scaffolding, shoring or brace, select tools, equipment and materials from yard and transport item to site.

Qualification Pack Details:

QP NOS Reference CON/Q0303
QP NOS Name Assistant Scaffolder
NSQF Level 2

ISCO 08 Unit Group Details:

Code 7119
Title Building Frame and Related Traders Workers, n.e.c.

7119.9900

Building Frame and Related Trades Workers, other

Building Frame and Related Trades Workers, other include workers engaged in building frame and related trades tasks not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7119
Title Building Frame and Related Traders Workers, n.e.c.

Group 712

Building Finishers and Related Trades Workers

Building finishers and related trades workers cover, apply or install, maintain and repair roofs, floors, walls, insulation systems, glass in windows or other frames, as well as plumbing, piping and electrical systems in buildings and other structures.

Occupations in this Group are classified into the following Families:

7121	Roofers
7122	Floor Layers and Tile Setters
7123	Plasterers
7124	Insulation Workers
7125	Glaziers
7126	Plumbers and Pipe Fitters
7127	Air Conditioning and Refrigeration Mechanics

Family 7121 Roofers

Roofers build and repair roofs on all types of buildings using one or more kinds of materials.

7121.0100

Tile Layer, Roof

Tile Layer, Roof lays and sets tiles over rafters joining them with mortar to make roofs of buildings. Measures location for each row of tiles over rafters and

estimates quality and quantity of material required. Marks guide lines with chalk. Discards defective tiles and places good tiles in position on buttons over rafters adjusting them in grooves by hand as required and cutting and shaping them wherever necessary for proper setting and alignment. Inserts nails or cement mortar in between tiles to fix and make them water tight. Fills gap between tiles or covers exposed nails with cement. Cleans surface of tiles using gunny bag and water. Ensures proper setting of tiles by observation and using alignment string and wooden level. May replace broken tiles and punch holes where required.

ISCO 08 Unit Group Details:

Code	7121
Title	Roofers

7121.9900

Roofers, Other

Roofers, Other include all other workers engaged in roofing buildings and structures such as those setting and fixing galvanized iron, asbestos sheets, or other materials for roofing purposes, mending leakages in them by repairs or replacements, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7121
Title	Roofers

Family 7122

Floor Layers and Tile Setters

Floor layers and tile setters install, maintain and repair flooring, and cover floors, walls and other surfaces with tiles

or mosaic panels for decorative or other purposes.

7122.0100

Tile Setter

Tile Setter; Tile Layer fits and sets tiles to walls, floors and ceilings of buildings according to specified design using cement or other mortar and hand tools. Receives instructions regarding specifications, layout and material to be used. Soaks tiles in water to prepare them for setting. Applies mortar or cement coat over wall with trowel and lays tiles aligned in rows according to pattern. Checks alignment of tiles laid with straight edge, levelling hoard, spirit level etc., makes adjustments if necessary and taps them with trowel handle to get them set firmly. Sprinkles dry cement over freshly laid concrete for laying floor tiles and ensures proper bond between cement and tiles while laying. Cuts and shapes tiles for corner pieces, fills gaps with cement as necessary and ensures proper joining setting and alignment. May erect scaffolding for setting ceiling tiles.

ISCO 08 Unit Group Details:

Code	7122
Title	Floor Layers and Tile Setters

7122.0200

Concrete Mixer (Mosaic Tile)

Concrete Mixer, Mosaic Tile makes ready mix (mall) for making mosaic tiles by mixing cement, marble chips and other colouring ingredients in water. Studies requirements of customers and evolves colour pattern scheme and shades. Measures required quantity of cement, marble powder or chips and colouring powder (oxides) and places them in container. Adds prescribed quantity of

water to mixture. Mixes it uniformly using hand trowel to make paste of required consistency. Places ready mix (mall) near tile presser for making mosaic tiles. Checks whether mixture conforms to required colour and shade by making sample tile and alters proportion of mixture to attain required colour combination if necessary. May operate tile pressing machine.

ISCO 08 Unit Group Details:

Code 7122

Title Floor Layers and Tile Setters

7122.0300

Tile Presser (Mosaic)

Tile Presser, Mosaic makes coloured mosaic tiles for floor walls etc. according to design. Places metal mould of required size on table, cleans it with brush and applies linseed oil on its surface. Fills mould manually with prescribed quantity of cement mixture (mall) containing marble chips or powder. Levels mixture in mould using metal spreader. Sprays dry (nead) cement powder over mixture for absorbing moisture when pressed. Fills layer of cement powder with wet mixture of cement and sand and closes mould with metal lid or cover. Places filled mould under hand or hydraulic press and operates it by levers to press mixture in mould to form tiles of required shape. Removes pressed mould and dismantles frame. Removes pressed tile places it on racks for drying before curing it in water and repeats process. May repair hand or hydraulic presses.

ISCO 08 Unit Group Details:

Code 7122

Title Floor Layers and Tile Setters

7122.0400

Planer (Mosaic Tile)

Planer, Mosaic Tile operates smoothening machine to grind surface of mosaic tiles to evenness and to expose marble chips to view. Starts machine fitted with revolving circular metal plate. Places tiles on revolving bed of machine with smooth side of tiles facing metal plate on entire area of circular bed. Fills tanks placed above machine with water and sand and opens them to allow water and sand to fall on rotating bed in prescribed ratio. Watches tiles getting ground by mixture of water and sand in metal bed for prescribed period of time and ensures required finish. Removes ground or planed tiles from bed of machine and replaces them with fresh tiles. Keeps place neat and tidy.

ISCO 08 Unit Group Details:

Code 7122

Title Floor Layers and Tile Setters

7122.0500

Mosaic Layer

Mosaic Layer; Terrazzo Layer lays mosaic surface and floors according to specified designs using stone chips cement sand etc. and gives glossy finish to surface. Examine drawings and pattern of mosaic laying and estimates material required. Selects material like stone chips of required colour, cement, sand etc. and mixes them together in water or takes up mosaic panels, mosaic tiles, stones, ceramic, opaque coloured glass and similar other material as designed. Prepares ground by setting levels and laying cement mixture or lime mortar to required thickness. Allows cement floor to set and dry. Rakes-out (clips off) cement floor with trowel or otherwise to create unevenness over surface and spreads

coating of mosaic plaster material over it. Levels and smoothens it with trowel and wooden smoothener and cures it with water for specified period. Grinds surface with stones to give glossy finish. Pour noad cement (Mixture of cement and water) on surface for grouting, lays mosaic tiles and panels on it according to design, if necessary after sizing them, levels them with wooden leveller to ensure uniform height and fills gaps in between them with cement of matching colour if engaged in laying precast tiles and panels. Ensures proper setting and cures laid tiles and panel, sprinkling water as required. Cleans surface by rubbing with polishing machine or hand grinding stones and cleans it with gunny bag. May apply finishing and shining polish. May cut mosaic panels out of bigger pieces.

ISCO 08 Unit Group Details:

Code 7122

Title Floor Layers and Tile Setters

7122.0600

Parquetry Floor Layer

Parquetry Floor Layer lays all kinds of ornamental parquetry floor designs according to lay-outs furnished by Architect. Studies design and shapes and finishes required type of wood accordingly. Covers sub-floor with building paper or other material to protect wood from moisture. Nails wood flooring according to design, if necessary by further tooling to suit dimensions. May secure floor to mastic or asphalt base without using nails. May hammer narrow strips of wood into place on asphalt-mastic base.

ISCO 08 Unit Group Details:

Code 7122

Title Floor Layers and Tile Setters

7122.9900

Floor Layers and Tile Setters, Other

Floor Layers and Tile Setters, Other include all other workers engaged in floor laying and tile setting, like tasks, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7122

Title Floor Layers and Tile Setters

Family 7123 Plasterers

Plasterers install, maintain and repair plasterboard in buildings, and apply decorative and protective coverings of plaster, cement and similar material to the interiors and exteriors of structures.

7123.0100

Plasterer

Plasterer plasters walls, ceilings and other surface of structures with cement, lime, mud or other mortar using hand trowel, level etc. Mixes sand, cement, lime brick powder etc. in required proportion adding water to it to prepare plastering mortar. Wets structure to be plastered with water to ensure proper adherence; spreads plaster with trowel to give preliminary coating. Levels and smoothens primary coat of plaster with straight edge, shapes borders to guide second coating and scratches surface of primary coat to provide bond for subsequent coating. Plasters area to be covered with primary coat and allows it to set for some time ensuring that it does not get dry before final coating. Applies thin layer of finish plastering coat over surface, makes out corners and angles to suit it and smoothens plastered area with straight

edge and trowel. Directs and supervises sprinkling of water for curing during plastering and watches drying and final outcome of surface. May undertake ornamental plastering.

ISCO 08 Unit Group Details:

Code	7123
Title	Plasterers

7123.9900

Plasterers, Other

Plasterers, other include workers who install and repair laths and apply plaster to walls and ceilings of buildings not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7123
Title	Plasterers

**Family 7124
Insulation Workers**

Insulation workers apply and repair insulating materials to buildings, boilers, pipes or refrigeration and air-conditioning equipment.

7124.0100

Building Insulator, Hand

Building Insulator, Hand applies slabs or bats (sheets) of insulating material, such as cork or spun glass, to walls, floors and ceilings in buildings. Examines drawings and other specifications. Nails or wires bats of insulating material, such as rock wood or spun glass to interiors of walls, on attic roofs and on bottom of floors, or spreads hot asphalt on surface and embeds courses of cork slabs in it, or spreads cement mortar with trowel on slabs and sticks them to surface. Nails

slabs to walls and ceilings for additional security. Saws slabs to make them fit at ends of courses and around outlets and fixtures. May construct interior insulating walls by fixing courses of compressed cork blocks one upon another with cementing substance. May finish cork surface of walls and ceilings with plaster or spread concrete over floor slabs to form wearing floor.

ISCO 08 Unit Group Details:

Code	7124
Title	Insulation Workers

7124.0200

Acoustical Insulator

Acoustical Insulator applies adhesive sound absorbing material upon ceilings and other surfaces with power driven machine to reverberation of sound. Prepares machine for operation by filling container with insulating material. Starts machine and directs hose nozzle towards surface to be covered. Applies insulating material to surface in even layer of required thickness. (Excluded are workers who fit acoustical boards by hand to surfaces).

ISCO 08 Unit Group Details:

Code	7124
Title	Insulation Workers

7124.0300

Insulator, Boilers and Pipes

Insulator, Boilers and Pipes applies insulating material such as asbestos mastic, cork, felt or mineral wool to exposed hot or cold surfaces of equipment such as boilers, pipes or tanks. Cleans surface of object to be insulated. Binds heavy wires around object and attaches small tie wires to them. Applies

base coating of asbestos mastic or insulating cement to surface or covers object with layer of insulating material. Covers base or coating or layer with wire netting to reinforce insulation. Fastens netting in place with small tie wires. Applies one or more coatings over wire netting and smooths final coat with trowel. May cover object with felt bound with wire or with gauze covered with plaster of Paris. May cover insulated pipes, etc., with strips of canvas or sacking. May paint or whitewash insulating surface.

ISCO 08 Unit Group Details:

Code	7124
Title	Insulation Workers

7124.0400

Insulator, Refrigeration and Air Conditioning Equipment

Insulator, Refrigeration and Air Conditioning Equipment insulates refrigeration and air-conditioning equipment with various materials, such as cork or asbestos, to retain desired temperature. Shapes, trims and smooths insulating sheets and blocks to cover and to fit parts of equipment such as expansion chamber, condenser and piping. Applies waterproof cement to insulating material and surfaces of members to be insulated and presses them together. Secures insulating material with wire and wire netting. Applies one or more layers of asbestos plaster over wire netting with trowel. Packs walls or partly assembled casing with sheets or loose particles of insulating material. May apply insulating material to hot or cold air ducts and pipes.

ISCO 08 Unit Group Details:

Code	7124
Title	Insulation Workers

7124.9900

Insulation Workers, Other

Insulators, other include all other workers engaged in various tasks in insulating plants, buildings and equipment, not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7124
Title	Insulation Workers

Family 7125 Glaziers

Glaziers measure, cut, finish, fit and install flat glass and mirrors.

7125.0100

Glazier, (Construction)

Glazier; Glass Fitter; Glass Setter (Construction) cuts glass panes or plates to required size and shape and sets them into doors, windows, skylights, show-cases, partition of buildings etc. using hand tools. Measures frame where glass is to be fixed and selects required type of glass sheet. Marks glass according to measurements, cuts it along markings and smoothens edges using hand tools. Mixes chemical ingredients in set proportions to prepare putty for fixing glass. Cleans frame in which glass pane is to be fixed and secures it in frame with nails, metal spring or spring clips. Applies putty evenly on edges firmly to secure glass pane on frame and smoothens with blunt knife or otherwise to ensure desired finish. May fix glass in metal frames by providing rubber lining.

ISCO 08 Unit Group Details:

Code	7125
Title	Glaziers

7125.0200**Glazier, Vehicle**

Glazier, Vehicle cuts ordinary and pressurised glass or moulded cellulose acetate to correct size and fits them in frame of windows, wind-shields, and doors of automobiles, aircrafts, railways and tram coaches etc. edging them with rubber or leather packing. Measures size of door, window, wind-shield frame etc. where glass is to be fixed. Selects appropriate type of glass, cuts it with cutting tool according to requirements and smoothens edges with hand grinder. Heats pressurised and shatter proof glass panels along marked line and breaks it by pressing with hands to required size. Fixes channelling rubber, rubber-lining or leather around edges of glass and sets and secures glass firmly in groove. Oils locks and sets locking chain device while fixing glass panels in automobile doors and ensures their easy raising and lowering operations. Checks and ensures proper setting and fixing of glass by tapping it with hand to feel resistance to wind vibrations produced in running vehicles. May polish glass.

ISCO 08 Unit Group Details:

Code	7125
Title	Glaziers

7125.0300**Picture Framer**

Picture Framer; Photo Framer cuts glass, frame pieces and cardboard to required size and mounts pictures and photos in frame. Measures size of pictures and cuts frame pieces to required size. Cuts joints

at ends of wooden frame pieces and fastens them together with nails to make frame. Places glass sheet on working bench and marks outlines according to required measurements. Cuts glass along marking with cutting tool and smoothens its edges. Cuts plywood and cardboard pieces to size using hand saw and scissors. Fixes Glass in frame, puts picture facing glass over it and places cardboard and plywood on reverse of picture. Drives small nails suitably on rear of frame to hold mounted picture compact and secure glues plain or decorative paper at back; fixes hook on frame to facilitate hanging. Is designated as MIRROR FRAMER if specialized or engaged in framing mirrors. May use only cardboard on reverse side for mounting ordinary pictures. May polish or varnish picture and mirror frames. May grind glass edges by grinding machine.

ISCO 08 Unit Group Details:

Code	7125
Title	Glaziers

7125.9900**Glaziers, Other**

Glaziers, other include all other workers engaged in different tasks, glazing operations in vehicles, buildings and other structures, not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7125
Title	Glaziers

Family 7126
Plumbers and Pipe Fitters

Plumbers and pipe fitters assemble, install, repair and maintain pipe systems, fittings and fixtures for water, gas, drainage, sewerage systems, and hydraulic and pneumatic equipment.

7126.0101**Plumber, General**

Plumber, General lays out, assembles, installs and maintains sanitary fittings and fixtures, sewage and drainage systems, heating and sanitary systems, gas and water pipe lines etc. Receives instructions from Sanitary Engineer or Civil Engineer regarding lay out of pipes, gas or water mains, position of fixtures and fittings, etc. Examines drawings or other specifications regarding size and dimensions of area where sanitary fittings or pipe are to be fitted or laid. Marks points at places to indicate position for fixing brackets and laying pipes. Drills passage holes in walls or floor of premises and fixes necessary brackets, stands, holders etc. to keep or hold fittings and fixtures in position, using nuts, bolts, clamps etc. and tightens them with hand tools. Cuts reams, threads and bends pipes as appropriate. Ensures that pipe lines are laid properly by Pipe Fitter. Joins pipes with sockets, Tees, elbow etc. or with molten lead or lead wool. Caulks joints (operation of making joint seam tight to withstand pressure) and tests them for leaks with pneumatic or hydraulic pressure. May repair and maintain sewerage and pipe lines by replacing washers on leaky faucets, mending burst pipes, opening clogged drains, etc. May do lead burning, dressing and bossing of lead pipe and sheet lead, inlaying of wooden tanks, construction of septic tanks etc.

Qualification Pack Details:

QP NOS Reference	PSC/Q0104
QP NOS Name	Plumber (General)
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0102**Plumber, Operations**

Plumber (Operations) is responsible for operation of plumbing system used in housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference	PSC/Q0108
QP NOS Name	Plumber (Operations)
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0103**Plumber, General-Installation and Repair**

Plumber (General)-II is responsible for installation and repair plumbing systems including those of advanced sanitary fixtures as per manufacturer's specifications in housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference	PSC/Q0110
QP NOS Name	Plumber (General)-II
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0104**Plumber, General Helper**

Plumber (General) Helper is responsible for helping Plumber (General) by carrying and handling of tools and materials required in installation, minor repair and maintenance of plumbing systems.

Qualification Pack Details:

QP NOS Reference	PSC/Q0101
QP NOS Name	Plumber (General) Helper
NSQF Level	1

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0105**Plumber, General Assistant**

Plumber (General) Assistant is responsible for assistance in, preliminary installation and minor repair work of basic plumbing systems in domestic, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference	PSC/Q0102
QP NOS Name	Plumber (General) Assistant
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0106**Plumber, Maintenance and Servicing Assistant**

Plumber (Maintenance and Servicing) Assistant is responsible for assistance in maintenance and servicing of pipes and sanitary fixtures in housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference	PSC/Q0109
QP NOS Name	Plumber (Maintenance & Servicing) Assistant
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0107**Plumber, Maintenance and Servicing**

Plumber (Maintenance and Servicing) is responsible for assistance in maintenance and servicing of pipes and sanitary fixtures in housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference	PSC/Q0112
QP NOS Name	Plumber (Maintenance & Servicing)
SQ. Level	3

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0201**Pipe Layer/Plumber Pipeline**

Pipe Layer; Sewer Pipe Layer lays concrete, stone ware or clay pipes to form sanitary drains and sewers. Receives instructions regarding size and type of concrete, stone ware or clay pipe to be laid. Digs or gets earth dug along marked lines using spade, picks etc. to make trenches for laying pipes. Levels and smoothens bottom of trenches to proper gradient by scooping with shovels. Receives pipes of required size lowered into trench manually or by pulley and adjusts their position by hand or crow-bar for correct levelling and vertical and horizontal alignment. Joins pipes together using appropriate couplings, joints, rings etc. and closes joints by

caulking with fibre and cement to prevent leakage. Tests joints by hydraulic or pneumatic pressure after sealing. Fills trench with earth to cover laid pipe and rams earth to avoid sinking. Is designated as PIPE LAYER WATERMAINS or WATER MAINS FITTER if engaged in laying cast iron or galvanized iron water pipe mains and in caulking their joints with lead to prevent leakage. May lay pipe lines to provide water connection to houses, sanitary sewers etc. May fix meters to stopcocks, remove defects from pipe lines and replace defective ones.

Qualification Pack Details:

QP NOS Reference	PSC/Q0107
QP NOS Name	Plumber Pipeline
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0301 Pipe Fitter

Pipe Fitter lays repairs and maintains, pipes for supply of water, gas, oil or steam in buildings, gardens, workshops, stores, ships etc., according to drawings or instructions. Examines drawings and other specifications or receives relevant instructions. Cuts passage holes for laying pipes in walls and floors. Cuts reams, threads and bends pipes according to specifications. Lays pipes in cut passage and assembles pipe sections with couplings, sockets, Tee's elbows etc. Levels position of pipes using spirit level for gravitational flow. Caulks joints, tests them for leakage with pneumatic or hydraulic pressure and secures pipe line to structure with clamps, brackets, and hangers. Fits water meters, taps etc. to pipe where necessary. Repairs and

replaces leaky pipe lines, taps and joints and provides connections to overhead water tanks. Helps Plumber, General in fittings sanitary fittings to buildings. May join pipe sections and fittings.

Qualification Pack Details:

QP NOS Reference	PSC/Q0108
QP NOS Name	Plumbing (Sanitary Fixtures) Fitter Assistant
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7126
Title	Plumbers and Pipe Fitters

7126.0400 Straightening Machine Operator (Iron and Steel)

Straightening Machine Operator, Iron and steel operates hydraulic, mechanical or pneumatic straightening machine to straighten girders, bars, tubes, joints, plates, angle irons, rails, etc., to required accuracy. Sets metal to be straightened between fixed supports on machine bed using crane and with assistance of helpers as necessary. Locates bent portion of metal to be straightened, by sight, scale or level. Starts machine. Manipulates hand wheel of machine to lower or raise moving ram of machine over metal object to be straightened. Adjusts stroke of ram to required pressure according to nature and extend of bend. Changes position of metal object either by turning or shifting it by hand or moving it to position by hoist for removing bend to required accuracy. Checks object by sight or with straight edge, scale or level to ensure that curves or bends are straightened to required accuracy. Removes straightened metal object from table with assistance of helpers or using hoisting equipment. May

oil and clean machine. May do minor repairs to machine.

ISCO 08 Unit Group Details:

Code 7126

Title Plumbers and Pipe Fitters

7126.0500

Puncher, Metal

Puncher, Metal punches, drills and countersinks holes in strip-plates, boiler frames and other metal parts by machine or hand tools. Studies drawings and other specifications to understand nature of punching operation required. Selects proper size punch and screws it into upper jaw of machine. Hoists and places plate to be punched between die and punch. Aligns hole mark on metal part accurately under punch. Starts machine and releases foot pedal to cause punch descend through plate and cut hole over marked area. Changes position of metal and repeats punching operation. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 7126

Title Plumbers and Pipe Fitters

7126.0600

Pneumatic Chipper

Pneumatic Chipper operates pneumatic chipper and removes excess metal and scrapings from metal products and fixtures such as castings, fixtures, girders, joints etc. Examines metal objects and other structural assemblies and marks areas with chalk requiring chipping of excess metal or burrs to give smooth finish. Connects air nozzle of pneumatic chipper to high pressure air supply pipe. Fits cutting chisel or tool to chuck or spindle or chipper as appropriate. Starts

chipper to rotate chisel or cutting tool at high speed and chips off excess metal and burrs from castings, riveting points, joints, angles etc., by pressing it over marked area. Manipulates machine as necessary and observes metal getting smooth finish. Stops machine and examines chipped area for finish and accuracy by feel of hand or by using tools. Cleans and oils machine periodically.

ISCO 08 Unit Group Details:

Code 7126

Title Plumbers and Pipe Fitters

7126.9900

Plumbers and Pipe Fitters, Other

Plumbers and Pipe Fitters, other perform number of routine and low skilled tasks such as assisting in laying pipes, making water tight joints, fitting sockets and reducers, threading pipes with taps and dies, removing leakages, etc., and are designated as Plumber Mate or Pipe Fitter Helper according to type of work done.

ISCO 08 Unit Group Details:

Code 7126

Title Plumbers and Pipe Fitters

Family 7127

Air Conditioning and Refrigeration Mechanics

Air conditioning and refrigeration mechanics assemble, install, maintain and repair air conditioning and refrigeration systems and equipment.

7127.0100

Mechanic, Refrigeration and Air Conditioning

Mechanic Refrigeration and Air Conditioning Unit installs and repairs refrigeration or air conditioning plant by replacing defective parts, re-seating valves, refitting coils, insulating, requiring electrical connections, soldering etc. Installs at site assembled air conditioning unit and refrigerators giving necessary power connections and making changes to units as necessary to attain desired results. Examines faulty equipment to ascertain nature and location of defects. Dismantles equipment partly or completely according to nature of defects to remove damaged or worn out parts. Replaces or repairs defective parts. Replaces or repairs defective parts to units by re-seating valves, refitting coils, reinsulating system, etc. over hauls units and reassembles them after cleaning components and replacing defective or worn out parts of pumps, compressors, motors, etc., Removes faulty sealed units or sub-units of refrigerators or air conditioning plants and obtains replacements. Conducts vacuum and pressure test of pipe lines and charges system with fresh refrigerant. Sets plant to desired cooling conditions, prevents leakage and ensures attainment and maintenance of required temperature. Gets burnt out motors or generators repaired by Electrician or Electrical Winder and installs repaired ones to plant giving necessary electrical connections. May work in ice factory, cold storage plants, specialized air conditioning units or domestic refrigerators.

ISCO 08 Unit Group Details:

Code 7127

Title Air Conditioning and Refrigeration Mechanics

Group 713

Painters, Builders, Structure Cleaners and Related Trades Workers

Painters, building structure cleaners and related trades workers prepare surfaces and apply paint and similar materials to buildings and other structures, vehicles or various manufactured articles. They cover interior walls and ceilings with wallpaper, clean chimneys and exterior surfaces of buildings and other structures.

Occupations in this Group are classified into the following Families:

7131	Painters and Related Workers
7132	Spray Painters and Varnishers
7133	Building Structure Cleaners

Family 7131

Painters and Related Workers

Painters and related workers prepare surfaces of buildings and other structures for painting, apply protective and decorative coats of paint or similar materials, or cover interior walls and ceilings of buildings with wallpaper or other finishes.

7131.0100

Painter, Building

Painter, Building; Painter, House applies coats of paint, varnish and other similar material to protect or decorate exterior and interior surface of buildings using spray gun, hand brush, etc. Selects paint materials. Mixes paints and matches colours by stirring together proper proportions of pigment, oil, thinner etc. and drying substances. Erects working scaffolding with bamboo poles and wooden planks or positions ladders at required height or places to be painted.

Cleans surface packs, cracks and holes with mud fillers or mortar to prepare it for painting. Applies prime coat and allows it to dry. Brushes or sprays one or more coats of paint on surface to required finish. May finish and decorate surfaces with marble or brick and tile effects or by building silvering, stencilling etc.

ISCO 08 Unit Group Details:

Code 7131

Title Painters and Related Workers

7131.0101

Assistant Painter and Decorator

Assistant Painter and Decorator in this position need to work as semi-skilled category tradesman and perform tasks under instruction and close supervision of Painter and Decorator Level-3. He is expected to carry out shifting of materials, handling tools and tackles mixing of colours and paints. Including identification and surface preparation and housekeeping. He should ensure trade specific compliance to environment, health and safety aspects.

Qualification Pack Details:

QP NOS Reference CON/Q0502

QP NOS Name Assistant Painter
and Decorator

NSQF Level 2

ISCO 08 Unit Group Details:

Code 7131

Title Painters and Related Workers

7131.0200

Painter, Steel Structure

Painter, Steel Structure applies lead oxide, bituminous and other protective or decorative paints on steel framework of buildings, hangers, girders, bridges and other steel structures with hand brush or

spray gun. Rigs up scaffolding, cradles, ladders and other equipment as necessary. Rubs and cleans metal surfaces to be painted with wire brush, coir or other abrasive material to provide clean smooth surface for painting. Stirs readymade paints in containers, mixes turpentine with it for thinning and applies it on metal surfaces with hand brush or spray gun as provided. May mix paint with linseed oil, colouring matter or other substances to obtain proper colour consistency. May burn off old paint with blow lamp and scrap surfaces before painting with sand paper.

ISCO 08 Unit Group Details:

Code 7131

Title Painters and Related Workers

7131.0300

Painter, Industrial

Painter, Industrial applies paint, varnish and similar materials to building and other structure. Chooses the right paint or finish for the surface to be covered taking in to account durability, ease of handling, method of application and customers' wishes. Prepares surface to be covered using scrappers, abrasives, and chemical removers so that paint adheres properly. Removes old coat by stripping, sanding, wire brushing, burning or watering and abrasive blasting. May wash surfaces and do trimming to remove dirt and grease from surfaces; fills holes and cracks; welds; sand-papers rough spots and brushes off dust. Applies primer on new surfaces for the finish coat. Mixes paint and matches colours by stirring together proper portions of pigments, oil, thinner etc. and other substances relying on knowledge of paint composition and colour harmony. Chooses the right paint applicator for each job, depending on the

surface to be covered; characteristics of the finish and other factors. May use brush with soft tapered edge, or paint sprayer. Puts coating liquid in to spray gun tank, couples gun to air hose and adjusts air pressure valves and nozzles when working with sprayer.

ISCO 08 Unit Group Details:

Code 7131

Title Painters and Related Workers

7131.0500

Paper Hanger/Wallpaper Fixer/Decorator

Paper Hanger; Wall Paper Decorator cuts wall paper to proper lengths, applies glue paste on its back and covers walls and ceilings with them for decorative purposes. Selects wall paper of suitable colour, design and size and cuts it into suitable lengths. Erects scaffolding or positions ladder wherever necessary to reach surface to be decorated. Applies coat of glue on back of paper and pastes it on surface to be covered. Trims edges and runs hard rubber over painted paper to smoothen it. May apply sticking material on surface with roller or brush.

ISCO 08 Unit Group Details:

Code 7131

Title Painters and Related Workers

7131.9900

Painters and Related Workers, Other

Painters and Related Workers, other include those who prepare surfaces of buildings and other structures for painting, apply protective and decorative coats of paints or similar materials or cover interior walls and ceilings of

buildings with wallpapers, silk or other fabrics not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7131

Title Painters and Related Workers

Family 7132

Spray Painters and Varnishers

Spray Painters and Varnishers operate spray painting and varnishing equipment to apply protective coatings to manufactured items or structures.

7132.0100

Painter, General

Painter, General applies decorative or protective coats of paint, varnish, shellac, enamel, lacquer or other materials on exterior or interior surfaces, trimming and fixtures of glass, metal, wood, plaster concrete brick, building boards or other objects using brush, spray gun, roller, stencils etc. Receives work order and selects correct type of paint materials with the consideration to suitability, durability, ease of application and estimated cost. Mixes pigments, oils and other ingredients to material where required by manual or mechanical mixing device using paddle or electric mixer to obtain desired colour, shade and consistency. Removes dirt, grease or rough spots and irregularities by scrapers, chemicals and abrasives and patches cracks and holes with putty or other filler. Covers surface with appropriate prime coat or sealer to have suitable surface or base for paint. Brushes, sprays or stencils one or more coats of material on surfaces. May finish or decorate surfaces by gilding, silvering or painting over stencils. May be designated according to object coated or material used. May mix paint with linseed

oil, colouring matter of materials, labour, etc. May erect scaffolds to facilitate work.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0201

Painter, Spray/Painting Technician (Spray Painting)

Painter Spray; Duco Painter applies decorative or protective materials such as paint, enamel or lacquer including synthetic paint on articles of wood, metal etc., using spray painting equipment. Selects and mixes paints to produce desired colour consistency, strains and puts coating liquid into spray-gun tank, couples gun to air-hose and adjusts air-pressure valves and nozzle. Presses trigger and directs spray of prime and finish coats of paint over surfaces and ensures smooth and even finish. Covers with tape areas not to be painted or where painting is to be done in second colouring. Cleans gun and hose with solvent before changing colour and on completion of work. May prepare surfaces for painting, using scrapers, abrasives, chemical removers or other means. May be designated according to article coated or material used.

Qualification Pack Details:

QP NOS Reference CSC/Q0702

QP NOS Name Painting Technician
(Spray Painting)

NSQF Level 2

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0202

Auto Spray Painter/Painter

Painter prepares body surfaces on motor vehicles, and applies paint and other coatings.

Qualification Pack Details:

QP NOS Reference ASC/Q 1406

QP NOS Name Painter Level 4

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0203

Auto Body Painting Technician– Surface Treatment

Auto Body Painting Technician paints, does the touch up and inspection of the body. A Painting Technician does the final painting, touch up and inspection of the body of the vehicle being painted.

Qualification Pack Details:

QP NOS Reference ASC/Q3303

QP NOS Name Auto Body Painting
Technician –L 3

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0204

Automotive Body Painting Technician

Automotive Body Painting Technician paints, does the touch up and inspection of the body. A Painting Technician does the final painting, touch up and inspection of the body of the vehicle being painted.

Qualification Pack Details:

QP NOS Reference	ASC/Q3304
QP NOS Name	Automotive Body Painting Technician –L4
NSQF Level	4

ISCO 08 Unit Group Details:

Code 7132
Title Spray Painters and Varnishers

7132.0205**Auto Spray Painter
Assistant/Painter**

Painter prepares body surfaces on motor vehicles, and applies paint and other coatings.

Qualification Pack Details:

QP NOS Reference	ASC/Q 1407
QP NOS Name	Painter Level 3
NSQF Level	3

ISCO 08 Unit Group Details:

Code 7132
Title Spray Painters and Varnishers

7132.0300**Metal Sprayer**

Metal Sprayer controls portable flame spray equipment to spray corrosion-resistant coatings, such as zinc or aluminium, on objects, such as plates, tanks, and structural shapes according to specifications: Cleans and roughens surface of object to be coated, using sandblasting equipment. Selects nozzle to accommodate size of wire to be melted and sprayed and screws nozzle into place on metallizing gun. Inserts wire into rear of gun and through feed rollers and nozzle. Connects hoses from gun to air compressor and tanks of oxygen and fuel gas, such as acetylene. Turns knobs to synchronize speed of wire feed, air

pressure, and flow of oxygen and fuel indicated on dials to specifications computed from data charts. Ignites gases to melt wire and presses button or trigger to release compressed air, which atomises and sprays molten metal onto work piece. Directs spray over surface of work piece in specified pattern to obtain coating of required thickness as indicated by electromagnetic gauge or amount of wire used. May spray or brush paint or apply sealing material on coated surface for decoration or further protection. May flame-spray non-metallic objects, such as glass or plastics.

ISCO 08 Unit Group Details:

Code 7132
Title Spray Painters and Varnishers

7132.0400**Painter, Sign and Letter**

Painter, Sign or Letter; Letter Writer; Sign Writer plans, lays out and paints in one or more languages letters, signs, figures and monograms on wooden boards, metal plates, walls etc. using pencil brushes and palette. Prepares layout for sign writing, coats back-ground with paint, using paint brushes and allows it to dry. Sketches out lines with free hand in chalk or pencil or gets them marked by dusting on stencils. Mixes paints and pigments to get desired colour consistency and fills in marked out lines of letters and designs with paint using pencil brushes of various sizes. May make signs by cutting out and sticking gold lead lettering to surfaces. May cut stencils and paint signs by brushing and spraying paint over them. May make signs of metal or wood. May transfer designs and monograms and to gliding, silvering, graining etc.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0500**Painter, Brush**

Painter, Brush applies decorative or protective materials such as paint, enamel, varnish, lacquer etc., on metal articles, wood, building boards and other materials using hand brush. Selects correct type of paint and brush, taking into consideration suitability, durability, ease of application and cost or mixes pigments, oils and other ingredients to paint material, as required, to obtain desired colour, shade and consistency. Cleans surfaces with brush, cloth or abrasive material. Removes dirt, grease or rough spots and irregularities by scrapers, chemicals etc. and patches cracks and holes with putty or filler to provide smooth clean surface. Rubs or covers surfaces with appropriate prime coat to have suitable base or surface for painting. Brushes with hand one or more coats of paint material on it to required finish. Cleans brushes on completion of work and maintains them. May be designated according to object painted or material used.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0600**Painter, Wood Work and Furniture**

Painter, Wood Work and Furniture polishes wood and applies decorative or protective coats of materials such as paints, enamel, varnish, lacquer etc., on pieces of furniture, mirror and picture frames, building fixtures and other types of wood work to desired shade and colour

using hand brushes. Selects correct type of paint materials or mixes pigment, oils and other ingredients in proper proportions to obtain desired colour, shade and consistency. Prepares surface by scrapping with hand tools, rubbing with abrasive papers such as sand paper, steel wool or by applying chemicals to remove dirt, grease stains and old paint. Fills cracks and holes with putty, honey wax or filler and smoothens surface by rubbing with cloth, brush or abrasives. Covers surface with enamel, lacquer, paint, stain or varnish as required using hand brush and allows coat to dry. Applies wax or other polishing material with cloth and rubs it to shin finish. May paint decorative designs and mix finishing materials to get desired effect.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0700**Painter, Glass**

Painter, Glass paints ornamental and decorative designs on window glass and other glass articles using paints of required colours and painting brushes. Studies design or ornamental features and draws free hand out lines in chalk, pencil or with special brush on glass planes or other glass wares to be painted. Paints on objects required design, using paints of different colour to match design or pattern. Paints details and shade on coloured glass previously waxed up according to original pattern to complete design of windows used in churches, memorials and residences utilising knowledge of art, portraiture and effect of light and shade on glass. Cleans brushes in oil or solvent after painting. May estimate cost of work. May paint walls, roof etc., of

buildings. May stain back of painted glass pieces with silver chloride to achieve gold effect.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0900

Painter, Mate

Painter Mate; Painter Helper assists painters in their work by performing routine tasks such as cleaning and preparing surfaces, mixing paints or colours under instructions, carrying tools and other equipment from one place to another, supplying material to painters and assisting them in their work. Cleans surfaces of object to be painted with brush, cloth or abrasive material and removes grease and dirt with chemical solvents, patches cracks and holes with putty or other filling and assists painter in his work by supplying paint, brushes etc. as required. Keeps brushes and other painting equipment clean. May do brush painting for ordinary purposes. May cover surfaces with appropriate prime coat to have suitable base for paint.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.0901

Automotive Paint Shop Assistant

Automotive Paint Shop Assistant will be involved in BIW Inspection, loading of the body in the conveyor and processes of Sealing and sanding of the vehicle part.

Qualification Pack Details:

QP NOS Reference ASC/Q3302

QP NOS Name Automotive Paint

Shop Assistant

NSQF Level

2

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

7132.9900

Varnishers and Related Workers, Other

Varnishers and Related Painters, other include all those who paint vehicles such as cars, buses or trucks, or apply protective coats of enamel or varnish on metal, wooden and other manufactured articles, usually with a hand-spraying device not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7132

Title Spray Painters and Varnishers

Family 7133

Building Structure Cleaners

Building structure cleaners clean exterior surfaces of buildings and other structures, and remove soot from chimneys.

Sub Division 72

Metal, Machinery and Related Trades Workers

Metal, machinery and related trades workers cast, weld, forge and, by other methods, form metal, erect, maintain and repair heavy metal structures, engage in machine-tool setting as well as in fitting, maintaining and repairing machinery, including engines, vehicles, or they produce tools and various non-precious-metal articles.

The work is carried out by hand and by hand-powered and other tools which are

used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of the work organization, the materials and tools used, and the nature and purpose of the final product. Tasks performed by workers in this sub-major group usually include: making moulds and cores for casting metal; casting, welding and shaping metal; installing, erecting, maintaining and repairing heavy metal structures, tackle and related equipment; forging and forming steel and other non-precious metals to make and repair machinery, tools, equipment and other articles; setting for operators or setting and operating various machine tools; fitting, maintaining and repairing industrial machinery, including engines and vehicles. Supervision of other workers may be included.

Occupations in this Sub Division are classified into the following Groups:

721	Sheet and Structural Metal Workers, Moulders and Welders, and Related Workers
722	Blacksmiths, Tool Makers and Related Trades Workers
723	Machinery Mechanics and Repairers

Group **721** **Sheet and Structural Metal Workers, Moulders and Welders, and Related Workers**

Sheet and structural metal workers, moulders and welders, and related workers, make moulds and cores for casting metal, weld and cut metal parts, make and repair articles of sheet metal,

and install, erect, maintain and repair heavy metal structures, tackle, cable-cars and related equipment.

Occupations in this Group are classified into the following Families:

7211	Metal Moulders and Core Makers
7212	Welders and Flame Cutters
7213	Sheet Metal Workers
7214	Structural Metal Preparers and Erectors
7215	Riggers and Cable Splicers

Family **7211** **Metal Moulders and Core Makers**

Metal Moulders and Coremakers make moulds and cores for casting metal.

7211.0100 **Moulder, General**

Moulder, General prepares mould from foundry sand using pattern for casting metal parts. Places pattern on mould plate (Wooden plate with arrangements to hold pattern). Makes mould in two halves (top and bottom) by ramming foundry sand around the pattern. Removes pattern carefully and mends two halves of mould by trowel and smoothers. Makes vent holes by wire for escape of gas and other holes on top box for pouring metal into mould and for escape of excess molten metal (runners and risers). Fixes dried cores in proper position to have designed holes in casting. May prepare bottom half of mould in floor instead of in bottom box. May dry moulds by fire in case of heavy castings. May do additions and alternations in mould from drawing, using foot rule, knife and trowel. May be known as PIPE MOULDER if engaged in pipe moulding.

ISCO 08 Unit Group Details:

Code 7211
 Title Metal
 Moulders and Core Makers

7211.0101**Press Shop Operator**

Press Shop Operator is involved in operating the press machine, overseeing processes of blanking, drawing, etc., monitoring press operations and recording operational data, co-ordinating with die setter during die setting operation and assisting in running the press at optimum efficiency.

Qualification Pack Details:

QP NOS Reference ASC/Q3402
 QP NOS Name Press Shop
 Operator Level 4
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7211
 Title Metal
 Moulders and Core Makers

7211.0102**Press Shop Assistant/Helper**

Helper Press Shop role involves minor routine jobs like removing the scrap generated during the pressing operations (blanking, piercing, etc.), loading blanks and unloading of work pieces on the press line.

Qualification Pack Details:

QP NOS Reference ASC/Q3401
 QP NOS Name Press Shop
 Assistant/Helper
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 7211
 Title Metal Moulders and Core Makers

7211.0200**Moulder, Machine**

Moulder, Machine makes moulds for use in forming molten metal into castings of various sizes, using auxiliary machines, patterns, hand tools and sand or loam. Places plate to which lower half of pattern is attached on machine table. Fixes frame having sides and cross-bars but no top or bottom to plate. Packs sand or loam around pattern. Fills frame with coarser material from chute or by shovelling, and operates machine to ram material. Turns frame over by hand or machine and dusts surface of sand with powder. Fits upper half of pattern to half and pins them together. Fixes another frame on top of frame. Positions channels through which molten metal will be poured and observed. Repeats packing, filling and ramming tasks and pierces holes to allow gases to escape during and after pouring. Loosens frames and turns top frame over and removes halves of pattern. Fits cores in place. Repairs damaged surfaces and treats all surfaces to prevent crumbling of molten metal. Re-joins frames. Shapes channel tops and fits bushes to protect them. May use only one frame and work as member of team in preparing top or bottom frames. May specialize in casting any particular type of metal and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7211
 Title Metal Moulders and Core Makers

7211.0201**Casting Technician-Sand Moulding**

Casting Technician-Sand Moulding manages the specifications of the sand and molten metal, setting up and operating the casting equipment and forming and finishing the final output.

Qualification Pack Details:

QP NOS Reference ASC/Q3205
 QP NOS Name Casting Technician-Sand Moulding
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7211
 Title Metal Moulders and Core Makers

7211.0300

Moulder, Vertical Pipe

Moulder, Vertical Pipe prepares mould for vertical casting heavy pipes. Sets bottom socket in moulding box (casing) by operating crane hoist. Gets ramming done, removes socket pattern and repairs mould after withdrawal of body pattern. Blackwashes mould and gets it dried up. Sets socket core at bottom and gets main and top core lowered and placed securely in concentric position. Is designated as TOP MOULDER or BOTTOM MOULDER according to location of work.

ISCO 08 Unit Group Details:

Code 7211
 Title Metal Moulders and Core Makers

7211.0400

Rammer, Vertical Pipe Moulding

Rammer, Vertical Pipe Moulding rams foundry sand around body pattern and sets core for preparation of vertical pipe moulds. Directs other workers in lowering and fitting it into bottom socket. Fills and rams foundry sand in casing around body pattern. Signals Crane Driver to lower

spigot pattern on top; adjusts and sets pattern with help of gauges and completes ramming around spigot with pin rammers. Removes spigot and body patterns carefully.

ISCO 08 Unit Group Details:

Code 7211
 Title Metal Moulders and Core Makers

7211.0500

Core Maker, Moulding (Hand)

Core Maker, Moulding (Hand) prepares cores with core sand (foundry sand mixed with some bonding agent such as molasses) for casting cavities in metal parts. Sprays ash, silica or other non-adhering powder on sides of core box, partially fills box with core sand, and inserts metal strengthening pins, wires (grid bars). Fills in and compacts more sand until core box is full. Makes vent holes in core with wire. Removes core from core box, mends it if necessary and places it in oven for drying. May apply plumbago mixed with molasses and water to obtain smooth finish on finished castings.

ISCO 08 Unit Group Details:

Code 7211
 Title Metal Moulders and Core Makers

7211.0600

Core Maker, Vertical Pipe

Core maker, Vertical Pipe prepares cores for casting vertical pipes by repeated process of loam application. Applies splash loam uniformly on metal body and covers it with straw roll mechanically. Applies protective loam over it, gets it dried up in gas fixed stoves and

mechanically revolves it against core board to get coating of fine loam. Sizes core by mechanically scrapping off extra material after drying. Cuts off bottom portion of core to prevent crushing during operations. Repairs defects if any, applies thick coating of blackwash and gets it dried up again before use.

ISCO 08 Unit Group Details:

Code 7211

Title Metal Moulders and Core Makers

7211.9900

Metal Moulders and Core Makers, Other

Moulding and Core Making Operatives perform number of routine and low skilled tasks such as ramming foundry sand into mould by rammers (metal bars having flat and round bottom), setting body pattern with help of crane in centre of mould, fixing and removing of sockets for pipe castings, setting pullers for withdrawing machine castings, coating moulds with refractory or insulating powder, assisting in preparation of foundry sand, making bed for moulds, checking conditions of moulds, skimming dirt and slag from molten metal, cleaning and blackening trough, guiding and assisting Crane Driver in stripping castings from metal moulds, etc., and may be designated as Rammer, Socket Putter, Moulder Mates, Moulder Helpers, Pitman, Skimmer, Troughman, Stripper, etc.

ISCO 08 Unit Group Details:

Code 7211

Title Metal Moulders and Core Makers

Family 7212

Welders and Flame Cutters

Welders and flame cutters weld and cut metal parts using gas flame, electric arc and other sources of heat to melt and cut, or to melt and fuse metal.

7212.0100

Welder, Gas

Welder, Gas fuses metal parts together using welding rod and oxygen acetylene flame. Examines parts to be welded, cleans portion to be joined, holds them together by some suitable device and if necessary makes narrow groove to direct flow of molten metal to strengthen joint. Selects correct type and size of welding rod, nozzle etc. and tests welding, torch. Wears dark glasses and other protective devices while welding. Releases and regulates valves of oxygen and acetylene cylinders to control their flow into torch. Ignites torch and regulates flame gradually. Guides flame along joint and heats it to melting point, simultaneously melting welding rod and spreading molten metal along joint shape, size etc. and rectifies defects if any. May join part at various spots to prevent distortion of shape, form dimension etc. May preheat materials like cast iron prior to welding. May also weld by other gases such as argon coal etc.

ISCO 08 Unit Group Details:

Code 7212

Title Welders and Flame Cutters

7212.0101

Plumber (Welder)/Plumbing (Sanitary Fixtures) Fitter Assistant

Plumber (Welder) is responsible for welding activities related to plumbing works in housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference PSC/Q0105
 QP NOS Name Plumber (Welder)
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7212
 Title Welders and Flame Cutters

7212.0102

Plumber (Welder) Assistant

Plumber (Welder) Assistant is responsible for assistance in welding activities related to plumbing works in housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference PSC/Q0103
 QP NOS Name Plumber (Welder)
 Assistant
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 7212
 Title Welders and Flame Cutters

7212.0105

Iron and Steel (Tungsten Inert Gas Welder)

Iron and Steel (Tungsten Inert Gas Welder) performs manual TIG (GTAW) welding for a range of standard welding job requirements. This is for skilled welder who can weld different materials (carbon steel, aluminium, nickel, titanium, copper and stainless steel) in various positions and prepare various joints including corner, butt, fillet and tee. Set-up and prepare for operations interpreting the right information from the WPS.

Qualification Pack Details:

QP NOS Reference ISC/Q0807

QP NOS Name Iron & Steel
 (Tungsten Inert Gas
 Welder)
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7212
 Title Welders and Flame Cutters

7212.0111

Repair Welder

Repair Welder is responsible for maintaining and operating all welding related works. The individual must be able to use hand welding techniques or welding equipment and tools to join various metal components and also carry out repair work on machinery and equipment.

Qualification Pack Details:

QP NOS Reference ASC/Q1902
 QP NOS Name Repair Welder
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7212
 Title Welders and Flame Cutters

7212.0200

Welder, Electric

Welder, Electric Arc Welder fuses metals using arc-welding apparatus and electrodes (welding material). Examines parts to be welded, cleans them and sets joints together with clamps or any other suitable device. Starts generator or transformer (welding apparatus and regulates current according to material and thickness of welding. Clamps one lead (insulated wire carrying current from generator) to part to be welded, selects required type of electrode and clamps it to holder connected with other lead).

Generates sparks between electrode and joint, simultaneously guiding and depositing melting electrode uniformly for welding. Takes precautionary measures such as wearing rubber gloves, holding welding screen of dark glass etc. May join parts first at various points for holding at specified angles, shape, form and dimension.

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.0300

Welder, Machine

Welder, Machine operates gas or electric welding machine to joint metal parts by fusion. Sets machine for operation by igniting burners and adjusting flames or by switching on current. Regulates flow of gas or current and adjusts machine according to material to be welded. Checks cooling system and adjusts movement of conveyor, if any. Feeds material to be welded with either one by one or in batch according to type of machine and welds them by pressing paddle, or by automatic arrangements. May use fixtures or other suitable devices for mass production work. Is designated as SPOT WELDER, FLASH WELDER, etc. according to machine and type of work done.

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.0301

Welder

Welder is also known as Welding Technician, this role is similar for all types of joining techniques like Gas Discharge

Arc Welding (MIG, MAG, TIG), Resistance Welding (Spot Welding, Projection Welding, Butt Welding) and Automatic or Robotic Welding Process. This role is responsible for joining various types of metallic frames, structures, jigs, plates, sheets etc. using heating and melting process created through electrical power and gaseous discharge, maintaining process parameters, conducting quality checks on output product and maintaining a safe and healthy working environment on the shop floor.

Qualification Pack Details:

QP NOS Reference ASC/Q3103
QP NOS Name Welder Level 4
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.0302

Welding Technician

Welding Technician, this role is similar for all types of joining techniques like Gas Discharge Arc Welding (MIG, MAG, TIG), Resistance Welding (Spot Welding, Projection Welding, Butt Welding) and Automatic or Robotic Welding Process. This role is responsible for joining various types of metallic frames, structures, jigs, plates, sheets etc. using heating and melting process created through electrical power and gaseous discharge, maintaining process parameters, conducting quality checks on output product and maintaining a safe and healthy working environment on the shop floor.

Qualification Pack Details:

QP NOS Reference ASC/Q3102
QP NOS Name Welding Technician
Level 3

NSQF Level 3

ISCO 08 Unit Group Details:Code 7212
Title Welders and Flame Cutters**7212.0303****Gas Metal Arc Welder/Metal Inert Gas/Metal Active Gas/Gas Metal Arc Welder (MIG/MAG/GMAW)**

Metal Inert Gas/Metal Active Gas/Gas Metal Arc Welder (MIG/MAG/GMAW) perform manual (semi-automatic) MIG/MAG (GMAW) welding for a range of standard welding job requirements and weld different materials (carbon steel, aluminium and stainless steel) in various positions. The welder can prepare various joints including corner, butt, fillet and tee. Set-up and prepare for operations interpreting the right information from the WPS.

Qualification Pack Details:QP NOS Reference CSC/Q0209
QP NOS Name Metal Inert Gas/Metal Active Gas/Gas Metal Arc Welder (MIG/MAG/GMAW)

NSQF Level 4

ISCO 08 Unit Group Details:Code 7212
Title Welders and Flame Cutters**7212.0400****Gas Cutter**

Gas Cutter; Flame Cutter cuts metal to required shape and size by gas flame either manually or by machine. Examines material to be cut and marks it according

to instruction of specification. Mounts template and sets machine to cut to specifications. Makes necessary connections and fits required size of nozzle or burner in welding torch. Releases and regulates flow of gas in nozzle or burner, ignites and adjusts flame. Guides flame by hand or machine along cutting line at required speed and cuts metal to required size. May use oxyacetylene or any other appropriate gas flame.

ISCO 08 Unit Group Details:Code 7212
Title Welders and Flame Cutters**7212.0402****Iron and Steel Plasma Cutter-Manual**

Iron and Steel Plasma Cutter-Manual cuts different materials (mild carbon steel, stainless steel, aluminium, high tensile and special steels, and other materials) in various profiles. This involve setting-up and preparing operations interpreting the right information from the specification documents, obtaining the right consumables and other materials, etc.

Qualification Pack Details:QP NOS Reference ISC/Q0806
QP NOS Name Iron & Steel Plasma Cutter

NSQF Level 4

ISCO 08 Unit Group Details:Code 7212
Title Welders and Flame Cutters**7212.0500****Brazer**

Brazer fuses metal parts by heating using flux and fillings. Cleans and fastens parts to be joined face to face by wire, by seaming or by any other suitable means and prepares paste of flux and fillings. Applies it to joint and heats in furnace or by torch to melt filling into joint. Allows it to cool down. Examines joint and cleans them by filing, buffing etc.

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.0501

Soldering and Brazing Operator

Soldering and Brazing Operator is responsible for joining various types of metallic frames, structures, jigs, plates, sheets, wires etc. using heating and melting process created through electrical power and gaseous discharge, maintaining process parameters, conducting quality checks on output product and maintaining a safe and healthy working environment on the shop floor.

Qualification Pack Details:

QP NOS Reference ASC/Q4201
QP NOS Name Soldering and
Brazing Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code
Title

7212.0600

Lead Burner

Lead Burner installs and repairs lead tanks, tank lining, pipes, floors and other fixtures and equipment of lead, using blow lamp and hand tools. Cuts section of sheet lead or pipe to size. Scrapes and

levels edges of sections to be joined. Fits section into place and fuses section together by moving flame of lamp along joints or by heating joints with lamp and adding lead from rod or ladle. Makes lead fittings and pipes by cutting, shaping and joining. May fuse, cut or make lead parts of storage battery, tanks, etc. by operating bad burning machine, or using oxyacetylene or oxyhydrogen torch.

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.0700

Welder, Resistance

Welder, Resistance sets up and operates resistance welding machine to join metal parts, according to blueprints, work orders, or oral instructions. Turns machine dials to set air and hydraulic pressure, amperage, and joining time, according to specified type of metal, weld, and assembly. May select, install, and adjust electrodes. Aligns work pieces, using square and rule. May hold pieces together manually, fasten into jigs, or secure with clamps to align in specified assembly position. Holds part between electrodes or positions on machine worktable. Depresses pedal or pulls trigger to close electrodes and form weld at point of contact. Releases pedal or trigger after specified welding time. Cleans electrodes, using file, tip dresser, emery cloth. May operate machine which automatically releases electrodes from metal after welding cycle. May devise and build fixtures to hold pieces. May inspect finished work. May operate machine equipped with two or more electrodes which weld at several points simultaneously. Important variations include types of joints welded (seam,

spot, butt) and types of materials welded (aluminium, steel).

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.0801

Welding Assistant

Welding Assistant, also known as Welding Helper is an assistant to the operator and the entire team, the helper supports peripheral activities/non-core activities in the manufacturing process. The Helper's role is involved in performing small time routine jobs like cleaning, washing, fetching and holding tool for the operators, loading and unloading of work pieces on the welding assembly, bringing raw material and spare parts from the stores etc.

Qualification Pack Details:

QP NOS Reference ASC/Q3101
QP NOS Name Welding Assistant
NSQF Level 2

ISCO 08 Unit Group Details:

Code 7212
Title Welders and Flame Cutters

7212.9900

Welders and Flame Cutters, Other

Welders and Flame Cutters, other perform number of routine and low skilled tasks such as cleaning joints, fitting electrodes, relieving welder and flame cutters in minor operations, fitting nozzle or burner, fitting templates etc. and is designated as Welder Helper, Gas Cutter Helper, etc.

ISCO 08 Unit Group Details:

Code 7212

Title Welders and Flame Cutters
Family **7213**
Sheet Metal Workers

Sheet metal workers make, install and repair articles and parts of articles made out of sheet metal such as sheet steel, copper, tin, brass, aluminium, zinc or galvanised iron.

7213.0101

Sheet Metal Worker, General/Sheet Metal Worker – Hand Tools and Manually Operated Machines

Sheet Metal Worker, General makes sheet metal articles according to drawing or sample. Studies drawing or sample and records measurements if necessary. Selects sheet of required type, thickness (gauge) and size and marks it with scribe, square, divider, foot rule etc., according to drawing or sample. Shears wherever necessary by machine or hand shears and makes it to required shape and size by bending, seaming, forming, riveting, soldering etc., using mallets, hammers, formers, sets, stakes, etc., or by various machines such as shearing, bending, beading, channelling, circle cutting. Checks work at stages during operations and does soldering, brazing as necessary. May undertake pneumatic and hydraulic tests. May also undertake repair work. May specialize in different metal sheets such as tin, copper, brass.

Qualification Pack Details:

QP NOS Reference CSC/Q0301
QP NOS Name Sheet Metal Worker
– Hand Tools and
Manually Operated
Machines
NSQF Level 2

ISCO 08 Unit Group Details:

Code 7213
Title Sheet Metal Workers

7213.0200**Sheet Metal Worker, Structural**

Sheet Metal Worker, Structural assembles, alters and repairs prefabricated sheet metal sections according to specifications by various mechanical processes such as drilling, riveting, trimming, soldering etc. to form body structures of motor vehicles, aircraft, water tanks etc. Studies drawings and other specifications. Selects prefabricated metal sheet of required size, shape, form and thickness, measures them and marks outline and positions to indicate joints, bends etc. Punches or drills holes in metal sheets at marked points with hand or tools and joins various parts together by riveting, soldering, welding or with nuts and bolts. Bends metal sheet to required shape and covers it by joining it with frame at suitable places with nuts and bolts. Trims ends of bent metallic sheet by filing, sawing, bending etc. as appropriate. May install assembled body structure on frames for having wooden parts fitted to it. May heat and bend metallic parts of frame. May do spot welding.

ISCO 08 Unit Group Details:

Code 7213
Title Sheet Metal Workers

7213.0201**Auto Engine Repair Technician**

Auto Engine Repair Technician is responsible for the repair of vehicle engines and aggregates.

Qualification Pack Details:

QP NOS Reference ASC/Q1409
QP NOS Name Auto Engine Repair Technician
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7213
Title Sheet Metal Workers

7213.0301**Dent Remover/Auto Body Repair Technician/Denter**

Dent Remover; Panel Beater removes dents from sheet metal parts such as mudguards, body panels, tanks, containers, trunks by beating with mallets, smoothens surface for painting and other operations. Gets parts dismantled, examines dents caused by stress or accidents and starts beating from highest point on inner side with mallet to bring it back to original shape. Supports outer surface with soft metal-piece, wood or broader mallet to avoid distortion in reverse direction. Manipulates support and uniformly beats inner portion till damaged portion is reformed to original shape. May engage an assistant to hold support and guide him in manipulating it. May also scrape or lightly file outer surface to remove further defects, if any, for obtaining finer finish.

Qualification Pack Details:

QP NOS Reference ASC/Q 1410
QP NOS Name Auto Body Repair Technician/Denter
Level 3
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7213
Title Sheet Metal Workers

7213.0302**Auto Body Technician/Denter**

Auto Body Technician is responsible for repair of vehicles and for carrying out work on the body and frame of a vehicle following the manufacturer's repair procedures.

Qualification Pack Details:

QP NOS Reference	ASC/Q 1405
QP NOS Name	Auto Body Technician/Denter Level 4
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7213
Title	Sheet Metal Workers

7213.0400

Tinsmith/Whitesmith

Tinsmith makes and repairs cart-lamps. Containers, funnels, oil cans, siphons etc., from thin mild steel, galvanized or other sheets according to samples or instructions for commercial and domestic use. Measures sample with foot rule and callipers, selects required type of metal sheet, marks and cuts it accordingly with hand scissors. Develops sheet to required shape by beating and bending using mallet, rods, patterns, rails, stakes, etc., and solders joints as required. Secures joints by seaming or riveting and tests them for leakage. May be designated as COPPER-SMITH, BRASS-SMITH etc., according to material in which worked.

ISCO 08 Unit Group Details:

Code	7213
Title	Sheet Metal Workers

7213.0500

Tin Coater

Tin Coater; Kalaigare applies thin coating of tin on brass and copper utensils for

domestic use. Makes small charcoal fire, cleans (degreases) utensils by scribbling with dry sand or any other such abrasive, heats up utensils on fire, sprinkles powdered ammonium chloride and tin stick or powdered tin on it, allows tin to melt and spreads melted tin over entire required surface with cotton or wool pad. Repeats and again rubs coated surface to ensure smooth finish.

ISCO 08 Unit Group Details:

Code	7213
Title	Sheet Metal Workers

7213.0600

Machine Feeder and Off bearer

Machine Feeder and Off bearer feeds materials into or removes materials from machines or equipment that is automatic or tended by other workers. Feeds materials into machines and equipment to process and manufacture products. Off bears materials and products from machines and equipment, using hand tools. Cleans and maintains machinery, equipment, and work areas to ensure proper functioning and safe working conditions. Moves controls to start, stop, or adjust machinery and equipment. Modifies materials and products during manufacturing process to meet requirements. Records production and operational information and data on specified forms. Identifies and marks materials, products, and samples, following instructions. Weighs or measures materials or products to ensure conformance to specifications. Inspects materials and products for defects and to ensure conformance to specifications. Fastens, packages, or stacks materials and products, using hand tools and fastening equipment.

ISCO 08 Unit Group Details:

Code 7213
Title Sheet Metal Workers

7213.9900**Sheet Metal Workers, Other**

Sheet Metal Workers, Other perform number of routine and low skilled tasks, such as doing primary development of sheet metal, cutting sheets to sizes, assisting in operating sheet metal machines, applying brazing compound on joints to be brazed, heating rivets for assembly etc. and are designated as: Sheet Metal Helper if assists Sheet Metal Worker by performing simple flanging, punching, shearing soldering etc. for fabrication of sheet metal products, Tin Smith Helper if cuts tin sheets according to drawing or sample using foot rule, callipers and compass and assists Tin Smith in bending, shaping and joining various component parts. Sheet Metal Machine Helper if assists Sheet Metal Machine Operator in setting and operating sheet metal working machines such as bending machine, channelling machine, shearing machine etc.

ISCO 08 Unit Group Details:

Code 7213
Title Sheet Metal Workers

Family 7214**Structural Metal Preparers and Erectors**

Structural metal preparers and erectors assemble, erect and dismantle structural metal frames of buildings and other structures.

7214.0300**Boiler Fitter**

Boiler Fitter sizes and fits various components and mountings to boilers and assists Boiler Maker in preparing boilers for steam and hydraulic tests. Marks components according to drawings and sizes them accurately by chipping, filing, drilling, reaming, tapping, scrapping etc. to required specifications, checking frequently with precision measuring instruments. Locates carefully position of different mountings such as regulator, super heater, header, pressure gauge, seating, safety valve by measuring instruments and gauges and fits them on boiler. Fits external water and lubrication pipes. Performs various duties as instructed by Boiler Maker such as cleaning of pipes, connecting pump, sealing etc. and assists him in preparing boiler for hydraulic and steam tests. May also undertake riveting, caulking, replacing of worn out and defective parts.

ISCO 08 Unit Group Details:

Code 7214
Title Structural Metal Preparers and Erectors

7214.0400**Tubsmith, Boiler**

Tubsmith, Boiler forms, repairs and maintains boiler tubes, cuts tubes to required length, grinds surfaces, reams holes, expands or reduces ends and swages them as required. Repairs or replaces defective or worn out tubes and tests for leakage by hydraulic pressure. May do descaling and cleaning of boiler tubes.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.0500

Boiler Maker

Boiler Maker makes layout of boiler from drawings, fits and assembles different parts, adjusts valves, prepares boiler for steam and hydraulic tests and undertakes repairs of boilers. Studies drawing, sets barrel of boiler in position, marks out locations and fits different units such as stays, flue tubes with super heater, header, thermo-siphon, injection and external pipes, fire grate, ash pan, smoke box tube plate, junction rings, etc. Repairs and replaces tubes, stays, grates etc. as and when required. Expands tubes and adjusts valves and other functional parts of boiler. Does riveting, caulking reaming, beading etc. as required by pneumatic, hydraulic and mechanical devices. Checks components, fittings, mountings etc. and prepares boiler for inspection at different stages and also for hydraulic and steam tests. May assemble tanks, vats and other heavy steel vessels with prefabricated parts. May also alter boiler parts and repair pumps, pipe lines etc.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.0600

Erector, Structural

Erector, Structural; Erection Fitter, Structural erects iron and steel framework at site for construction of buildings, bridges, chimneys, drilling rise, ropeways, etc., under guidance of structural Engineer. Examines drawings, site facilities and other specifications to determine

kinds of lifting tackles, men, etc., required. Collects steel members such as truss, rafter, posts, etc., sets up hoisting equipment for raising and placing them and erects scaffolding. Aligns and bolts members in position for riveting. Drills, reams or enlarges holes and smoothens rough surfaces using pneumatic or electric tools, gets fabricated members slinged and lifted using lifting tackles, ropes, chains, crane etc. as necessary, structural steel places them according to specifications and joins them permanently in order of sequence to form completed structure or its frame work. May rivet or weld members together.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.0700

Fitter, Structural

Fitter Structural assembles and fits together various parts of heavy structures such as bridges, overhead cranes, hoists, ship etc. in workshop according to drawings under instructions of structural Engineer, and dismantles them for transporting to site for final construction. Examines drawings and other specifications. Checks parts to be fitted together. Cuts steel plates and angle iron using power shear or flame cutting equipment. Drills holes for bolts and rivets. Aligns members in position with connecting pins to ensure that members fit together properly preparatory to permanent erection of structures at site. Checks alignment of members with spirit level, etc., to ensure accuracy of fit. Dismantles parts of assembled structures to facilitate transportation to site. May bend or otherwise shape plates and

assemble structural members by fitting, forging, drilling, riveting, bolting, or welding.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.0800

Fitter, Construction

Fitter, Construction erects columns, trusses and general fabrication work at site for construction of buildings, heavy foundations, hangars, sheds, etc. under guidance of Civil Engineer or Overseer. Examines drawings and other specifications. Selects rods and cuts them to required length. Bends rods using hand tools or bending machine and joins them together with wires or fasteners. Places rods in forms and fixes them in position. May reinforce concrete with wire mesh.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.0900

Riveter

Riveter joins permanently metal parts, plates etc. with rivets either manually or by pneumatic or hydraulic machines. Selects correct size and type of rivets. Ensures by sight or calculation that rivets are of correct length including allowances for riveting and cuts them if required, to correct length. Gets them heated up by Riveter Helper if necessary. Sets parts or plates in correct position, aligns holes and inserts rivets. Directs Dolly Man to hold dolly in position or holds it by suitable mechanical device and snaps other end to

required shape by manual or mechanical process. Checks and ensures that rivets are not loose or bent and heads have been correctly formed. May detect faulty rivets, and drive them out after chipping or sawing rivet heads. Reams rivet holes manually or by drilling machine, if necessary, and fixes new rivets. Is designated as CAULKER if engaged in caulking seams, stays, rivets etc. with caulking tools. May also do beading.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.1000

Riveter (Railroad Equipment)

Riveter (Railroad Equipment) rivets structural members, assemblies, and parts of railroad cars, using portable riveting, dimpling, and drilling machines and hand tools: Reads work orders, blueprints, and operation sheets to determine sequence of operations and type size and hole pattern of rivets. Removes temporary bolts or fasteners and inserts rivets in predrilled holes. Places drive head of rivet gun against rivet shank and pulls trigger to actuate hammer that spreads rivet, or spreads rivet, using rivet set and hammer. Rivets together adjoining edges of parts and assemblies, using portable rivet squeezer. Places two dies of rivet squeezer overhead and shank of rivet, and presses trigger to activate dies that flatten shank of rivet. Drills and reams rivet holes and drills out defective rivets. Forms dimples around rivet holes, using portable dimpling gun or stationary dimpling machine. May align and assemble parts to be riveted, using jigs, holding fixtures, pins, clamps, and fasteners. May buck rivets.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.1101**Assistant Bar Bender and Fixer**

Assistant Bar Bender and Fixer works as semi-skilled category tradesman and perform tasks under instruction and close supervision of Bar Bender and Fixer Level-3 as Assistant Bar Bender and Fixer. He is expected to read and understand drawings, Bar Bending schedule, fabricate, store, transport and place reinforcement in position while effectively engaging and supervising the Helper under him for all trade relevant tasks. He should ensure trade specific compliance to environment, health and safety aspects.

Qualification Pack Details:

QP NOS Reference CON/Q0202

QP NOS Name Assistant Bar Bender and Fixer

NSQF Level 2

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

7214.9900**Structural Metal Prepares and Erectors, Other**

Structural-metal Preparers and Erectors, other include workers who shape, assemble and erect heavy metal girders and plates to form structures and frame-works not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7214

Title Structural Metal Preparers and Erectors

**Family 7215
Riggers and Cable Splicers**

Riggers and cable splicers assemble rigging gear to move and position equipment and structural components, or install and maintain cables, ropes and wires on construction sites, buildings or other structures.

7215.0100**Rigger**

Rigger erects lifting and hauling tackles, pulleys, wire ropes, etc. to lift, move or lower heavy articles such as girders, beams, roofing sheets, machinery, logs, etc. for building, erection, construction or similar purposes. Selects cables, ropes, pulleys, winches, blocks, and sheaves, according to weight and size of load to be moved; attaches pulley and blocks to fixed overhead structures, such as beams, ceilings and pole booms, with bolts and clamps; attaches load with grappling devices, such as loops, wires, ropes and chains, to crane hook; gives directions to Electric Bridge or Gantry Crane Operator or other Hoist Operator engaged in hoisting and moving loads to insure safety of workmen and material handled using hand signals, loud speaker, or telephone. May splice rope and wire cables to make or repair slings and tackle. May direct workers engaged in hoisting machinery and equipment into ships and be designated MACHINERY ERECTOR (Ship and boat building and repair). When hoisting and moving construction machinery onto truck beds, may be designated as MACHINE MOVER (Construction).

ISCO 08 Unit Group Details:

Code 7215
Title Riggers and Cable Splicers

7215.0101**Rigger: Rigging of Heavy Material**

Rigger: Rigging of Heavy Material selects tools and tackles, understanding and analysis of load distribution and lifting, moving (to be tied with manila rope to arrest lateral movement of loads safely as per needs of the group (Fitter, Welder etc.)

Qualification Pack Details:

QP NOS Reference ISC/Q0817
QP NOS Name Rigger: Rigging of Heavy Material
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7215
Title Riggers and Cable Splicers

7215.0200**Slinger**

Slinger Crane Hooker assists workers engaged in operating power shovels or cranes used to lift and move machinery equipment or materials such as concrete, castings, mill rolls, scrap metal, pipe, dirt and logs from one place to another. Affixes rope, cable, chain, sling or other grappling equipment or attachments to object being lifted or to lifting mechanism; places blocking or screw jacks in position to hold crane or shovel upright when lifting heavy loads; signals operator, vocally or with hand signals, to guide operator in lifting and moving loads when view from crane or shovel cab is obstructed; pushes or pulls load as it is lowered until it is deposited in desired place; removes grappling attachments or

pulls lever crane or shovel with grease gun or oil can. May be designated according to equipment used, attachments made or area worked, as CONCRETE BUCKET HOOKER (CONSTRUCTION) LOG HOOKERS (SAWMILL), MAGNET PLACER (IRON AND STEEL).

ISCO 08 Unit Group Details:

Code 7215
Title Riggers and Cable Splicers

7215.0300**Splicer (Rope and Cables)**

Splicer (Rope and Cables) joins, repairs or fits attachments to wire or hemp ropes or cables by splicing. Cuts parts of damaged cables; joins cables by opening up ends and interweaving strands, fits cables around hooks, eyes or other attachments and splices end of cable back into itself; binds joints and ends of cables. May be designated according to type of cables spliced.

ISCO 08 Unit Group Details:

Code 7215
Title Riggers and Cable Splicers

7215.9900**Riggers and Cable Splicers, Other**

Riggers and Cable Splicers, Other include all other workers engaged in splicing cables and rigging and material handling equipment, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7215
Title Riggers and Cable Splicers

Group 722
Blacksmiths, Tool Makers and Related Trades Workers

Blacksmiths, Toolmakers and Related Trades Workers, hammer and forge bars, rods or ingots of iron, steel and other metals to make and repair various kinds of tools, equipment and other articles, set machine tools for operators or set and operate various machine tools, and polish and sharpen surfaces.

Occupations in this Group are classified into the following Families:

7221	Blacksmiths, Hammersmiths and Forging Press Workers
7222	Tool Makers and Related Workers
7223	Metal Working Machine Tool Setters and Operators
7224	Metal Polishers, Wheel Grinders and Tool Sharpeners

Family **7221** **Blacksmiths, Hammersmiths and Forging Press Workers**

Blacksmiths, Hammersmiths and forging press workers hammer and forge bars, rods, ingots and plates of iron, steel or other metals, and draw wire to make and repair various kinds of tools, metal articles, pieces of equipment, and agricultural and related implements.

7221.0100 **Blacksmith**

Blacksmith; Lohar forges metal to required shape and size by processes of heating, bending, hammering etc. Heats metal in furnace to required degree of temperature. Places it on anvil holding it with tongs and forges it to required shape and size by hammering either themselves or by Hammerman. May use swages, sets from tools, jigs, etc. according to shape required. May weld by forging (joining

two pieces with brass and borax by heating), and work by cold process. Is designated as ANGLESMITH OR SPRING SMITH if specialized in working on angle iron or in making springs.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0200

Village Blacksmith

Village Blacksmith forges domestic and agricultural articles, used in villages, by repeated heating and hammering. Examines sample for shape and size. Heats specified type and length of metal in furnace to required degree of temperature. Places and holds it on anvil with tongs and gets it hammered or hammers it to desired shape and size using sets, swages, etc. Punches holes by heating and hammering. Joins pieces of ferrous metal by forge-welding (heating two pieces of steel or iron and hammering them together). Heats articles frequently and checks it by sight or with scale, callipers etc., while forging. May fit metal tyres on cart wheels. May do simple heat treatment operations. May also make articles according to instructions.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0300

Power Hammer Operator

Power Hammer Operator; Forging Machine Operator forges iron or steel to required dimensions by heating and hammering with power hammer. Heats

metal red hot and adjusts it below hammer on anvil with tongs. Holds it firmly with tongs and operates hammer by paddle or signals to Lever Man to operate power hammer with required force and momentum. Turns sides of metal by tongs for hammering according to requirements. May heat or get metal heated number of times according to necessity. May finish article by striking it with a hand hammer.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0301

Forging Operator

Forging Operator manages the specifications of the metal bars, setting up and operating the machinery for forging and producing the output in line with the desired specifications.

Qualification Pack Details:

QP NOS Reference ASC/Q4501

QP NOS Name Forging Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0400

Hammer Man

Hammerman; Striker hammers iron and steel to required dimension with sledges according to direction of Blacksmith. Selects sledge according to nature of forging and strikes hot metal hard or light as per direction of Blacksmith. May also work by cold process.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0500

Stamper/Forging Operator

Stamper; Drop Forger shapes articles from metal pieces by using dies and drop forging or stamping machine. Sets required die and punch securely in machine, heats metal to red hot and firmly places it on die holding it with long tongs. Signals Stamper, Helper to bring punch down with force. Checks formation by sight and adjusts position of material every time before strike. Applies oil, saw dust or powdered coal on die before stamping. May reheat and handle more than one set of die for completing article. May also work by cold process in case of hammer dies and metal sheets.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0600

Farrier

Farrier fits iron shoes to hoofs of animals such as bullocks, horses, etc., to protect them from injury and excessive wear and tear. Removes old shoes and nails from hoofs of animals and dresses them (hoofs) by mending and filing. Selects shoes of required size, rectifies defects if any, and fits them in hoofs with special types of nails. Ensures that shoes are not loose and animal does not get injured in process of fitting shoes. Ties and immobilises animal before fitting shoes if necessary. May also make shoes by common blacksmithy process.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0700**Wire Drawer/Wire Drawing Machine Operator**

Wire Drawer; Block Stripper, Metal Drawing draws wire through dies to required specification by operating wire drawing machine. Selects required die and fits it in die box. Sets height and alignment of block. Points one end of wire, feed it into die, starts machine and watches drawing and coiling at other end. Rectifies defects in case of faulty drawing or breakage.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.0800**Metal Spinner/Metal spinning Machine Operator**

Metal Spinner; Spinning Lathe Operator fashions metal sheet on spinning lathe into hollow-ware, utensils, and fancy articles using patterns and spinning tools studies drawings and other specifications of article to be made. Selects appropriate mandrels. Wooden chuck or mould to make article. Fastens mould to spindle or lathe. Measures, marks, and cuts discs from sheet metal stock and drills hole in each disc using marking devices, shear and drill press. Clamps disc to spinning form mounted on head stock spindle of lathe by forcing follow block against disc with tail stock (movable part of lathe). Starts machine. Coats outside of rotating disc, forcing it to shape of spinning form,

removes completed article from lathe and repeats process. Smoothens and trims spun piece with hand tools. May oil and clean machine. May work on wood turning lathe and make wooden chucks or moulds. May cut and prepare appropriate sizes of metal blanks on machine for use of spinning lathe. May be designated as ALUMINIUM SPINNER, BRASS SPINNER, and COPPER SPINNER, according to type of metal handled.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

7221.9900**Blacksmiths, Hammersmiths and Forging Press Workers, Other**

Blacksmiths, Hammer-smiths and Forging-press Workers, other perform variety of routine and low skilled tasks not elsewhere classified, in smithy section such as operating levers of power hammer, pulling string of drop forging machine, assisting Forging Machine Operator in placing material on anvil or carrying it off and are designated according to nature of work done such as Lever Man, Stamper Helper, Blacksmith Helper, etc.

ISCO 08 Unit Group Details:

Code 7221

Title Blacksmiths, Hammersmiths and Forging Press Workers

Family 7222**Tool Makers and Related Workers**

Toolmakers and related workers make and repair custom made and specialized

tools, sports guns, locks, dies, patterns machinery components and other metal articles using hand and machine tools to work metal to fine tolerances.

7222.0100

Marker, Metal

Maker Metal; Layout Man marks metal according to drawing or sample for filing, machining, grinding, drilling, forming, erecting, etc. Studies drawings, sketches, samples, etc., to determine nature of work. Selects metal such as sheet, blocks, angles, rods, etc. according to requirement and specification and applies chalk or copper sulphate solution on finished surface. Calculates and marks outline with centre punch marks on finished surface of metal, indicating lines, curves or points as per dimensions and other specifications given in drawing for fitting, cutting, grinding, drilling, developing, etc., using surface plate, angle plates, Vernier height gauge, divider, marking block and other devices. Checks markings by calculating dimensions to ensure accuracy of size, distances etc., using scales, divider, square and other tools. May use template for making standard sizes of metal products. May mark metal components with drawing numbers for final assembly and erection. May be designated as SHEET METAL MARKER, STRUCTURAL MARKER, TOOL ROOM MARKER, MACHINE SHOP MARKER, etc., according to shop and nature of work done.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0200

Tool Maker

Tool Maker makes cutting and press tools, gauges, simple jigs, fixtures, etc. mainly for use in machines. Studies drawings, samples and other specifications of tool or gauge to be made. Selects required type of metal or alloy and marks it for various operations, using Vernier height gauges, sine plate, vee blocks, etc. Cuts, files, grinds, scrapes or otherwise shapes metal to specified dimensions frequently checking it while working with measuring instruments such as micrometre, Vernier, gauges, face plate etc. as necessary. Anneals, shapes, hardens and tempers cutting tools ensuring correct cutting angles, clearances, etc. according to standard or prescribed specifications. Assembles part, finishes object. Checks accuracy with precision measuring instruments and shadow graph if necessary to ensure desired performance. Calibrates and adjusts tools and gauges where required and maintains them in good working order. Guides brazing of tips to stalks and finishes them to make tip tools. Is designated as GAUGE MAKER if engaged in making or reconditioning gauges. May repair and recondition tools for further use. May design tools, jigs and fixtures and braze and weld metal parts.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0300

Jig and Fixture Marker

Jig and Fixture Maker makes and repairs jigs and fixtures (device for holding metal and guiding cutting tools) for mass production work. Studies drawing and checks dimensions and other specifications of sample to calculate working details. Collects material, gets surfaces finished by filing or machining and marks them off. Makes different parts

of required jig or fixture by cutting, filing, machining, grinding, scraping, drilling, screwing, etc. and finishes them to required dimensions. Hardens and tempers necessary parts or gets them done ensuring that they do not get demored. Assembles parts in proper sequence, fits hardened bushes or parts where specified to guide cutting tools and checks easy fixing and removing of part to be machined to ensure operational efficiency of jig or fixture made. Checks fitting of jig and fixture at each stage while assembling to conform to specifications. Tests completed jig or fixture by trial operations to ensure operational efficiency and accuracy in production work. May make adaptors, pullers etc. for specific purposes. May machine and grind jig and fixture parts.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0400

Jig Borer

Jig Borer; Jig Boring Machine Operator sets and operates precision jig boring machine for making highly accurate holes in jigs, fixtures, castings, etc. Studies drawings and other specifications and calculates locations and sizes of holes to be drilled, pitch centre distances, etc. Marks or gets metal or object marked accurately to indicate exact position of holes to be bored. Sets machine table and fastens metal or object on it in perfect level and correct alignment with clamps, fixtures, jigs, etc., using dial indicators, slip gauges, optical scale of machine if provided, sine bars and other precision devices. Fits centring tool in chuck in machine spindle. Moves table across and sideways according to machine reading,

locks movements of machine table taking bearing from finished side of metal or object, lowers spindle to bring centring tool exactly over centre of hole to be drilled, notes table readings, starts machine and drills hole centre. Raises spindle, replaces centring tool with pilot drill, sets machine feed and speed, operates machine spindle and drills, pilot hole. Changes pilot drill with slightly less than hole size drill. Drills metal or object and checks hole with plug gauge for alignment, angle, size, etc. Fixes dead size (exactly of size of hole to be made) reamer or boring tool in machine spindle. Sets feed and speed as necessary and bores hole to finished size ensuring absolute accuracy of hole made. Stops and starts machine and keeps coolant on as required while working. Unlocks table movement, moves table sideways and across according to calculated pitch centre distances of holes, taking bearing from hole drilled and drills other holes in similar manner. May drill more than one hole in same surface in one setting. May grind tools and oil and clean machine.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0500

Die Maker

Die Maker; Die Fitter; Press Tool Fitter makes metal dies to prescribed dimension for punching, cutting, forging and forming of metal or synthetic components for mass production. Studies drawing and specifications of dies to be made. Selects required type of metal or rough cast metal block. Machines or grinds one surface and marks it with template or otherwise to indicate dimensions and other working details. Cuts shapes, drill holes and mills metal according to marking on various

machines. Checks dimensions while working with gauges and other measuring tools. Finishes made die (punch) by filing to required dimension and fits female to it. Files cutting angle and clearance accurately in female die and checks for sizes. Drills holes and cuts thread in female die for driving guide pin and fitting guide plates. Gets male and female dies tempered and grinds them to finish ensuring correct shear, cutting angle, clearances, etc. Sets finished dies in press and cuts or forms some trial pieces to ensure accuracy and correct production. May shape female die block to required angle for fitting it in bolster. May repair used dies and grind them to desired finish. May operate lathe, milling and shaping machines and harden and temper dies.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0600

Die Sinker, Hand

Die Sinker, Hand makes metal dies in two halves for manufacture of metal and synthetic components using fine chisels, hand tools, machine, etc. Studies samples or drawings of dies to be made. Selects right type of metal or alloy rough cast blocks. Gets one surface of each block ground finished. Marks one block to indicate position, size and shape of die to be cut. Follows marking and removes metal with different types of chisels, scrapers, etc. to form one half of die to be made. Measures amount of metal removed frequently while working with depth gauge, template, foot rule etc. to ensure correct forming. Transfers markings to other die block and (forms) and shapes it in similar manner to form other half of die. Takes lead casting of

complete die formed and measures it (casting) with callipers, micrometre, etc. for dimensions. Makes alternations in die halves if required checks with further lead castings and ensures that product formed conforms to prescribed specifications. Gets die halves tempered and finishes them by grinding. Sets them in machine and stamps or forges some trial pieces to ensure correct formation. May anneal, grind and sink dies again if necessary. May do primary sinking of dies in vertical milling machine.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0700

Locksmith

Locksmith fits assemblies and repairs locks with finished parts by accurately sizing components, setting levers riveting etc. studies design, sketch or model of lock to be made. Collects various finished components or parts and checks for accuracy of fit by supplementary tooling to remove defects. Assembles and fits parts in frame and rivets body to make complete lock. Tests completed lock for locking and unlocking with appropriate key. Dismantles defective locks, repairs or replaces damaged parts and sets them right by setting or filing levers, riveting etc. Opens jammed locks using special scriber to release levers and springs. May install locks. May make parts of locks by hand.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0800

Pattern Marker, Metal Foundry

Pattern Maker Metal, Foundry makes and repairs metal patterns for making moulds for casting metals. Studies drawings and other specification of pattern to be made and calculates shrinkage allowances. Takes metal cast roughly to shape or selects metal from stock and marks it off. Grinds, smoothens and other wise shapes metal to required dimensions keeping shrinkage allowances in view. Measures object (pattern) frequently while working with callipers, foot rule, gauges etc. to ensure correct shape and size. Assembles pattern parts by screwing, soldering or otherwise fixing them together. Checks completed pattern for accuracy using gauges, micrometre, callipers, etc. and makes alterations if necessary. May repair broken or damaged patterns.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.0900

Armourer

Armourer; Gunsmith; Fitter Arms assembles, replaces parts and repairs guns, rifles, pistols etc. by further tooling as necessary. Checks complete small arm (gun, rifle, pistol etc.) or its components such as stock, barrel, sight, trigger mechanism, firing pins, ejector etc. for alignment, proper fittings, grooving, functional operations, condition and serviceability and locates defects if any. Dismantles complete arm or defective portion as necessary and removes dents and defects by further tooling, brazing etc. or by replacement of broken or worn out parts. Selects seasoned walnut, shisam or any other type of appropriate timber, marks it and makes butt of respective small arms, if defective, in correct alignment with sights and barrel by

various carpentry processes. Removes rust if any and cleans barrel and other parts thoroughly. Assembles parts one by one in order of sequence with hand tools ensuring stipulated performance, correct setting, alignment, rigidity etc. sets back and fore sights in perfect alignment with muzzle and stock for different ranges of shooting and adjusts it correctly by trial shooting at firing range. Scrapes and polishes outer surface of barrel, trigger, trigger guard etc. and colours it by hot or cold gun bluing process. May personally test arms by trial firing at range to observe performance and accuracy.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

7222.9900

Tool Makers and Related Workers, Other

Toolmakers and Related Workers, other include all other Tool Makers engaged in making special or other types of tools such as fly cutters, capstan, from tools, etc., by performing one or more combination of tasks, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7222

Title Tool Makers and Related Workers

Family 7223 Metal Working Machine Tool Setters and Operators

Metal Working Machine Tool Setters and Operators set and/or operate, various machine tools working to fine tolerances.

7223.0100

Tool Setter, General

Tool Setter, General sets various types of precision metal cutting and grinding machines for Machine Operators. Studies drawings and other specifications of parts to be made. Fixes metal and cutting tool accurately in position on machine using chucks, jigs and other fixtures as required. Adjusts machine table, guides, stops and other controls by manual operations ensures that tool will cut or grind metal according to specifications. Starts and operates machine to cut or grind sample product. Checks progress and accuracy of cutting or grinding with precision measuring instruments such as micrometre, Vernier, gauges, etc. and makes necessary adjustments to ensure accuracy of final product and hands machine over to operator for production. Charges tools and resets machine as necessary. May be designated as BROACHING MACHINE SETTER; MILLING MACHINE SETTER; PROFILING MACHINE SETTER; SHAPING MACHINE SETTER; SETTER LATHE, etc. according to type of machine set. May do minor repairs to machine. May supervise work of machine operators.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0200

Tool Setter, Press

Tool Setter, Press sets press tools (die and punch) in power and hand press for manufacture of sheet metal products. Examines sample or studies drawings and specifications of item for production. Selects appropriate pair of die and punch and examines them for sharpness, cutting angle, clearance, etc. Fits punch in punch

holder of machine and securely screws it in position. Places die on machine table and lowers punch to fit in die. Adjusts position of die in relation to punch. Clamps die securely on machine table with holders, plates, bolts and nuts and manually operate punch few times to ensure that it passes clearly through die set. Starts machine and feeds metal to cut or form trial pieces. Examines them for correctness in all respects, resets die if necessary, and hands press over to operator for production work. May grind press tools on surface grinder. May fit guide pin in die to avoid wastage of material. May fit die in bolster (holding device) before setting. May supervise operators.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0300

Setter, Drop Forging Machine

Setter, Drop Forging Machine; Drop Forge Setter sets dies in forging machine for blacksmithy work to cut or form heated metal parts to desired shape. Studies drawing or part to be made and selects required pair of dies. Fits top die securely in sliding hammer head of machine and places bottom die on anvil (base platform of machine). Lowers top die by lever or otherwise slowly on bottom die and adjusts position of bottom die in relation to top die to have equal clearance on all sides. Sets bottom die securely on anvil with bolts, clamps, nuts, plates, etc. and checks for correct setting. Heats or gets blank or material heated to required temperature and forges some (two or three) trial pieces to ensure correct production and minimum wastage of

material. Resets dies if necessary and hands forge (machine) over to operator with necessary instructions. May set rope or belting to lifting device of hammer head. May be designated as DROP HAMMER SETTER, PNEUMATIC HAMMER SETTER, STEAM HAMMER SETTER etc. according to type of hammer or forging machine set.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0400

Setter, Automatic Machine

Setter Automatic Machine sets various types of precision metal cutting tools in automatic machines for specific repetitive operations for mass production of metal articles or components. Studies drawings and other specifications of metal parts or articles to be made. Selects appropriate tools and securely fixes them in automatic machines in order of sequence of operations. Fastens metal accurately in position in machine using chuck, jig or fixture as required. Starts machine. Operates different tools manually in order of sequence to cut metal to required specifications. Checks metal frequently while cutting with precision measuring instruments to ensure accuracy and regulates feed of metal, travel and movement of tools, etc. by setting locking devices, guides, automatic and other controls after each completed operation. Cuts trial piece according to settings done to check accuracy of each operation and cutting of metal to prescribed dimensions. Resets controls, guides, etc. where necessary to ensure accuracy. Sets machine feed and speed, adjusts flow of

coolant and hands over machine to operator with required instructions for tool manipulations and operations as necessary. Visits machines under his charge frequently, checks production and ensures that products of each machine are inter changeable and are manufactured to required specifications. Guides and resets tools where necessary. May develop and form new tools for specific operations and harden and temper them. May suggest form and type of jig and fixture required.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0401

Assembly Line Machine Setter

Assembly Line Machine Setter oversees assembly operation as per the required norms and assembly of aggregates in the vehicles and includes controls for machine operation, temperature and pressure including all machine settings.

Qualification Pack Details:

QP NOS Reference ASC/Q3603

QP NOS Name Assembly Line
Machine Setter

NSQF Level 6

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0500

Mechanist, General/Machinist

Machinist General operates various types of power driven metal cutting or grinding machines for cutting and grinding metal.

Studies drawings or measures out sample with appropriate measuring instruments to note different dimensions and sequence of operations required. Selects metal piece and marks it or gets it marked for machining operations required. Fastens metal in chuck, jig or other fixture and respective tool or cutter, according to sequence of operation, on appropriate machine. Checks machine setting or sets it for stipulated machine operations. Selects machine feed and speed and starts machine. Controls flow of coolant (cutting lubricant) and manipulates hand wheels or applies automatic controls to feed tool to metal or metal to tool. Observes cutting or grinding both from marking and machine readings, checks for dimensions as necessary and removes parts when machining is completed, checks completed part with measuring instruments and gauges to ensure prescribed accuracy. Makes adjustments if necessary and repeats operations, as required, on same or other machines. May assist in setting up machine for repetitive work, change tools, make simple adjustments, clean and oil machine.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0501

Machine Shop Master Technician/Setter

Machine Shop Master Technician/Setter sets parameters and programming of CNC and other machining equipment's, supervision of operations for different machine tools performed both manually and through automatic/CNC machines/robots. This role primarily

involves setting machine parameters, supervising all kinds of machining and in-line inspection activities for quality verification, resolving line operation issues, ensuring compliance to all super finishing, tool room operations etc.

Qualification Pack Details:

QP NOS Reference ASC/Q3506

QP NOS Name Machine Shop
Master

Technician/Setter

NSQF Level

6

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0502

Machine Shop Supervisor

Machining Supervisor role covers supervision of operations for different machine tools performed both manually and through automatic/CNC machines/robots. This role primarily involves supervising all kinds of machining and in-line inspection activities for quality verification, resolving line operation issues, review of fixtures etc.

Qualification Pack Details:

QP NOS Reference ASC/Q3505

QP NOS Name Machine Shop
Supervisor

NSQF Level

5

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.0601

Turner/Conventional Turning

Turner; Lathe Operator makes metal articles to required specifications using lathe and cutting tools. Studies drawings and other specifications of parts to be made. Selects metal, holds it in chuck, jig or fixture on lathe as required, centres it by manipulating chuck jaws or otherwise using dial indicator or marking block and securely tightens it in position. Selects correct cutting tool, grinds it if necessary and holds it tight in tool post at correct height. Sets feed and speed and starts machine. Manipulates hand wheels or starts automatic controls to guide cutting tool into or along metal. Controls flow of coolant (cutting lubricant) on edge of tool. Arranges gears in machine to obtain required pitch for screw cutting. Calculates tapers and sets machine for taper turning, controls lathe during operation by means of hand wheels and levers and frequently checks progress of cutting with measuring instruments such as callipers and rule, micrometres, etc. Stops machine, removes completed part and checks it further with instruments to ensure accuracy. Repeats operations if necessary. Cleans and oils machine. Is designated as ROLL TURNER; RELIEVING LATHE OPERATOR; SURFACE LATHE OPERATOR etc. according to type of lathe on which worked. May improvise devices and make simple adjustments to machine. May recondition lathe tools.

Qualification Pack Details:

QP NOS Reference	CSC/Q0110
QP NOS Name	Conventional Turning
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.0700

Turret and Capstan Lathe Operator

Turret and Capstan Lathe Operator operates turret or capstan lathe for mass production of metal components. Studies specifications of parts to be fashioned. Checks tools set in order of sequence of operations in appropriate parts of turret. Clamps work piece accurately in position on lathe using chuck, collets, fixtures or other device as required. Checks guides and stops set by Tool Setter or by self to limit or control movement of tools. Selects rotation speed of metal as guided and starts machine. Manipulates hand wheels or sets and starts automatic controls to guide each cutting tool in turn in order of sequence into or along metal. Controls flow of cutting lubricant to tool tips. Observes cutting operation by different tools. Stops machine after each operation and checks machining with gauges and measuring instruments and makes necessary adjustments if necessary to ensure accuracy. Is designated as WARD OPERATOR, if engaged in operating ward machine (a type of automatic lathe). May shape and sharpen lathe tools. May oil and grease machine.

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.0701

Lathe Machinist

Lathe Operator is also known as a Lathe Machinist. A Lathe Operator is responsible for setting up, operating and monitoring lathe or turning machines, shaping or threading wire, rod or bar stock. A Lathe

Operator studies blueprints and tooling instructions to determine the correct procedure for machining the component in such a manner that facilitates maximum efficiency in tool usage and time. The operator also performs machine maintenance and checks tools for signs of wear.

Qualification Pack Details:

QP NOS Reference ASC/Q1901
 QP NOS Name Lathe Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7223
 Title Metal Working Machine Tool
 Setters and Operators

7223.0800

Shaper

Shaper; Shaping Machine Operator shapes metal objects to required specifications using shaping machine and cutting tools. Examines drawings and other specifications of part to be made. Fastens metal accurately in position in vice. Selects appropriate cutting tool and fixes it in tool holder on machine. Sets appropriate speed feed and stroke of machine depending on nature of required cut, type of metal etc. Adjusts machine table and tool post by manipulating levers or controls. Starts machine. Turns hand-wheel to feed cutting tool into or across work or engages automatic feed. Checks progress of cutting with measuring instruments and makes necessary adjustments to ensure accuracy. Stops machine when completed and removes work from it. May sharpen and make own tools. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
 Setters and Operators

7223.0900

Planer

Planer sets and operates single or double column smoothening machine to shape metal objects to required dimensions. Studies drawings and specifications for setting work piece and tools for different operations involved. Fastens metal object accurately in position on machine table with bolts, nuts and other fixtures. Selects single or double faced tool and fixes it in tool holder of machine. Adjusts guides, stop and other controls to set speed and limits of forward and backward movements of machine table. Starts machine. Turns hand wheels to bring cutting tool position over metal to start machining. Manipulates hand-wheels or starts automatic controls to guide tool into and across metal at end of each stroke. Changes tool and position of metal if required. Checks and measures work to ensure correct dimensions. Adjusts position of table or tool as necessary for accurate performance. May oil machine. May specialize in any particular type of planning and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7223
 Title Metal Working Machine Tool
 Setters and Operators

7223.1000

Planer, Edge

Planer, Edge planes edges of heavy metal plate, girders etc. for structural work using appropriate cutting tools and edge shaping machine. Fastens plates, angles and other metal objects accurately in position on machine table using fixtures,

bolts and nuts. Selects appropriate cutting tool and clamps to machine spindle. Selects and sets speed and feed of machine depending on nature of machine operation and metal used. Starts machine. Lowers spindle of machine with cutting tool over metal to plane or cut edges. Regulates flow of cutting lubricant over edge of tool where necessary. Finishes edges of metal to required finish or smoothness by changing shaping or grinding tools in machine. Checks finished metal with measuring instruments and gauges for accuracy. May oil and clean machine. May sharpen machine tools. May specialize in particular type of planing and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.1100

Slotter

Slotter; Slotting Machine Operator sets and operates slotting machine to cut slots keyways etc. in metal work pieces. Examines drawings and other specifications for type and size of slots and keyways to be cut on metal objects. Fastens metal object accurately in position on machine table with bolts, clamps and other fixtures. Selects cutting tool and fixes it in tool holder of machine. Adjusts guides, stops and other controls to set stroke and speed of tool movement. Adjusts table and sets work piece correctly for cutting operations. Starts machine and applies cut. Observes progress of cutting. Stops machine and checks slotted or grooved area for accuracy of depth and width using measuring instruments. Cleans and oils machine. May assist in setting up

machine, and make simple adjustments. May recondition and sharpen tools.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.1201

Miller/Operator–Conventional Milling

Miller cuts metal blocks, gears, tools, cutters, jigs, components, etc. accurately according to drawings or samples by means of multi-toothed rotary cutters on milling machine. Studies drawings and other specifications of part to be made. Calculates feed, speed table, cutter and work angles, indexing, gear trains, number and type of cutter required, etc. using trigonometrical and log tables as necessary. Fastens blank (object) securely on machine table on vice or between centres as required in correct alignment using dial indicator, bolts, nuts, clamps and other fixtures and instruments. Selects and clamps selected cutter on arbor (tool holding device of) or spindle of milling machine. Sets machine, dividing head, work, gear trains, machine feed and speed etc. depending on nature of machine operation and metal handled. Starts machine. Manipulates hand wheels or applies automatic controls to start machining. Controls flow of cutting lubricant on edge of tool and observes progress of cutting. Stops machine and checks product while machining and on completion using gauges and measuring instruments for accuracy. Repeats process if necessary. May perform machine operations such as keyway milling, gear cutting, facing flute cutting, surfacing etc. as required. Is designated as HOBGING MACHINE OPERATOR, if engaged in

hobbing machine. May clean and oil machine. May grind and make form cutters.

Qualification Pack Details:

QP NOS Reference	CSC/Q0108
QP NOS Name	Operator– Conventional Milling
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.1300 Gear Cutter

Gear Cutter cuts gear-teeth on metal blanks on gear cutting machine using special cutters. Examines drawings and other specifications of gear to be cut. Calculates suitable gear trains for division, cutter and blank arbor rotations proper helix, and different angles, automatic feed, number and type of cutter etc. and sets machine accordingly. Mounts blank in position using mandrel, fixtures etc. as required and sets appropriate cutter or tool on machine. Turns and adjusts angle and position of blank and cutter in relation to one another and adjusts relief of cutter teeth according to calculations. Adjusts guides and stops to limit or control movement of tools. Selects rotation speed of metal blank and starts machine. Turns hand wheels or engages automatic controls to guide cutting tool into or along metal. Controls flow of cutting lubricant over tools and observes operation. Stops machine and checks cut teeth for size, depth and shape using measuring instruments and gauges for accuracy. Cleans and oils machine. May grind or recondition own tools. Is

designated as BEVEL GEAR SHAPER; GEAR PLANER; GEAR SHAPER; GEAR HOBBER; etc., according to type of gear and machine operated.

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.1400 Heavy Duty End Mill Operator

Heavy Duty End-Mill Operator machines ends of columns, girders etc. to required finish for structural work by means of segmented end-mill and heavy duty milling machine. Fastens metal object accurately in position on machine table, using nuts, bolts and other fixtures. Selects appropriate segmented milling cutter and fixes it to machine spindle. Adjusts guides, stops and other controls or determine speed and limits of table movement. Starts machine. Controls flow of cutting lubricant on edge of tool and observes progress of milling ends of metal object. Stops machine when milling is over and checks finished surface for accuracy to required tolerances using measuring instruments. Removes metal from table and repeats process. May oil and clean machine.

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.1500 Driller Metal, General

Driller Metal, General drills holes in metals according to specifications using drilling machine. Studies markings or drawings and other specifications for type and

nature of holes to be drilled. Selects appropriate drilling bit or cutter and fits it in machine spindle using drilling chuck or otherwise. Aligns metal accurately in position on machine, table using jigs and other fixtures as required. Adjusts guides and stops to limit or control downward movement of drill. Sets rotating speed of spindle and starts machine. Lowers drill exactly on control punch mark on hole to be drilled. Controls flow of cutting lubricant on edge of drill. Observes progress of drilling and makes necessary adjustments to ensure accuracy. Stops machine and pull out drill when hole is drilled. Cleans drilled area and checks hole for accuracy with measuring instrument. Selects and uses counter bores where required. May use reamers for reaming operation. May do tapping (screw cutting) on drilling machine using tapping attachment. May sharpen and recondition drill bits or tools.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.1600

Radial Driller

Radial Driller operates radial drilling machine to drill holes in heavy metal blocks, girders, plates, etc. by adjusting radial arm and carriage of machine according to positions of holes to be drilled. Studies drawings and other specifications for size and number of holes to be drilled on metal. Fastens metal accurately in position on machine table, using dial indicator, jigs and other fixtures as required. Selects appropriate drill and fixes it in machine spindle. Draws by hand moveable arm or carriage to bring drill bit

over required area of metal for drilling and starts machine. Lowers spindle, aligns drill accurately over hole to be drilled. Checks setting for accuracy by trial, readjusts if necessary and locks respective positions. Controls flow of coolant while drilling. Checks hole for accuracy. Repeats drilling operation over wide area of metal by stretching radial arm and adjusting position of carriage and drilling spindle over hole to be drilled. Is designated as TOWER DRILLING MACHINE OPERATOR if engaged in operating tower drilling machine to drill large number of uniform holes in big plates, columns etc. by adjusting position of travelling tower in relation to location of holes to be drilled. May clean and oil machine. May grind drills. May cut screws with tapping arrangement and do reaming and counter boring where needed.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool

7223.1701

Borer/Operator Boring Machine Operator

Borer bores holes in metal objects for various mechanical purposes by means of boring bars and boring machine. Examines drawings and other specifications of holes to be bored. Fastens metal object accurately in position on machine table, using jigs and fixtures as required. Selects boring bar and fixes it in machine spindle. Centres hole accurately using cutting tool as guide and adjusting object to desired position. Selects and sets speed and feed of machine. Starts machine to rotate cutting tool or object depending on type of machine operated and moves levers to advance cutting tool into position to start boring. Controls flow of cutting lubricant

on edge of tool. Checks progress of boring with measuring instruments and makes necessary adjustments to ensure accuracy. Stops machine when boring is completed and removes object from table. Repeats operations as required. Sets machine to required pitch after adjusting hole position while threading by boring machine. Is designated as VERTICAL BORER or HORIZONTAL BORER according to type of machine operated. May clean and oil machine. May sharpen and recondition tools. May set the machine for operator. May set depth of cut and do step boring in blind holes.

Qualification Pack Details:

QP NOS Reference	CSC/Q0107
QP NOS Name	Boring Machine
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.1800

Cylinder Borer

Cylinder Borer Bores cylinders of engines to specified accuracy by means of cylinder boring machine and special cutting tools. Examines drawings and other specifications of cylinder to be bored. Fastens cylinder block on machine table in position by use of jigs and fixtures as required. Selects cutting tool and fixes it in machine spindle. Adjusts position of cylinder block accurately below cutting tool exactly over cylinder hole to be cut. Selects rotation speed of tool,, starts machine and applies cut. Switches on vacuum pump mechanism of machine. Controls flow of lubricant on tool. Observes progress of work. Checks size of bore with gauge or measuring instrument

and ensures that cuttings are drawn off by suction while boring. Stops machine when boring to required finish is completed and cutting tool automatically withdrawn from cylinder hole. Checks cylinder hole with measuring instruments to ensure accuracy. Repeats operations as required on other holes to be bored. May do cylinder re-boring. May make simple adjustments to machine. May clean and oil machine.

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.1900

Rifling Machine Operator

Rifling Machine Operator sets and operates rifling machine to make grooves inside rifle barrels. Studies drawings and other specifications of barrel rifling of to be done. Centres barrel in steady-rests and chuck of machine. Mounts appropriate broach cutter or sets of cutters on cutting head at end of riffling bar of machine and adjusts them to cut grooves of required specification. Regulates oil feed on edge of cutter. Starts machine to move rifling bar and cutters spirally through bore of barrel. Observes operation of cutting grooves (rifling) in bore surface. Stops machine when cutter has passed entirely through bore and withdraws rifling bar. Measures rifling with gauges to ensure conformity to specification. Removes barrel from machine and inspects rifling for defects. Removes dulled cutters and replaces them with sharpened ones as necessary to ensure that rifling grooves are cut to specified depth. May shape, harden and temper cutting tools.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators**7223.2000****Bending-Machine Operator**

Bending-Machine Operator sets up and operates machine to bend metal structural shapes, such as bars, rods, angles, pipes, and tubes, to angle or contour specified by work order, drawings, templates, or layout: Selects and bolts holding clamp, die block, and guide clamp to machine. Positions and clamps end stops on machine to set specified location of bend. Inserts or screws plug stops into guide wheel to set specified degree of bend. Positions workpiece against end stop. Locks holding clamp and guide clamp onto workpiece. Lubricates workpiece with oil. Starts turntable that draws workpiece through guide clamp around die block until stopped by plug stops or until dial indicator points to specified degree of bend. May slide mandrel into tubing instead of using guide clamp. May preheat workpiece, using hand torch or heating furnace. May use hand-powered bending machine for short runs. May fill tubes or pipe with sand, resin, or lead to prevent wrinkling or collapsing during bending operation. May heat tube, using torch, and manually bend tube or pipe around forming blocks. May flare tube ends, using tube flare and cut or trim metal stock to length, using power shears or saws.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators**7223.2100****Glazer**

Glazer; Buffer grinds and polishes metal components before and after electroplating, on polishing lathe, using appropriate wheel of cloth, leather or felt and chemical compounds. Starts polishing lathe, fit buffing wheel to it and applies emery compound. Holds component in hand or in suitable holding device and presses it against rotating wheel. Grinds surface slowly to uniform finish. Replaces buffing wheel by polishing wheel, applies polishing compound and repeats process for setting grains and obtaining high polish. May also polish metal articles without plating.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators**7223.2200****Grinder, Tool and Cutter**

Grinder, Tool and Cutter grinds machine tools and cutter to correct specifications by special grinding machines and wheel. Studies drawings and other specifications to understand nature of grinding operation required. Fastens appropriate abrasive wheel to spindle of machine. Mounts cutting tool to be ground on machine using dividing head, jig or fixture as required. Manipulates swivel tables, wheel head and work holding device, guide finger, etc. as necessary to set machine to appropriate angle for grinding desired level on cutting edges of tool selects and sets speed and feed to machine according to nature of work and wheel used. Starts machine, brings rotating grinding wheel in contact with edge of tool and grinds proper angles, clearance, flutes etc. as required on tool or cutter set, frequently checking it with

gauge or measuring instrument while grinding to ensure accuracy. Rotates work through proper angle by dividing head or otherwise to set next flute or teeth of tool or cutter for grinding and continues operation. Uses cutting fluid or coolant as found necessary and ensures that no part of work gets burnt or damaged while grinding. Stops machine and removes tool when grinding is completed. Changes grinding wheel and position of tool as and when required. May give final finish to cutting edge by hand using hones. May oil and clean machine. May specialize in grinding a particular type of tool and be designated accordingly. May check ground tool or cutter by shadow projector to ensure accurate finish.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2300

Power Press Operator, Metal

Power Press Operator, Metal operates power driven press for manufacture of sheet metal components by punching, blanking and forming operations. Operates machine manually to check length of stroke of rams, setting of die and punch, placing of safety guards and ensures that machine is safe for operation. Starts machine, feeds metal strip, sheet or component on die and presses foot pedal or hand lever, as provided in machine, to bring punch over die to cut, bend or form metal according to type of tool set. Stops machine, get trial pieces inspected and continue operation after resetting, if necessary. Arranges ready stock of feeding material and set machine for continuous operation if possible. Observes operation, avoids

wastage, maintains production and gets cuttings and components removed as necessary. Is designated as Broaching Machine Operator if engaged in broaching operation (cutting away metal). May get metal strips and shafts oiled before feeding. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2400

Sheet Metal Machine Operator

Sheet Metal Machine Operator operates sheet metal machine for sizing, bending and forming sheet metal for further operations. Sets machine to required dimensions (except press tools) using common measuring instruments such as foot rule, callipers etc. Operates machine, feeds trial piece and checks for dimensions and resets machine if necessary. Checks out-turn from time to time to ensure correctness. May operate one or more sheet metal working machines such as shearing machine, bending machine, channelling machine, forming machine and is designated as SHEARING MACHINE OPERATOR, BENDING MACHINE OPERATOR, CHANNELLING MACHINE OPERATOR, GROOVING MACHINE OPERATOR, FORMING MACHINE OPERATOR, etc. May set cutters, blades, dies etc. and undertake minor repairs under guidance.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2500

Ball Filling Machine Operator

Ball Filing Machine Operator sets and operates ball filing machine for filing balls to required diameters. Studies drawings and other specifications of ball to be made. Starts pump and conveyor, feeds roughly pressed balls into intake hopper and regulates its supply to machine. Feeds balls into conveyor and rotates pressure wheel manually for trial operation. Adjusts machine, guides, stop and other controls to regulate load, wheel pressure, etc. according to machine performances and specifications prescribed. Rotates wheel at required speed to control cutting of balls fed and ensures desired smoothness of ball surface. Starts machine. Adjusts feed finger and pick off finger in tool pocket for obtaining desired clearances. Examines filed balls visually and with measuring instrument to ensure uniformity, smoothness of filing and adherence to specifications. Unloads filed balls from machine through chute to container placed below. May clean and oil machine. May operate ball grinding machine and be designated as BALL GRINDING MACHINE OPERATOR.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2600

Ball Lapping Machine Operator

Ball Lapping Machine Operator lapps steel balls after grinding to accurate and high finish by special grinding wheels and lapping machine mostly for manufacture of ball bearings. Starts pump and conveyor and feeds hard ground balls into intake hopper. Adjusts machine, guides, stops and other controls to regulate load, wheel pressure etc. according to machine performance and specifications

prescribed. Starts machine, sets rotation speed of wheel and regulates flow of coolant and oil into machine. Opens hopper gate and feeds ball into machine. Observes operation and adjusts feed finger and pick-off finger in tool pocket for obtaining required finish. May operate ball grinding machine and be designated according.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2700

Dividing Machine Operator

Dividing Machine Operator calibrates and graduates metal, wood, perspex or ivory scales into required number of divisions by dividing machine for measuring lengths and angles. Studies drawings and other specifications of parts to be calibrated. Selects metal, ivory or plastic work piece depending on nature of work and specifications prescribed. Marks or bisects work piece as required. Secures blank plate on circular or rectangular calibrated or graduated base plate of machine with catching devices. Aligns blank and base plates according to specification and number of divisions to be marked. Adjusts dividing machine by turning its pointer to required position; and sets it (machine) to required rotations to rotate base and blank plate to set position according to number of division required. Presses and draws forward by hand pointer of machine over blank plate to cut lines, marks etc. to indicate divisions. Completes calibrating plate with specified divisions to indicate lengths, angles etc., by rotating wheel of machine and graduating blank plate with pointer mechanism. Removes

calibrated plate from machine and cleans and polishes it to give smooth finish using emery paper. Sends graduated plate to Engraver for engraving appropriate numerals, words, degrees, etc. May sharpen knife or cutter of machine. May engrave plate with specified marks, symbols, etc.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2800

Die Copying Machine Operator/Die Sinking Electric Discharge Machine Operator

Die Copying Machine Operator; Die Sinker Machine sets and operates special type of electronic or hydraulic die sinking machine for making dies by copying master (Pattern). Places master and metal block at appropriate distance on machine table and rigidly secures them in position with bolts and nuts. Selects tracer pin or feeler and fixes it in machine spindle over master and sets appropriate cutter in other spindle over metal block to be cut. Centres position of tracing pin and cutting tool by adjusting position of master and metal block by movement of machine table according to markings made on block. Lowers spindles to have tracer pin or feeler touch master and cutter set on metal block. Sets feed and speed of machine. Starts machine and regulates flow of coolant over cutter. Observes operation as tracing pin or feeler travels over contours of master die and its reproduction by processes of copying on metal block by cutter. Measures machined area frequently with precision instruments for length, width and depth and ensures exact copying of master

pattern. Stops machine when required to change tracer and cutter according to nature of operation and continues operation until master pattern is completely reproduced on metal block. Checks completed die copied on metal block along with master, using precision instruments and ensures desired accuracy in all dimensions. May oil and clean machine. May send machined die for further milling (cutting) to secure better or final finish if necessary.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.2900

Profiling Machine Operator

Profiling Machine Operator sets and operates profiling machine (special type of milling machine) to make smaller dies, gauges, etc. by copying samples and templates in two dimensions (length and breadth). Fixes cutting tool and work (metal block) on machine and sets table feed and cutter speed. Clamps model (sample) or template of object to be made on fixture attached to machine. Fits tracing finger or pin on secondary or tracing spindle of machine. Turns and wheels to bring tracing finger in contact with model or template and milling cutter with work respectively. Regulates flow of coolant (cutting lubricant) on cutter and starts machine. Observes operation of automatic machining of work of copying sample or template according to travel of tracing figure in contact with model (sample or template). Checks progress from time to time with precision measuring instruments to ensure correct machining. Stops machine to change milling cutter. Re-sets work in position,

etc. if necessary and continues machining until model is exactly reproduced in work to ensure accurate copying. Removes work from machine, cleans and oils machine. May be designated according to parts and nature of profiling work done.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.3000

Metal Stamper

Metal Stamper stamps trademarks, code number and other designs on metal parts or components using stamping machine. Fits appropriate metal die containing trademarks, symbol, batch number etc., to spindle of stamping machine. Starts machine. Places hot or cold metal object or component holding with tongs, below spindle on machine table and presses pedal to lower and press die over metal for stamping appropriate marking, checks and ensures that stamping on metal is clear. Reports defects to superior and gets machine reset. Removes stamped metal from table and places it at required place. May clean and oil machine. May keep record of stampings made.

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.5001

Machining Technician/CNC Operator

Machining Technician is also known as Machinist or CNC Machine Operator. The role covers operations of different machine tools performed both manually

and through automatic/CNC machines/robots. This role primarily involves all kinds of machining and in-line inspection activities for quality verification, ad hoc repair work, change of worn out parts, gauging and deburring activities.

Qualification Pack Details:

QP NOS Reference ASC/Q3503

QP NOS Name Machining
Technician/CNC
Operator L4

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7223

Title Metal Working Machine Tool
Setters and Operators

7223.5002

CNC Operator-Machining Technician

CNC Operator-Machining Technician sets up base level operations of different machine tools and same can be performed both manually and through automatic machines/robots. Machining Technician Level 3 is often called Assistant Machinist, Junior Machinist, Lathe Operator, Apprentice Machinist, Semi-Skilled Operator. This role primarily involves supporting the Machine Operator in all pre machining activities, machining of the actual part, ad hoc repair work like in auto service stations, gauging, deburring and inspection activities

Qualification Pack Details:

QP NOS Reference ASC/Q3501

QP NOS Name CNC Operator-
Machining
Technician L3

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7223
 Title Metal Working Machine Tool
 Setters and Operators

7223.5003

CNC Operator-Machinist

A CNC Operator is responsible for maintaining and operating CNC machine. The individual monitors gauges and dials. The individual must be proficient in programming and setting CNC machinery.

Qualification Pack Details:

QP NOS Reference ASC/Q1903
 QP NOS Name CNC Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231
 Title Motor Vehicle Mechanics and
 Fitters

7223.5004

CNC Operator-Vertical Machining Centre

CNC Operator-Vertical Machining Centre produces components that combine a number of different features, such as flat faces, parallel faces, faces square to each other, faces at an angle, steps/shoulders, open and enclosed slots, drilled, bored and reamed holes, internal threads, and special forms. It involves continuously monitoring, inspecting the components and meeting production targets.

Qualification Pack Details:

QP NOS Reference CSC/Q0116
 QP NOS Name CNC Operator-
 Vertical Machining
 Centre
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7223
 Title Metal Working Machine Tool
 Setters and Operators

7223.5005

CNC Setter cum Operator-Vertical Machining Centre

CNC Operator-Vertical Machining Centre produces components that combine a number of different features, such as flat faces, parallel faces, faces square to each other, faces at an angle, steps/shoulders, open and enclosed slots, drilled, bored and reamed holes, internal threads, and special forms. It involves continuously monitoring, inspecting the components and meeting production targets.

Qualification Pack Details:

QP NOS Reference CSC/Q0123
 QP NOS Name CNC Operator-
 Vertical Machining
 Centre
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7223
 Title Metal Working Machine Tool
 Setters and Operators

7223.6001

CNC Setter cum Operator-Turning

CNC Setter cum Operator-Turning sets up the CNC turning machine, its work holding devices, tooling, loading the machine operating programs, conducting trial runs and correcting faults, in order to ensure that the work output is produced as per specification.

Qualification Pack Details:

QP NOS Reference CSC/Q0120

QP NOS Name	CNC Setter cum Operator-Turning
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.6002**CNC Operator-Turning**

CNC Operator-Turning removes metal from the outer diameter of a rotating cylindrical workpiece. It also involves inspecting the components and continuously monitoring of the machining operations and making minor adjustments in order to ensure that the work output is to the required quality and accuracy.

Qualification Pack Details:

QP NOS Reference	CSC/Q0115
QP NOS Name	CNC Operator- Turning
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.6003**CNC Programmer**

CNC Programmer produce the component program using manual data input or by use of a remote computer, saving the prepared program on the machine controller from the computer. This involves understanding the CNC machine tools used in the process, their application and programming, editing and proving process, in adequate depth to provide a sound basis for carrying out the activities.

Qualification Pack Details:

QP NOS Reference	CSC/Q0401
QP NOS Name	CNC Programmer
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

7223.9900**Metal Working Machine Tool
Setters and Operators, Others**

Machine Tool Operators, Other includes all other Machine Tool Operators engaged in operating automatic, semi-automatic and simple special purpose production machines, sawing and filing by machine, grinding by hand, cutting threads in bolts and nuts etc., and may be designated as; Automatic Machine Operator if tends and feed, one or more automatic machine tools; De-Burrer if removes burrs and rough spots from metal parts or castings by use of hand files or using emery stone; Sawing Machine Operator if cuts and files various materials using electrically powered band-type sawing and filing machines; Thread Roller if tends screw-making machine in which thread is formed on screws by rolling head with circular dies by action of hardened metal dies that reciprocate, rolling screw shank between their surfaces and pressing metal of screw shank into thread form; Tapping Machine Operator if cuts internal and external threads by means of tapping machine set up and adjusted by other workers or themselves; Profile Roller etc.

ISCO 08 Unit Group Details:

Code	7223
Title	Metal Working Machine Tool Setters and Operators

Family 7224

Metal Polishers, Wheel Grinders and Tool Sharpeners

Metal polishers, wheel grinders and tool sharpeners polish and grind metal surfaces and sharpen tools.

7224.0100

Grinder, General

Grinder General grinds and smoothens metal surfaces to specified accuracy using one or more type of grinding machine. Examines drawings and other specifications of part to be ground. Selects grinding wheel of appropriate size, shape and abrasive quality and fastens it on spindle of machine. Mounts metal part accurately in position on machine using chucks, jigs, fixtures or between centres of head and tail stock of machine as required and sets it accurately either parallel or at angle in relation to grinding wheel as specified using appropriate devices and instruments necessary. Adjusts machine table, guides, stops and other controls to determine direction and limit of metal and grinding wheel movements. Selects grinding wheel speed and starts machine for grinding. Manipulates hand wheel or sets and starts automatic controls to bring grinding wheel in contact with work. Checks progress of grinding with measuring instruments and gauges for accuracy. May balance dress or change grinding wheel, stone or abrasive. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 7224
Title Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0102

Fitter-Fabrication

Fitter-Fabrication identifies metals, tools; carrying out fitting and fabrication operations like measuring, marking out, sawing, grinding, drilling, chiselling, threading, tapping, scraping, manual lapping and inspecting of components in order to fit a component as per specifications. It also involves basic oxy-fuel gas cutting and basic manual arc welding as per given instructions and under supervision.

Qualification Pack Details:

QP NOS Reference CSC/Q0303
QP NOS Name Fitter-Fabrication
NSQF Level 2

ISCO 08 Unit Group Details:

Code 7224
Title Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0200

Grinder, Crankshaft

Grinder, Crankshaft grinds crank pins and journals of crankshaft accurately to uniform diameters by special grinding machine and attachments. Studies drawings and other specifications of parts to be ground. Fastens crankshaft accurately in position on machine using chucks, fixtures, and other devices and sets portion to be ground, using dial indicator, marking block or otherwise. Selects appropriate type and quality of grinding wheel and fits it on machine spindle. Adjusts guides stops and other controls to determine limit of work and grinding wheel movements. Selects rotation speed of wheel and starts machine. Manipulates hand wheels of machine and brings rotating grinding wheel in touch with crankshaft journal or area to be ground. Regulates flow of

coolant over ground portion. Observes progress of grinding to prescribed accuracy and finish. Stops machine periodically and checks for accuracy using micrometre or set gauges. Removes crankshaft when grinding is over and repeats operations on other portions as required. May make simple adjustments to machine. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7224

Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

7224.0300

Roll Grinder

Roll Grinder grinds shafts, rollers, commutator etc., to accurate finish for various mechanical purposes by centreless, cylindrical or universal grinding machine. Studies drawing and other specifications of parts to be ground. Selects and mounts appropriate abrasive wheels on machine. Turns hand wheel to adjust gap between rims of wheels according to diameter of part to be ground. Moves levers to select appropriate speeds for each wheel. Sets feed guide to guide work into position between two wheel rims and clamps coil guide properly to receive work from between wheel rims. Starts machine and feeds work on to feed guide or keeps hopper filled with objects that are automatically fed between wheels. Observes progress of work and checks periodically ground parts with micrometre or gauge to ensure that they conform to prescribed specifications. May do cylindrical grinding of parallel, step and taper shafts and internal bores set between centres or otherwise by processes of traverse plunge or angular grinding and be designated as

CYLINDRICAL GRINDER or INTERNAL GRINDER as appropriate. May set or adjust grinding wheel distance for different operations. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7224

Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

R/RM/O Classification: R

7224.0400

Surface Grinder

Surface Grinder grinds flat surfaces of machined metal objects to required finish and thickness by surface grinding machine. Studies drawings and other specifications for nature of grinding operations required. Selects appropriate grinding wheel and fits it on machine spindle. Places work in position on magnetic chuck on the machine. Sets required speed of grinding wheel and feed of machine and adjust guides and stops to control to and fro travel of machine table. Starts machine and brings grinding wheel into contact with work. Applies cut and observes progress of operation. Stops machine and measure work as necessary to ensure required accuracy. Removes work from machine when grinding completed. May operate horizontal or vertical spindle surface grinding machine. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 7224

Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

7224.0401

Grinder – Hand held and Power Tools

Grinder – Hand held and Power Tools selects appropriate grinding equipment, tools and methods to suit work requirements, preparing the tools, applying grinding procedures for carrying out the grinding operations, inspecting the components after grinding operations and correcting faults.

Qualification Pack Details:

QP NOS Reference	CSC/Q0302
QP NOS Name	Grinder – Hand held and Power Tools
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7224
Title	Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0402

Operator-Conventional Surface Grinding Machines

Operator-Conventional Surface Grinding Machines carries out the grinding operations, in accordance with approved procedures, using different grinding machines (e.g. horizontal or vertical surface, cylindrical or universal grinding machines).

Qualification Pack Details:

QP NOS Reference	CSC/Q0109
QP NOS Name	Operator-Conventional Surface Grinding Machines
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7224
Title	Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0500

Thread Grinder

Thread Grinder finishes accurately threads of precision bolts, taps etc. by thread grinding machine. Studies blue print for pitch and other specifications of threads to be ground. Adjusts wheel of grinding machine and dresses grinding wheel to required pitch and cross-sectional shape of thread to be ground. Checks ground wheel with gauges to ensure accuracy. Mounts grinding wheel on spindle of machine and sets it to required, grinding operation. Mounts threaded work piece to be ground on machine and fastens it securely. Adjusts proper gears in feed mechanism of machine to give threads specified pitch. Sets prescribed speed and feed of machine. Starts machine, and applies cut by matching ground wheel and thread on work piece perfectly. Observes operation as first cut is completed. Stops machine and returns wheel to original position. Checks dimensions of finished threads using measuring instruments and gauges. Makes adjustments, if necessary, and repeats operation until thread is properly ground. May clean and oil machines.

ISCO 08 Unit Group Details:

Code	7224
Title	Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0600

Honer/Honing Machine Operator

Honer grinds internal surface of bores and cylinders to accurate mirror like finish with honing machine. Mounts ground cylinder accurately in position on machine, using clamps, jigs and other fixtures. Selects appropriate honing stick (abrasive tool) and clamps it on spindle of machine. Aligns cylinder accurately so that

honing tool goes smoothly inside cylinder bore. Sets machine to feed and rotate hone at appropriate speed and starts machine. Expands tool to required diameter and manipulates hand wheel to feed tool into cylinder. Engages automatic feed that oscillates hone within cylinder and regulates supply of cutting lubricant over honing tool. Checks progress of honing as required with measuring instruments and makes necessary adjustments to ensure accuracy. Removes work when honing is completed. May do internal grinding of cylinders and bores. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 7224

Title Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0700

Lapper

Lapper smoothens hardened flat, cylindrical, spherical or other metal surfaces mechanically or manually to glossy finish by rubbing surfaces with fine abrasives. Examines drawings and other specifications of part to be lapped and selects appropriate abrasive dust. Fits lapping wheel and sets object to be lapped on machine. Applies abrasive dust on metal surface and wheel and starts machine. Brings metal objects in contact with lapping wheel or holds work by hand over lapping wheel and polishes surface to required finish. Applies abrasive compound where necessary to attain high degree of finish. Smoothens or polishes surface for set period. Removes metal and cleans it in special liquids. May do hand lapping by enclosing object in container and vigorously rubbing by hand top plate of container with abrasive compound on

metal surface to attain high degree of polish and accurate finish.

ISCO 08 Unit Group Details:

Code 7224

Title Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0701

Super Finishing Technician

Super finishing Technician Level 4 is a skilled operator. The role covers operations of different machine tools performed both manually and through automatic/CNC machines/manually and all kinds of activities like burnishing, lapping, buffing and in-line inspection activities for quality verification, adhoc repair work, change of worn out parts and gauging activities.

Qualification Pack Details:

QP NOS Reference ASC/Q4301

QP NOS Name Super Finishing Technician

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7224

Title Metal Polishers, Wheel Grinders and Tool Sharpeners

7224.0801

Polisher

Polisher polishes metal articles such as household utensils, vases etc. to high finish on polishing spindle with abrasives and polishing tools. Fixes article on suitable adapter screwed to spindle. Starts motor to rotate spindle and adjusts article on adapter to run concentric. Presses fine emery paper on article to glossen surface. Improves texture and attains high polish by manipulating polishing tool against

article. May also polish silver and costly wares with buff for still higher finish.

Qualification Pack Details:

QP NOS Reference CSC/Q0113
QP NOS Name Polisher – Machine
NSQF Level 2

ISCO 08 Unit Group Details:

Code 7224
Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

7224.0900

Saw Grinder, Hand

Saw Grinder, Hand sharpens teeth of different kinds of saws by filing and slightly bending them in required direction. Examines dull saw blade and determines extent of grinding and mending of saw teeth required. Fixes saw blade of wooden cramp and grinds each saw tooth individually with triangular file. Feels sharpness by touch and bends saw teeth alternately or as designed using hammer and sawage or special pliers. May make saws by cutting fresh teeth and fixing handle in new or used blades.

ISCO 08 Unit Group Details:

Code 7224
Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

7224.1100

Metal Bluer

Metal Bluer imparts blue finish to metal object to make them resistant and to improve their appearance. Packs metal objects in bone or chemical and places them in furnace. Regulates heat to bring furnace to desired temperature and ascertains it by means or pyrometer or otherwise. Removes metal object from

furnace when they have attained required heat and places them in vats of prepared chemical solution. Removes metal objects from chemical bath when bluing is completed and washes them in oil.

ISCO 08 Unit Group Details:

Code 7224
Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

7224.9900

Metal Wheel Grinder, Polishing and Tool Sharpeners, Other

Metal Wheel Grinders, Polishers and Tool Sharpeners, Other include all other Metal Grinders, Polishers and Tool Sharpeners engaged in grinding and polishing knives, cutlery, choppers, domestic appliances and such other items and tools, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7224
Title Metal Polishers, Wheel Grinders
and Tool Sharpeners

Group 723 Machinery Mechanics and Repairers

Machinery mechanics and repairers fit, install, maintain and repair engines, vehicles, agricultural or industrial machinery and similar mechanical equipment.

Occupations in this Group are classified into the following Families:

7231	Motor Vehicle Mechanics and Repairers
7232	Aircraft Engine Mechanics and Repairers

7233	Agricultural and Industrial Machinery Mechanics and Repairers
7234	Bicycle and Related Repairers

Family **7231** **Motor Vehicle Mechanics and Repairers**

Motor vehicle mechanics and repairers fit, install, maintain, service and repair engines and the mechanical and related equipment of passenger cars, delivery trucks, motorcycles and other motor vehicles.

7231.0100 **Mechanic, Automobile**

Mechanic, Automobile repairs overhauls and services motor vehicles to keep them in good running condition. Examines vehicle to ascertain nature and location of defects either by running engine or driving vehicle on road. Dismantles partially or completely defective unit or parts of vehicle such as engine, gear box, rear axle, front axle, steering assembly, radiator, etc. according to nature of repairs to be done, using hoist, jack, pullers, hand tools and other devices. Measures essential parts like cylinder, bores piston, sizes crank pins etc. using gauges, micrometre and other precision tools and gets cylinders re-bored, liners filled, valve seats refaced, bearings re-metalled etc. as necessary. Repairs or overhauls and assembles engine by performing tasks similar to those of Mechanic Petrol or Diesel Engine such as replacing defective parts, scrapping bearings, grinding valves, setting timing, cleaning injectors, tuning carburettor etc. according to maker's specification. Replaces or repairs defective

parts of gear box, rear axle, steering mechanism etc. and sets them right ensuring correct alignment, clearance, meshing of gears, specified movements and operations. Relines and builds brakes, sets wheel alignment, adjust, steering, clutch, hand brakes etc. fits new or repaired accessories and body parts, makes electrical connection, and performs other tasks to effect repairs. Lubricates, joints, tightens loose parts, tests performance of vehicle by driving on road and makes necessary adjustments to attain desired standard. May assemble complete vehicle from finished components.

Qualification Pack Details:

QP NOS Reference
QP NOS Name
NSQF Level

ISCO 08 Unit Group Details:

Code 7231
Title Motor Vehicle Mechanics and Fitters

7231.0101 **Maintenance Technician-Service Workshop**

Maintenance Technician maintains and manages tools and equipment used in the workshop.

Qualification Pack Details:

QP NOS Reference ASC/Q1601
QP NOS Name Maintenance Technician-Service Workshop
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

7231.0102 AC Specialist

AC Specialist is responsible for installing, servicing and repairing an air conditioning system of a vehicle. The individual also performs routine maintenance of the various components associated with the air-conditioning system of the vehicle.

Qualification Pack Details:

QP NOS Reference ASC/Q1409
QP NOS Name AC Specialist
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231
Title Motor Vehicle Mechanics and Fitters

7231.0103 Automotive Body Technician Level 3

Automotive Body Technician is responsible for assisting in repair of vehicles and carrying out work on the body and frame of a vehicle following the manufacturer's repair procedures.

Qualification Pack Details:

QP NOS Reference ASC/Q1410
QP NOS Name Automotive Body Technician Level 3
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7231
Title Motor Vehicle Mechanics and Fitters

7231.0104

Automotive Body Technician Level 4

Automotive Body Technician is responsible for repair of vehicles and for carrying out work on the body and frame of a vehicle following the manufacturer's repair procedures.

Qualification Pack Details:

QP NOS Reference ASC/Q1405
QP NOS Name Automotive Body Technician Level 4
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231
Title Motor Vehicle Mechanics and Fitters

7231.0105 Brake Specialist

Brake Specialist is responsible for performing diagnostic tests and determining common problems occurring in the Braking and allied systems. The individual also repairs and replaces various components/aggregates in the braking system of the vehicle, and performs routine maintenance of various components/aggregates within the Braking system.

Qualification Pack Details:

QP NOS Reference ASC/Q1414
QP NOS Name Brake Specialist
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231
Title Motor Vehicle Mechanics and Fitters

7231.0106

Clutch Specialist

Clutch Specialist is responsible for repairing and replacing the clutch assembly and related parts. The individual also performs routine maintenance of various components/aggregates within the Clutch assembly including the pressure plate/clutch plates.

Qualification Pack Details:

QP NOS Reference ASC/Q1415
 QP NOS Name Clutch Specialist
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231
 Title Motor Vehicle Mechanics and Fitters

7231.0107

Auto Service Technician-Mechanic

Auto Service Technician Level 4 is responsible for the repair and routine servicing and maintenance (including electrical and mechanical aggregates) of vehicles.

Qualification Pack Details:

QP NOS Reference ASC/Q 1402
 QP NOS Name Auto Service Technician Level 4
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7231
 Title Motor Vehicle Mechanics and Fitters

7231.0108

Auto Service Technician-Helper

Auto Service Technician Level 3 assists in service, maintenance and technical repair of vehicles.

Qualification Pack Details:

QP NOS Reference ASC/Q 1401
 QP NOS Name Auto Service Technician Level 3
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7231
 Title Motor Vehicle Mechanics and Fitters

7231.0200

Engine Tester

Engine Tester, Automobile; Test Bed Mechanic, Automobile tests performance of newly assembled automobile engines before fitting them on chassis. Mounts motor on test bed with hoist and clamps it securely in position with nuts and bolts. Connects dynamometer/alternator to crankshaft of engine, oil and fuel line, controls, and other accessories adjusts tappets, starts engine, sets air-fuel ratio and performs precise tune up operations. Runs engine for specified period at different speed and observes performance, unusual noises knocks, etc. reads and records temperature, fuel consumption, oil pressure, compression and power developed at certain speed and other specification and calculates torque, B.H.P thermal efficiency etc. Passes engine to assembly line or reject, it for return to disassembly. May rectify minor faults or report faults noticed.

ISCO 08 Unit Group Details:

Code 7231
 Title Motor Vehicle Mechanics and Fitters

7231.0201**Test Technician**

Test Technician is responsible for conducting various types of tests inside the laboratory as well as supporting on road testing. The role holder is responsible for setting the test apparatus on the test bench, connecting the aggregates/vehicle under test to the test bench, support the engineer in taking readings during tests procedures, making minor modifications to the test setup and keeping the test areas and apparatus in a clean and working condition.

Qualification Pack Details:

QP NOS Reference	ASC/Q/8401
QP NOS Name	Test Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7231
Title	Motor Vehicle Mechanics and Fitters

7231.0300**Tractor Mechanic**

Tractor Mechanic repairs and overhauls tractors by various mechanical processes for agriculture, constructional and other heavy duties. Examines and drives vehicle on road or runs engine in stationary position to diagnose troubles and defects. Dismantles part or complete engine or unit according to nature of defects. Repairs or replaces defective parts, reassembles them with prescribed settings, clearances, timings and adjustments by further tooling as necessary and ensures accuracy of fit. Installs assembled or repaired engine securely in position on vehicle chassis and connects oil and fuel lines, controls and other accessories. Starts engine and

observes performance for any unusual noise and knocks. Adjusts carburettor, fuel pump (Carburettor for petrol engine and fuel pump for diesel engine), sets clearance between tappets and valves, tunes engine, adjusts brakes, makes electrical connections and performs other tasks to ensure stipulated performance. May repair and overhaul electric motors, fuel pump, carburettor etc. of engine. May weld, braze or solder parts. May repair other agricultural machinery for ploughing, levelling, harvesting etc. and be designated as MECHANIC, AGRICULTURAL MACHINES.

ISCO 08 Unit Group Details:

Code	7231
Title	Motor Vehicle Mechanics and Fitters

7231.0400**Fitter Automobile**

Fitter, Automobile attends to minor repairs to motor vehicles under guidance of Mechanic Automobile. Receives instructions from Mechanic, Automobile about tasks to attend. Jacks up vehicle to required height for repair in convenient position where necessary. Removes nuts and bolts to dismantle parts such as water pump assembly, fuel pumps assembly, distributor, carburettor, sparking plugs, starter motors, generator, steering gear, brakes, clutch, transmission and suspension systems, etc. Grinds valve and decarbonises cylinder head under guidance of mechanic and changes oil of engines and transmission system. Tightens loose parts, lubricates joints, does minor repairs, replacements and adjustments and performs simple fitting operations such as filing, chipping, grinding etc. May work in workshops or garage. May drive vehicle on road. May be designated as

SERVICE MECHANIC if engaged in cleaning, polishing, oiling and greasing vehicles and do minor routine adjustments as included in servicing.

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

7231.0401

Mechanic Fitter

Mechanic/Fitter is responsible for repair, maintenance and overhaul of crushers, heavy earth moving machinery, medium and light vehicles, pumps and compressors and other mechanical equipment and assemblies used in a mine. A fitter most often works with/assists technicians who are more qualified and experienced. The individual must be trained to work safely and assure that they can protect themselves and others working around them from getting injured.

Qualification Pack Details:

QP NOS Reference	MIN/Q0406
QP NOS Name	Mechanic/Fitter
NSQF Level	3

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

7231.0500

Mechanic, Motor Cycle

Mechanic, Motor Cycle repairs, services and overhauls motor cycles, auto-rickshaws, scooters; etc., to make and keep them roadworthy. Examines motor cycle or scooter to locate faults by running engine in stationary position or by driving

it on road. Dismantles parts such as engine, ignition system, dynamo forks, shock absorbers, gear box etc., as necessary. Grinds valves, sets timings, relines brakes, re-bushes steering mechanism, replaces worn out parts, assembles gear box clutch etc. and performs other tasks to effect repair, cleans and sets carburettor, fits driving chain, wheels silencer, kick, gear, clutch and brake levers and other accessories. Adjusts control cables for brake, clutch and accelerator, sets tappets and wheel alignment, tightens loose parts and makes necessary fittings and connections. Changes engine and gear box oil, starts engine and tunes it up. Tests performance of vehicle by driving on road and makes further adjustments to remove defects noticed if any. May assemble motor cycle or auto-rickshaws from assembled parts.

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

7231.0501

Auto Service Technician (Two and Three Wheelers)

Auto Service Technician (two and three wheelers) is responsible for the repairing and routine servicing and maintenance (including electrical and mechanical aggregates) of two/three wheeler vehicles.

Qualification Pack Details:

QP NOS Reference	ASC/Q1411
QP NOS Name	Auto Service Technician (Two and Three Wheelers)
NSQF Level	4

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

7231.0900**Cleaner Motor Vehicle**

Cleaner, Motor Vehicle cleans and lubricates moving parts of motor cars, trucks and other automatic vehicles and performs various other related tasks. Fills oil cans, grease guns with required type of lubricant. Lubricates vehicles according to charts, instructions, own judgement or knowledge of type of vehicle to be lubricated. Injects oil or grease into various parts of engine or chassis. Inspects transmission, differential and rear axle casing and fills them with grease and oil. Cleans or replaces clogged or damaged lubricators. Examines oil levels in gear box, crankcase, steering box etc., and drains out old oil and refills them with good oil as required. Reports apparent defects to Mechanic. May fill radiator with water/coolant, check and fill distilled water in battery, tighten loose parts such as bolts and nuts, repair flat tyres, mount tyres on wheel rims, inflate tyres and perform other related duties as assigned.

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

7231.9900**Motor Vehicle Mechanics, Other**

Motor Vehicle Mechanics, other perform number of routine and low skilled tasks in repairing and overhauling motor vehicles such as removing mudguards, bonnets etc. to facilitate working, adjusting alternator and fan belt, assist in bleeding

of brakes, draining gear box and oil pump, removing and resetting road spring, etc., and are designated as Motor Mechanic Helper, or Garage Boy according to nature of work done.

ISCO 08 Unit Group Details:

Code 7231

Title Motor Vehicle Mechanics and Fitters

Family 7232**Aircraft Engine Mechanics and Repairers**

Aircraft engine repairers and mechanics fit, service, repair and overhaul aircraft engines and assemblies, such as airframes, hydraulic, and pneumatic systems.

7232.0100**Airframe Erector**

Airframe Erector assembles fuselage, tail, wings, under carriage, fuel tanks, doors etc. and installs plumbing pulley, pulley brackets and other airframe structural members according to approved schedules. Studies blue print and approved assembly schedules. Assembles airframe components, by supplementary tooling where necessary using jigs, fixtures and other devices. Ensures correct fits, assembly, alignment and clearance according to schedule, using feeler gauges, micrometre etc. Secures members temporarily with fasteners, screws or by tack welding and marks locations for rivet holes. Drills and countersinks holes in members for subsequent riveting, checks operation of pneumatic and hydraulic systems, locates defects and rectifies faults. Tests rigging and satisfactory operation of aircraft control and ensures

airworthiness. Is designated as MECHANIC AIRCRAFT AIRFRAME OVERHAULING if engaged in disassembling above parts and reassembling them after necessary repairs. May rivet parts together. May replace, repair and modify passenger galley and toilet structural parts. May maintain record of parts examined.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

7232.0200

Mechanic Aircraft, Propeller

Mechanic Aircraft Propeller installs, repairs and sets aircraft propellers according to design for specified displacement of air. Checks propeller used on aircraft and ensures recommended combinations, mandatory modifications and compliance with Directorate General of Civil Aviation's requirements. Strips or dismantles propeller assembly, gets them properly cleaned and checks them for size, shape, wear and tear, cracks and fatigue using precision instruments and other devices according to set procedure. Assembles propeller with spares, where necessary, according to instructions and approved schedules. Checks fits, clearance, alignment of propeller blades etc. and carries out balancing of components of propeller assembly. Gets balancing done checked and approved by appropriate authority and installs propeller assembly on test rig to administer tests and functional checks such as blade angle, leak check, micro switch setting etc. as prescribed. May do complete over-hauling of constant speed units and get parts repaired or rectified in appropriate sections.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

7232.0300

Engine Tester, Aircraft

Engine Tester, Aircraft tests performance of aeroplane engines by operating them under controlled conditions, keeping record of various meter readings taken at periodical intervals and interpreting data thus obtained. Prepares engine for tests run. Dresses and installs engine on tests bed, using chain hoist and fastens it securely to bed with clamps and other fixtures. Connects oil and fuel lines, instruments, controls, and accessories. Connects propeller or dynamometer to crankshaft pre oils, primes starts engine according to test run procedure. Runs it for prescribed period at different specified speeds, locates defects and rectifies them. Reads and records speed, temperature, fuel level, oil pressure, manifold pressure and other data in log sheet. Calculates performance of engine at different speeds using slide rule, standard formula and curves and maintains data. Makes minor repairs or adjustments to set engine to required perfection. Maintains test house equipment and calibrates tests fans. Slushes engine and preserves for storage.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

7232.0400

Engine Tester, Helper, Aircraft

Engine Tester Helper, Aircraft assists Engine Tester in preparing and mounting aircraft engine on test bed, and in starting

engine for performance test. Assists Engine Tester in removing engine to test room and mounting it on test bed, using hand tools, trucks, and hoists, connects oil and fuel line, instruments, controls and accessories. Cleans tools, performs other duties as directed and maintains test bed. May assist in rectifying defects, making adjustments and recording various test data.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

7232.0500

Mechanic Aircraft Engine, Field Service/Filed Mechanic Aircraft

Mechanic Aircraft Engine, FieldService, checks and detects faults, removes defective parts, engines etc. from aeroplane by disconnecting wiring and accessories, installs new or repaired engines and parts and does final adjustments to prepare plane for test flights. Inspects and checks engine to locate defects. Disassembles engine and accessories such as carburettor, fuel pump starters generators, ignition hammers, sparking plugs and other hydraulic and electrical systems. Removes engine for overhauling by disconnecting tubing, wiring and accessories, embolting engine and lifting it from plane with chain hoist. Replaces or repairs defective or worn out parts and makes necessary accessories and makes final inspection to ensure they are in scheduled and prepares plane for test flight. May assist Aircraft Maintenance Engineer in carrying out routine maintenance as preapproved inspection schedule. Aircraft test engine performance after aircraft had been repaired in shed and does final settings

and adjustments before and after scheduled hours of flight. Examines external appearance of engine and listens to engine sound to detect malfunctioning. Times and adjusts engine and replaces parts, such as tyres, wiring, instruments etc. using necessary tools. Inflates tyres, fills gasoline tanks and oil reservoirs, greases moving parts and cleans motors with rags. Starts and warms up motors and taxis aeroplane into position for servicing and loading, checks aeroplane thoroughly before flight according to schedule, trying brakes, operating controls, reading instruments, checking vital parts etc. And ensures that it is absolutely fit for flight. Undertakes similar checking of aeroplanes after scheduled hours of flight to assess airworthiness or necessary repairs. May disconnect and remove engine from aeroplane for overhaul. Proper operating order. Performs miscellaneous duties to service engine such as flushing crankcase, clearing strainer screens and greasing moving parts etc. Installs new or overhauled engine in airplane, connects all part and wiring, checks and removes snags.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

7232.0600

Mechanic Aircraft, Engine Overhauling

Mechanic Aircraft, Engine Overhauling repairs and overhauls aeroplane engines. Examines engine mounted on aeroplane and listens to its idle running sound to detect malfunctioning. Removes engine from airplane using hoist, necessary tools and equipment. Mounts it on work bench. Disassembles engine, cleans parts and examines them to ascertain repairs

needed. Repairs or replaces defective parts and reassembles engine by setting timings, clearance, etc. according to manufacturers' specifications. Balances impellers and incorporates modifications as suggested. Runs engine to test performance, makes necessary adjustments to carburettor, and tunes it up precisely using feeler gauge, timing discs and other special tool, performs other talks to service engine, such as flushing crank case, cleaning strainer screens, greasing moving parts etc. May specialize in servicing and overhauling specific aircraft parts or unit such as carburettor, propellers, landing gears, wings, fuselage, etc. May operate workshop machine for drilling, grinding, milling etc. May keep record of parts examined, repaired and replaced.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

7232.9900

Aircraft Mechanics, Other

Aircraft Mechanics, other include all other workers engaged in assembling and repairing gliders and aircrafts either in workshop or airport, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7232

Title Aircraft Engine Mechanics and Repairers

Family 7233
Agricultural and Industrial Machinery Mechanics and Repairers

Agricultural and industrial machinery mechanics and repairers fit, install, examine, service and repair engines, agricultural and industrial machinery and mechanical equipment, except motor vehicle, aircraft and electric motors.

7233.0100

Fitter, General

Fitter General sizes metal parts to close tolerances and fits and assembles them using hand tools for production or repairs of machines, or other metal products. Studies drawings to understand specification of different parts, fittings or assemblies to be made and their functions. Cuts and shapes required parts dimensions and specifications by processes of sawing, clipping, filing, grinding, drilling holes, screw cutting, scrapping etc., Assembles parts by riveting, screwing, pinning etc. So as to make complete unit according to drawing. Dismantles or removes worn out, broken or defective parts using hand tools and replaces them by repaired or new ones. Tests completed article to ensure correct performance. May do simple turning, planning and shaping of parts on machines and perform welding, brazing, annealing, hardening, tempering and, like operations. May specialize in particular type of machine or product and be designated accordingly. May suggest alterations.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0101

Maintenance Fitter-Mechanical

Maintenance Fitter-Mechanical dismantles, removes and replaces faulty equipment at component or unit level on a variety of different types of mechanical assemblies and sub-assemblies and diagnosing, locating faults, overhauling, fitting and adjusting mechanical systems and equipment.

Qualification Pack Details:

QP NOS Reference CSC/Q0213
 QP NOS Name Maintenance Fitter-Mechanical
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7233
 Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0102

Iron and Steel-Machinist

Iron and Steel-Machinist identifies the sequence of machining operations required to fabricate product component required to fabricate product components by studying their designs/sample parts and fabricating the components using the appropriate tools and dies.

Qualification Pack Details:

QP NOS Reference ISC/Q0802
 QP NOS Name Iron & Steel-Machinist
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7233
 Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0121

Fitter Levelling, Alignment and Balancing

Fitter Levelling, Alignment and Balancing ensures alignment of moving parts (e.g. Pumps, blowers, fans etc.).

Qualification Pack Details:

QP NOS Reference ISC/Q0814
 QP NOS Name Fitter Levelling, Alignment & Balancing
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7233
 Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0200

Fitter, Bench

Fitter, Bench; Viceman sizes metal accurately to required dimension by sawing, chipping, filing, etc. using hand tools for making specimens or finished components. Studies drawing or measures sample to record dimensions of part to be made. Holds specified material in vice and sizes it by processes of sawing, chipping and filing. Measures object while working using foot rule, callipers, gauges etc. and checks for correct filing with square. Gets half-finished objects marked or marks it using face plate, marking block scribe, Vernier, height gauges, vice-blocks, angle plate, sine plate, slip gauges, combination set, etc. depending on accuracies required, to indicate guide lines for finished sizes, holes to be drilled and pitch centres, threads to be cut and other working details as specified in drawing or sample. Clamps object securely in correct position in vice and files it to required dimensions according to punch marks and

guide lines frequently measuring it with clippers, micrometre, Vernier, gauges etc.. Drills holes with hand drill, cuts threads with taps and dies ensuring that they are square or at required angle to base. Measure finished article with dial indicator, micrometre, Vernier, height gauges, screw gauges, plug gauges, sine plate slip gauge, etc. according to prescribed accuracies. May make parts separately and assemble them screws, rivets, pins, etc. as specified. May check dimension with shadow graph. May be designated as FITTER TOOL ROOM or Filer according to nature of work done.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0300

Mechanic, Petrol Engine

Mechanic, Petrol Engine; Petrol Engine Fitter, locates defects, repairs, and overhauls stationary petrol engines for correct performance to drive pumps, generators, propulsion shafts, etc., checks engine to locate defects. Dismantles or partly dismantles it according to nature of defects and measures essential parts such as cylinder bore, crank pins, pistons etc., using cylinder gauge, micrometre and other appropriate tools. Gets cylinders rebored, valve seats refaced and liners filled if necessary. Fits and taps pistons in cylinders, decarbonises cylinder head and grinds valves using appropriate abrasives. Replaces or repairs worn out or damaged parts and assembles them, doing supplementary tolling as necessary to ensure accuracy of fit. Installs assembled or repaired engine in position, sets timings, fits accessories, adjusts tappets,

carburettor, fan belt etc. and connects it to propulsion drive. Starts engine, tunes it precisely and runs it at prescribed or set standard making necessary adjustments. Observes different readings such as temperature, fuel level, oil pressure etc. for optimum performance. Checks, adjusts and lubricates equipment periodically and performs other operations to keep engine in good working order. May rebore engine, reface valve seats, anneal pipes, braze or solder parts etc.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0301

Bearing Maintenance

Bearing Maintenance, identify the problems in the equipment, rectify the root causes for leakages, replaces the bearings, lubricates the bearings, ensures fitness of all types of bearings in the plant and carry out routine maintenance.

Qualification Pack Details:

QP NOS Reference	ISC/Q0816
QP NOS Name	Bearing Maintenance
NSQF Level	3

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0400

Mechanic, Diesel Engine

Mechanic, Diesel Engine; Oil Engine Fitter repairs services and overhauls diesel or oil engines for efficient performance as prime mover to drive machinery and equipment. Examines engine to locate defects, using various tools and instruments. Dismantles or partly dismantles it to remove damaged or worn out parts and replaces or repairs them. Grinds valve and assembles parts, doing supplementary tooling and other functions as necessary to ensure accuracy of fit. Installs assembled or repaired engine in position and connects pulley or wheel to propulsion system. Starts engine, tunes it up and observes performance noting different meter readings such as temperature, fuel level, oil pressure, etc. and sets it to specified standard for optimum performance. Checks, adjusts and lubricates engine periodically and performs such other functions to keep engine in good working order. May solder or braze parts and service diesel fuel pumps and injectors.

ISCO 08 Unit Group Details:

Code 7233
Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0401

Belt Conveyor Maintenance

Belt Conveyor Maintenance maintains conveyor system including belts, idlers motors, interlocking belts, bunkers and control systems.

Qualification Pack Details:

QP NOS Reference ISC/Q0812
QP NOS Name Belt Conveyor Maintenance
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7233
Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0402

Conveyor Operation and Maintenance

Conveyor Operation and Maintenance inspects the total belt driving system including the controls of conveyor belt as per the required sequence for feeding different raw materials (coal, limestone, iron ore etc.) in the service bunker through crushers/screener etc. This also involves basic maintenance and troubleshooting of the conveyor belt system.

Qualification Pack Details:

QP NOS Reference ISC/Q0008
QP NOS Name Conveyor Operation and Maintenance
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7233
Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0600

Mechanic, Gas/Diesel Engine

Mechanic, Gas Engine checks, adjusts, repairs and overhauls gas engines to ensure desired performance. Examines engine to check supply of gas, ignition system, exhaust pipe, crank bearings etc., to locate causes of defective operation. Dismantles part or complete engine according to nature of defects, repairs or replaces defective and worn out parts and reassembles engine with prescribed settings, timing and adjustments by further tooling as necessary, checks entire lubrication system, ensure requisite flow

of oil and lubricates all points. Turns engine to check compressions, ensures correct operation of compression release lever and starts engine. Observes performance and makes further settings and adjustments if necessary to ensure correct operation. May repair air or gas compressors and gas producer plant.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0700

Mechanic, Earth Moving Machinery

Mechanic, Earth Moving Machinery repairs, services and overhauls earth moving machines such as Bull-dozers, scraper, dumper, power-shovel, dredger, dragline, etc., studies manufacturer's instructions for dismantling and repair work. Examines and drives vehicle to locate defects. Sets right minor defects by cleaning, resetting and adjusting carburettor, fuel pump, injector, plugs, fuel line, electrical circuits etc. Dismantles part or complete engine or defective unit according to nature of defects and replaces or repairs damaged and worn out parts. Assembles repaired unit or engine, sets timings, clearances etc. and makes necessary adjustments according to specifications by doing supplementary tooling as necessary to ensure accuracy of it. Fits accessories, components and frame to vehicle.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0701

Mobile Equipment Maintenance

Mobile Equipment Maintenance carries routine maintenance, identifying the problems, rectifying the root causes and ensuring the fitness of all moving equipment, for e.g. Mobile Cranes, Dumper, Forklift etc.

Qualification Pack Details:

QP NOS Reference	ISC/Q0815
QP NOS Name	Mobile Equipment Maintenance
NSQF Level	3

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0800

Mechanic, Road Roller

Mechanic, Road-Roller repairs and overhauls engine transmission system, chassis components and accessories of light or heavy road roller to ensure efficient performance. Inspects and tests road rollers to locate defects. Dismantles engine and other sub-assemblies, partly or completely according to nature of defects. Repairs or replaces damaged parts of different sub-assemblies fuel injections performing simple machine and fitting operations where required. Checks condition of engine parts such as piston, rings, valves, steam whistle, reversing gear, auto-positive injector in steam engine or plunger, governor, atomiser etc. in case of diesel engine and replaces damaged parts. Refits or assembles components or unit, sets timings, fuel injection, clearances etc. and tests performance. Changes oil in engines and

transmission systems and lubricates running parts and joints. Tightens loose parts, makes necessary adjustments and performs other tasks to keep vehicle in good working condition. Runs engine or drives vehicle on yard to check and ensure that all mechanical systems are functioning properly. May braze, solder and weld parts. May drives vehicle on road. May specialize in diesel or steam road rollers.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.0900

Mechanic, Turbine

Mechanic, Turbine; Fitter, Turbine reports irregularities, removes defects and overhauls turbines under guidance of Electrical Engineer or Mechanical Engineer Maintenance Dismantles turbines and their components according to manufacturer's instructions using hoisting equipment under guidance of Electrical/Mechanical Engineer, examines parts for any damaged or defects and repairs or replaces damage parts by filing, chipping, drilling, grinding, scraping etc., as necessary. Checks level, alignment etc. and changes bearings, shafts and related parts of generator where necessary. Refits parts ensuring correct adjustments, clearance, function level alignment, etc., as per manufacturer's instructions. Starts turbine and observes performance by watching and listening to unusual sounds, leakage, knocks etc. and reports defects to superiors for rectification. May connect water/steam channel from penstock/steam pine to turbine for flow of water/stream at high pressure to drive

turbine blades. May operate turbine. May repair and service mechanical equipment in power house. May oil and grease lubricating points of plant (turbo alternator or turbo-generator) and equipment. May erect turbine alternators or generators under guidance of Mechanical or Electrical Engineer in power houses.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.1000

Mechanic, Stationery Steam Engine

Mechanic, Stationary Steam Engine repairs, services and overhauls steam engine for correct performance. Examines steam pipes, joints, valves etc. to ascertain nature and location of defects and dismantles them partly or wholly as necessary to remove damaged or worn out parts. Replaces or repairs damaged and worn part by remitting, filling, grinding and scraping etc. and measures them for size to ensure functional accuracy. Checks alignments with gauges and spirit level and assembles parts and complete unit doing supplementary tooling as necessary to ensure accuracy of fit. Tests reassembled equipment, sets valves, adjusts control and makes necessary adjustments. Starts engine, observes gauges and meters to ascertain engine performance, balances etc. and makes further adjustments if necessary. Checks, adjusts lubricates working parts, tightens loose parts and performs other servicing tasks periodically to keep engine in good running condition. Reports to Mechanical Engineer of any service defects noticed for rectification. May keep

record of parts examined and engine performance. May erect and install equipment. May operate or drive steam engine.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.1100

Mechanic, Maintenance, Chemical Plant/Technician, Maintenance, Chemical Plant

Mechanic Maintenance (Chemical Plant); repairs and overhauls chemical plant, machinery and equipment periodically and on break downs to maintain them in efficient operating condition. Studies methods of processing of raw material to finished products. Examines plant and equipment to locate faults and removes minor defects on spot. Reports major defects and break downs to Chemical Engineer and dismantles defective unit as directed with necessary precaution, using hand tools, adopter, twists etc. as necessary. Replaces or repairs defective parts and components by re-metalling, filling, drilling, grinding, scraping, soldering, brazing, etc. as required and reassembles unit according to specifications with prescribed precautions particularly for explosive, gas acid and other chemical plants, ensuring correct alignment clearance, valve operations, adjustments, flow of material operational functions and other necessary details. Tests assembled unit for proper performance, makes further adjustments, if necessary and gets assembled if examined by appropriate authority before handing over to production. Checks, adjusts and lubricates equipment

periodically or gets it done and performs other tasks to maintain plan in proper working order. May maintain records of parts examined, repairs done, replacements made and plant performance. May erect and install equipment under the guidance of Chemical Engineer.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.1200

Millwright

Mill Wright; Mechanic Maintenance, General repairs and overhauls workshop machines and equipment periodically and on break downs to maintain them in working condition. Examines machines and equipment to ascertain nature and location of defects. Dismantles unit partly or completely using hand tools, adopters, twists, dollies, roller etc., as necessary, at spot or after shifting to mill wright section according to nature of defects and removes damaged and worn out parts. Obtains replacements or repairs defective parts by re-metalling, chipping, machining, filing, scraping, drilling, screwing, grinding etc. and assembles them with supplementary tolling as necessary ensuring accuracy of fit, alignments, prescribed clearances and functional efficiency. Tests reassembled equipment and makes necessary adjustments. Installs machines and equipment in correct position and aligns power shifting and pulleys using plumbs bobs, thread line spirit level etc. as necessary. Checks, adjusts and lubricates equipment periodically or directs helper to do so and maintains them in working order. May

work in various industries on plant and equipment peculiar to those industries. May specialize in repairing particular types of machines or equipment in premises.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.1300

Mechanic, Pump

Mechanic Pump repairs all types of pumps such as centrifugal, plunger types etc., according to specifications for pumping water, oil, air etc., Dismantles pump using hand tools and examines mechanism to locate faults or damage, Repairs defective parts or obtains replacements, sets them in position and assembles pump. Tests reassembled or repaired unit for pressure, leakage etc., makes necessary adjustment and observes performance for appropriate yield of air, oil or water. May erect and install pumps at site and connect to motor power. May locate faults to electric system motor repaired such as rewinding of field coils or armatures by Electrician or Armature Winder. May specialize in repairing centrifugal or reciprocating pumps.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.1301

Plumber (Pumps and E/M Mechanic)

Plumber (Pumps and E/M Mechanic) is responsible for installation and repair of Pumps and E/M equipment used for different plumbing applications of housing, commercial and institutional setups.

Qualification Pack Details:

QP NOS Reference PSC/Q0111

QP NOS Name Plumber (Pumps &
E/M Mechanic)

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.1400

Mechanic, Dairy Maintenance

Mechanic, Dairy Maintenance repairs and services dairy equipment to maintain them in working condition. Repairs and services bottle and can-washers, soakers, butter and cheese packing and sealing equipment, pasteurizers milk evaporators, etc. replaces defective wiring, burnt fuses, worn switches and connects electric motors. Repairs and installs pumps, fits water and gas pipes and repairs leaky joints by general fitting operation, using hand tools or by simple welding, as necessary. May clean and re-assemble refrigeration units, regulate boiler supply pressure and mend leaky steam pipes and joints by simple welding.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.1500

Mechanic, Mining Machinery

Mechanic, Mining Machinery repairs services and overhauls drilling, scraping, cutting, winding, hoisting and other mining machinery for correct performance. Get, defective machine or equipment removed from surface or underground working place to repair section, using slippers, roller, hoists etc. as necessary. Examines faulty equipment to ascertain nature and location of defects. Dismantles equipment partly or completely to remove damaged and worn out parts. Repairs parts by various mechanical processes such as re-metalling, filing, chipping, scrapping, grinding etc. or obtains replacements. Assembles parts, doing supplementary tooling as necessary and ensures correct fit, movement, clearance, adjustments, functional operations etc. as specified. Tests reassembled equipment making necessary adjustments for optimum performance. Checks, adjusts and lubricates equipment periodically or gets it done and performs other tasks to keep equipment in good working order. May undertake minor repairs at working place. May weld, braze or solder parts.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.1600

Mechanic, Textile Machinery

Mechanic, Textile Machinery repairs services and overhauls weaving, spinning, hosiery and other textile machines and equipment to maintain them in working order and ensure correct performance. Examines equipment to locate defects.

Dismantles equipment partly or completely according to nature of defects and removes damaged or worn out parts. Repairs defective parts, if possible, by various mechanical processes such as re-metalling, riveting, filing, grinding, scraping etc. or obtains replacements. Assembles parts doing supplementary tooling as required to ensure accuracy of fit and specified functions. Tests reassembled equipment and makes necessary adjustments for required performance. Checks, adjusts and lubricates equipment periodically or gets it done and performs such other tasks to keep machinery in good working order. May keep record of parts examined and equipment performance. May weld, braze and solder parts. May erect and install textile machinery and equipment. May operate lathes, milling and smoothing machines and perform general fitting work. May specialize in particular type of textile machinery such as carding, spinning, weaving, sizing etc.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.1700

Mechanic, Printing Machinery

Mechanic, Printing Machinery repairs, services and overhauls printing machinery such as linotype, monotype, rotary, letter press etc. for efficient performance. Examines faulty equipment to ascertain nature and location of defects. Dismantles equipment partly or completely to remove damaged or worn out parts using hand tools, hoist etc. as necessary. Repairs parts by filing, grinding etc. or obtaining replacement. Assemble parts, doing supplementary tooling such as

filing, drilling, grinding etc. as necessary and ensures accuracy of fit. Operates and tests reassembled machine, makes necessary adjustments and ensured that types are uniform and it is running to specified accuracy. Checks, adjusts and lubricates equipment periodically or gets it done and performs other tasks to keep it in good working condition. Ensures that lead casting chamber, type casting unit and plunger mechanism of unit are functioning properly to cast type of required specification. May remove heavy machines and machine units from assembly line using hoisting equipment for heavy repair. May operate printing machines on job work. May specialize in servicing particular type of printing machines such as mono-casting, line casting, rotary press, treadles, binding machines etc. May keep record of parts examined and equipment performance. May be designated according to machine on which engaged such as MONOTYPE, LINOTYPE, INTER-TYPE, LITHO-BINDRY MACHINE.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.1800

Mechanic, Sewing Machine

Mechanic Sewing Machine; Sewing Machine, Repairman examines, adjusts repairs and services sewing machines for proper performance. Examines faulty machines to ascertain nature and location of defects. Dismantles machine partly or completely to remove damaged and worn out parts. Repairs defective parts or obtains replacements. Assembles parts and tests machine for desired performance by making necessary

adjustments of position of screws, nuts, levers, needle bar, rockers, etc. Stitches, trial piece of cloth and makes further adjustments, if necessary. Cleans and oils machine periodically for smooth performance. May specialize in overhauling and repairing domestic and power driven commercial and industrial sewing machines. May visit residences or premises to repair domestic sewing machines at spot.

Qualification Pack Details:

QP NOS Reference AMH/Q1901

QP NOS Name Machine
Maintenance
Mechanic-Sewing
Machine

NSQF Level 5

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.1900

Lamp Repairman, Mines

Lamp Repairman, Mines Lamp Cleaner/Mines; Lamp Fitter, repairs, tests, cleans and changes safety lamp used underground by miners. Checks safety lamp parts such as gauge, chimney, glass, wick, asbestos washer and fuse, head ring, cables, etc., in case of electric safety lamp for defects. Repairs or replaces parts and tests lighted lamp for safety by blowing round top and bottom of gauge and glass to ensure that flame is not exposed. Cleans safety lamps by holding them against felt lined rotating wheel, adds chemicals and changes small batteries after each shift. Issues lamps locked and lighted to miners and receives them back on return. May keep record of number of

men underground by number of lamps issued.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2000

Mechanic, Repairman (Domestic Appliances)

Mechanic, Repairman, Domestic Appliances services and repairs all types of small machinery and mechanical appliances generally in domestic use by replacement and repairs of worn or damaged parts to ensure correct performance. Examines small machines and appliances such as heaters, geysers, coffee grinders, gramophones, pressure cookers, stoves etc. to ascertain nature and location of defects. Dismantles equipment partly or completely to remove or replace damaged or worn out parts. Repairs defective parts by setting washers, filing, soldering, riveting etc. or obtains replacements. Assembles parts to make complete unit ensuring accuracy of fit by supplementary tooling as necessary. Tests reassembled equipment and adjusts nuts, screws etc. as necessary to ensure its correct performance, fits assembly frames or structures, installs appliances in premises and gives power or water connections. Checks, cleans, adjusts and services equipment periodically to maintain them in working order. May specialize in repairing particular type of machine or equipment. May work in workshop, factory, outdoor station or at customer's residence.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2100

Fitter, Stationery Steam Engine

Fitter, Stationary Steam Engine fits and assembles parts according to manufacturer's instructions and assists Mechanic steam Engine in his work. Examines drawings and other specifications, checks parts for flaws and accuracy of fit using gauges, micrometres and other measuring instruments and removes defects by chipping, filling, scraping, grinding, drilling and other supplementary tooling as necessary. Assembles parts as directed using screw drivers, pliers, spanners etc. tests completed equipment and makes necessary adjustments under guidance of Mechanic Steam Engine. May oil and lubricate engine parts. May braze and solder parts and assist in installing equipment.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2200

Fitter, Marine

Fitter, Marine repairs, services and overhauls engines and accessories of ships, boats etc., under guidance of MARINE ENGINEER. Examines drawings and other specifications. Checks and measures parts for flaws and other accuracy of fit using gauges, micrometres etc., and removes defect by chipping, filing, scraping, grinding and does other supplementary tooling as necessary.

Assembles engines and auxiliary machinery in position using hoisting equipment and other tools. Tests completed assembly and makes necessary adjustments, Dismantles partly or completely such machinery in ship as propelling machinery, steam diesel or electric auxiliaries, pumps, cargo-handling machinery anchor-handling gear, ventilating and firefighting equipment, steering gear etc., removes and replaces worn or damaged parts and reassembles them as per drawings under guidance of Marine Engineer using hand and portable tools. Installs below deck auxiliaries such as evaporators, stills, heaters, pumps, condensers and boilers and connects them to steam pipe systems. Tests and inspects installed machinery and equipment during dock and sea trials and removes defects, if any. May attend to minor electrical defects. May assist in keeping watch on engine, boiler and other machinery and assist in their operation.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2300

Fitter, Railway Carriage and Waggon

Fitter Railway, Carriage and Waggon checks repairs and sets various metal parts and units of railway coaches and waggons to locate damage or worn out parts. Strips off wooden and metal fixtures, removes outer shell or coach and places it on wooden block using hoisting equipment. Removes under-carriage frame, bogey, wheel assembly, vacuum units, springs, buffers etc. as required.

Gets bogey completely cleaned by Khalasis, examines it for damages, cracks etc. and replaces cross members damaged and worn out parts of body using hand tools. Checks pivot pins, side bearings, etc. to set and maintain necessary clearances. Checks condition of springs, brake fittings, buffers, etc. and repairs or replaces worn out and damaged ones. Tests vacuum unit for vacuum pressure over testing machine, changes defective parts and resets them. Cleans and inspects wheel bearing and replaces them where necessary. Gets wheel machined, faced and tyre set and refits wheel assembly using new parts such as keyways, guides, space bars, etc. Examines condition of coach work and replaces worn or corroded frames with new ones. Fits various fittings to coaches such as doors, windows, lamp and fan brackets, locker, water closet fittings, places repaired or overhauled coach over bogey using overhead crane, fastens and fits bogey to coach by tightening bolts, nuts space bar, connecting rods etc. and aligns and fits metal frame and doors to waggons. May specialize in erection of new coaches or waggons or in conducting their periodical overhauling. May attend to repairs of coach and waggon buffers, vacuum brakes etc. May keep record of parts examined.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2400

Fitter, Loco

Fitter, Loco repairs locomotives and sets them to working condition according to instruction and guidance of Loco Foreman Examines drawings and other

specification, checks parts for defects and accuracy of fit, using gauges, micrometres and other measuring instruments, Dismantles units and components partly or completely to remove damaged or worn out parts and repairs them or obtains replacements. Assembles parts, doing supplementary tooling as necessary to ensure accuracy of fit. Uncouples all parts and mechanism from wheel assembly fitted to engine chassis or frame to get boilers mounted on frame free from wheels. Directs Crane Operator to lift and places engine frame along with boiler over wooden stand or blocks. Sends wheel assembly and connected parts to machine shop for repairs or reconditioning of wheels, cross bars etc. Unscrews nuts and bolts and removes all boiler mounting such as safety valve, gland steam fountains, whistle pipes, smoke box fittings etc. Unscrews nuts and bolts and removes all boiler mounting such as safety valve, gland stem fountains, whistle pipes, smokes box fittings etc. Lifts boiler from frame by crane and sends it to boiler section for repairs and servicing. Examines engine frame for damage, cracks and other defects and marks area for welding, riveting etc. as required. Checks piston, valves, cylinder etc. and gets cylinder bored to specific accuracy. Repairs valve assembly, fits new rings and assembles all parts and units according to specifications under guidance of Loco Supervisor/Foreman. Tests reassembled parts, units for components and makes necessary adjustments. Checks, adjusts and lubricates parts and joints periodically or directs helpers to do so and performs other tasks under guidance of Loco Foreman to keep loco engine and equipment in good working order. May keep record of parts examined and equipment performance. May specialize in steam or diesel engine. May specialize

in repairing, servicing and overhauling of particular units or components.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2500

Loco Cleaner

Loco Cleaner; Cleaner Railway cleans loco engines and performs allied tasks in loco-shed. Cleans engine and its parts using waste cotton and kerosene oil. Applies white chalk or lime stone solution on cleaned parts and strikes with hammer to check cracks if any. Moves engine backward or forward with help of crow-bars and turns it by pushing it on mechanical device when required. Lights up firebox, shovels coke in it. Drops fire by shaking handle of fire-grate or operating lever in engine and performs other tasks as guided. May oil and lubricate engine parts. May be designated as ENGINE LIGHTER if engaged only in lighting up engine boiler and as FIRE-DROPPER, ENGINE if engaged in dropping fire from firebox of engine after completion of journey.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2600

Fitter, Bicycle

Fitter, Bicycle: Cycle Repairer repairs and overhauls pedal cycles, perambulators etc. by replacements, setting and adjusting parts to keep them in good working

condition. Examines bicycle to ascertain nature and location of faults. Dismantles bicycle partly or completely to remove damaged and worn out parts. Repairs defective parts or obtains replacements and refits components in order of sequence. Adjusts brakes, driving chain mechanism, wheels, handle bars etc. for correct alignment. Fixes attachments such as saddle, bells, luggage carrier and lamp to assembled cycle and tests performance on road. Cleans, oils and greases moving parts; patches punctured tubes and repairs tyres. May cut threads where necessary with taps and dies.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.2700

Fitter, Signal

Fitter, Signal: Mechanical and Electrical Signal Maintainer (Railways) tests, overhauls and installs all mechanical and electrical signal equipment other than interlocking and station master's slide control frames and maintains them in working order to prevent failure and detention of rail traffic. Issues disconnection notices, as prescribed for repairs and adjustments. Attends to all failures of signal mechanism, locates and rectifies defects expeditiously, removes jamming of locking device by oiling, taping or other external means without opening cover and takes appropriate measure to prevent recurrence. Tests facing point, locks detectors, electrical points and signal mechanism regularly while on maintenance rounds and ensures that cover, of locking boxes of station masters slide control room are not removed

except in presence of Signal Inspector. Cleans signal glasses, checks focus of signal and colour lights periodically, sets and keeps them correctly focussed and ensures that they are properly maintained, batteries cleaned and charged periodically at regular intervals and no one does any repairs or adjustments without his guidance. Undertakes new installation and carries out alterations and modification under guidance of Signal Inspector. Submits fortnightly reports, informs about programmes to Station Masters concerned, and maintains necessary records such as failure book, inspection book, muster roll attendance register, material indented and received etc. Prevents wastage and guides and controls men placed under him. May specialize in electrical or mechanical and signal equipment.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial
Machinery Mechanics and
Repairers

7233.2800

Agriculture Engineering Technician

Agriculture Engineering Technician maintains, services, repairs or overhauls different farm equipment such as Tractors, Power tillers, Sprayers, Drillers, etc. Receives instructions from Senior Engineers. Studies standing duty chart, sketches, blue prints, etc. and decides methods of work to be adopted. Draws necessary stores, examines their suitability, issues them to respective workers. Instructs and guides his subordinates on machines and tools to be used, accuracy required, process of work and other details to ensure correct repairs or overhauling. Checks completed work,

makes necessary adjustments or replacements. Guides farmers in proper use and upkeep of farm equipment. Lends machines on hire to farmers. Sells spare parts of farm machinery and implements. Prepares contour maps by taking levels and plane table surveying. Examines land and prepares estimates for reforming the land to make it suitable for cultivation. Prepares plans for field channels for surface and sub-surface drainage. Provides bench terraces in hill areas and guides installation of sprinkler irrigation equipment and accessories. May design and fabricate agricultural machinery. May also sell pesticides and fertilisers.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.2901

Fitter: Hydraulic and Pneumatic System

Fitter Hydraulic and Pneumatic System does regular upkeep of Hydraulic/Pneumatic equipment/system, checking of hydraulic medium (hydraulic mineral oil), air under pressure and rectifying breakdowns including; identifying problems, dismantling equipment, cleaning parts, rectifying root causes, re-assembling equipment, checking alignment, vibration etc. to ensure fitness of equipment prior to hand over and informing supervisor, operations, stores, etc. as appropriate in hydraulic and pneumatic system.

Qualification Pack Details:

QP NOS Reference ISC/Q0810

QP NOS Name Fitter: Hydraulic and Pneumatic System

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

7233.9900

Machinery Mechanics and Fitters, Other

Machinery Mechanics and Fitters, other perform number of routine and low skilled tasks in overhauling and repairing engines, pumps machines, etc., (other than Electrical and Precision Instruments) such as dismantling defective parts, cleaning components, adjusting parts and are designated as Refrigeration Mechanic Helper, Maintenance Mechanic Helper, etc. according to type of work done.

ISCO 08 Unit Group Details:

Code 7233

Title Agricultural and Industrial Machinery Mechanics and Repairers

Family 7234

Bicycle and Related Repairers

Bicycle and related repairers fit, maintain, service and repair the mechanical and related equipment of bicycles, rickshaws, baby carriages, wheelchairs and similar non-motorized transport equipment.

Sub Division 73

Handicraft and Printing Workers

Handicraft and Printing Workers make and repair precision instruments, musical instruments, various articles such as

jewellery, precious metal ware, ceramics, porcelain ware and glassware, as well as handicrafts made of wood or textile, leather or related materials, or they perform printing or book-binding tasks. The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of the work organization, the materials and tools used, and the nature and purpose of the final product. Tasks performed by workers in this sub-major group usually include: making and repairing nautical, meteorological, optical and other precision instruments and equipment; making and repairing musical instruments; making jewellery and precious metal ware; making pottery, porcelain ware, ceramics and glassware; painting and decorating various articles; producing handicraft articles in wood or textile, leather and related materials; performing printing or book-binding tasks. Supervision of other workers may be included.

Occupations in this Sub Division are classified into the following Groups:

731	Handicraft Workers
732	Printing Trades Workers

Group 731 Handicraft Workers

Handicraft workers combine artistic and manual skills to design, make, repair, adjust, maintain and decorate precision instruments, musical instruments, jewellery and other precious-metals, pottery and porcelain ware. They apply traditional and/or recently developed techniques to carve, mould, assemble,

weave and decorate various glass, ceramics, textile, straw, stone, wood and leather articles.

Occupations in this Group are classified into the following Families:

7311	Precision Instrument Makers and Repairers
7312	Musical Instrument Makers and Tuners
7313	Jewellery and Precision Metal Workers
7314	Potters and Related Workers
7315	Glass Makers, Cutters, Grinders and Finishers
7316	Signwriter, Decorative Painters, Engravers and Etchers
7317	Handicraft Workers in Wood, Basketry and Related Materials
7318	Handicraft Workers in Textiles, Leather and Related Materials
7319	Handicrafts Workers, Not Elsewhere Classified

Family 7311 Precision Instrument Makers and Repairers

Precision-instrument makers and repairers make, calibrate, repair, maintain, adjust and install mechanical watches, clocks, nautical, meteorological, optical, orthopaedic and other precision instruments and equipment and set them for correct performance.

7311.0100 Mechanic Precision Instrument, General

Mechanic, Precision Instrument General tests, repairs, overhauls and assembles various precision instruments and their parts for efficient performance. Examines

instrument for defects. Dismantles components and cleans them in appropriate fluid such as petrol, kerosene etc. to find out extent of damage or wear and tear to parts. Removes minor defects of parts by grinding, filing, drilling, etc. and replaces worn out and damaged parts. Adjusts position of various parts using screwdriver, spanner etc. and assembles instrument to form complete unit. Makes simple electrical connections, solders contact points and performs other tasks as necessary. Tests performance either by visual observation or by conducting simple electrical and mechanical tests and ensures that repaired or assembled instrument conforms to prescribed efficiency. May make new components and assemble new instruments. May specialize in any particular type of instrument like mechanical, hydraulic, pneumatic, electrical, optical, orthopaedic etc.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0101

Technician Instrumentation

Technician Instrumentation dismantles removes and replaces a range of instruments and faulty peripheral components down to unit and component level, setting up test equipment, troubleshooting components of instruments, calibrating them and also preparing service reports and accurately documenting parts replacement and repair.

Qualification Pack Details:

QP NOS Reference CSC/Q0802

QP NOS Name Technician

Instrumentation

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0200

Watch Repairer

Watch Repairer cleans repairs and adjusts clocks, watches and time pieces for accurate time keeping. Examines watch pieces or clock mechanism using magnifying eyepiece to locate defects. Opens watch and disassembles components or parts of watch such as main spring, hair spring, balance staff etc. using special screw drivers, tweezers, pincers, and other watch makers tool. Cleans part with benzene or other cleaning solution using special brushes. Checks, jewels, spring, pinion joints pivots, balance staff etc. and determines their serviceability. Repairs or replaces broken or damaged parts and assembles watch step by step in proper sequence ensuring desired performance of each component. Lubricates pivots and operating components with thin special type of vile and soaks extra oil using pith sticks. Winds watch, observers performance and sets it with chronometer or accurate watch to regulate timing. Makes necessary adjustments after set period and regulates timing both in horizontal and vertical positions to ensure accurate time keeping. Is designated as Watch Maker if able to make balance staff pivots etc. operate watchmakers lathe and overhaul chronometers, self-winding, electric and other types of special watches and clocks. May operate cleaning machine to clean delicate parts in petrol and special solutions.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0300**Assembler (Clock and Watch)**

Assembler (Clock and Watch) assembles and installs chime-controlling mechanisms in master clocks according to blueprints and sketches, using watchmaker's tools: Bolts mounting casting which houses clock and chimes mechanisms to inner rear panel of master clock case. Installs toggle switch and cut-off secondaries, for opening and closing chime-mechanism circuit, on panel, and makes wire connections. Disassembles, examines, repairs, or adjusts spring-wound clock, and reassembles clock adding strike-control parts, such as hour-strike spring to hour mechanism, night-spot cut-out to hour hand sleeve-wheel, and minute-mercury ring to minute mechanism. Bolts assembled clock mechanism in position on mounting casting. Assembles parts, such as dial, hour and minute hands, contact springs, motor drum and condenser, and makes wire connections to complete master clock mechanism. Installs completed assembly into master clock case.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0400**Mechanic Precision Instrument, Mechanical**

Mechanic Precision Instrument, Mechanical makes, alters and adjusts mechanical instruments or mechanical

parts of electrical and optical instruments by accurate milling, filing, grinding, lapping and other processes. Studies drawings or samples and examines precision instrument like balance, meters, pressure gauges etc. for defects. Dismantles instrument, cleans metal components in petrol, kerosene oil or otherwise and checks them to find out extent of damage and further serviceability. Makes new parts on lathe milling or other machines, if necessary. Sizes and fits metal parts by filing, scraping, grinding lapping etc. as necessary and ensures their desired accuracy by checking with precision measuring instruments shadow graph and other highly perfect devices. Assembles parts to form complete unit. Gets electrical components repaired by Electrician. Fits electrical and optical parts to instrument and adjusts them as required. Tests repaired or assembled instrument for clarity or vision sensitivity, correct meter and scale readings etc. as required and ensures stipulated performance within prescribed limits. Makes necessary adjustments and seals meters to avoid manipulations. May specialize in particular type of instruments like balance, pressure gauges, meters, theodolites, etc. May make new instruments from blue prints.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0401**Iron and Steel Fitter Instrumentation**

Iron and Steel Fitter Instrumentation installs, dismantles, removes, replaces a range of components down to sub-assembly level right from pick up/unit

point of measurement and linking either directly to the instrument or the instrument panel. This also involves making suitable slots on panel and fixing instruments and its associated parts under the supervision of Technician Instrumentation.

Qualification Pack Details:

QP NOS Reference ISC/Q0903
 QP NOS Name Iron & Steel Fitter
 Instrumentation
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7311
 Title Precision Instrument Makers and
 Repairers

7311.0500

Viewer, Workshop

Viewer, Workshop; Examiner, Metal Working; Checker, Metal Working checks mechanical components, units, machines etc., at various stages of manufacture, assembly and erection and ensures that they are made to required specifications. Studies diagram, sketch etc., of product to be manufactured to determine its specification and other details. Examines product prior to and at various stages of manufacture to detect faculty material or bad workmanship. Measures and tests components for accuracy using gauges and other instruments and checks finished products, assembled or erected structures to ensure that they conform to drawings, samples or specifications. Marks defective units, components or parts for rectification or for rejection and approves finished products that conform to required standard and specifications. Removes minor defects or informs superiors if machines do not function properly or products do not come up to

prescribed standard. Keeps record of production, indicating quantum of rejections or bad workmanship. May be designated according to nature of duties performed such as CYLINDER EXAMINER; TESTER, PIPES: etc.

ISCO 08 Unit Group Details:

Code 7311
 Title Precision Instrument Makers and
 Repairers

7311.0600

Mechanic, Atomizer and Fuel Pump (Diesel)

Mechanic Atomiser and Fuel Pump (Diesel) repairs and sets atomisers and fuel pumps units of diesel engines, using testing and setting tool, for efficient performance. Dismantles fuel pump kit using different tools. Cleans various components in oil and examines them for wear and tear, damage etc. Replaces damaged or worn out parts with new ones. Assembles parts together to complete unit. Fits assembled or repaired kit on test bench with testing engine and gives various connections like fuel supply, pressure gauge etc. Sets machine speed and pressure and starts testing pump. Observes machine running at prescribed speed and collects oil output in calibrated test tubes. Ensures that output of oil is as per specifications and makes necessary adjustment to plunger sleeve of pump to get quantity of oil from each nozzle. Conducts face angle tests to pump oil at correct timing and rectifies defects, if any. Removes atomiser from pump, fits it to special testing machine and operates machines to see whether oil is ejected in fine spray under prescribed pressure. Changes nozzles where necessary. Disassembles governor mechanism of fuel pump, cleans it, oils and greases moving

parts and sets it. May change governor diaphragm if necessary.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0800

Mechanic, Optical Instrument

Mechanic Optical Instruments repairs and sets optical instruments such as microscopes, telescopes, binoculars theodolites, photography cameras, sextants etc. for enlarged view photography for recording accurate measurements, etc. by checking the centre, setting lenses to required focal length and adjusting other components to required perfection. Examines optical instruments for defects visually or by focussing it to standard observations. Examines parts or components for wear and tear, damages etc. and replaces unserviceable ones. Repairs parts, where possible, by filing, grinding, scrapping etc. and fits new or ground lenses, mirrors and other accessories according to prescribed focal lengths and specifications. Grinds glazes and cements (joining of two lenses with Canada balsam to form one unit) lenses used in optical instruments such as microscopes, telescopes, gun sight photographic equipment, etc. to obtains correct lens assemblies Aligns parts to requirement and assembles components to form complete unit. Makes necessary settings and adjustments to instruments and tests to repaired unit for clarity and efficiency by visual observations or by using them over fields to ensure desired result and accuracy. May assemble and fit new equipment. May be designated as CAMERA REPAIRMAN OR PHOTOGRAPHIC EQUIPMENT ASSEMBLER AND

REPAIRMAN if solely engaged in repairing and assembling photography cameras and allied gadgets and equipment.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.0900

Calibrator, Glass

Calibrator, Glass calibrates measuring and detecting glass instrument such as pipette, burette, hydrometer, thermometer etc. according to set standards by direct experiments for recording correct readings. Sets and connects master (standard) measuring instrument with water or appropriate fluid supply line and connects instrument to be calibrated with master using rubbers or glass tabling with stop cocks. Allows measured quantity of liquid to flow into master measuring instrument, sets level at zero by adding or flowing out extra liquid as necessary, transfers contents completely into instrument to be calibrated by operating stop cock and marks position of zero level on it with paint, ink or coloured pencil. Marks different levels similarly by adding measured quantity of liquid first into master and then transferring whole lot into instrument to be calibrated. Heats or cools mercury, alcohol, sensitive metal foil or other appropriate indicator filled in thermometers and thermal recording instruments carefully through measured degree of temperature and suitably marks position of observations recorded on glass body of instrument. Calibrates intermediate position by dividing machine calculators or by actual experiments as necessary. Removes provisional calibrated instrument and makes permanent

marking as recorded by process of etching or on pantograph machine. May etch calibrated glass with hydrofluoric acid.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.1000

Calibrator (Instrument and Apparatus)

Calibrator (Instrument and Apparatus) tests and calibrates controlling, indicating, and measuring instruments and devices, such as monochromators, pressure regulators, tachometers, temperature controls, and thermometers, to ensure specified operating performance, using hand tools, testing and calibrating instruments and equipment, and precision measuring instruments: Reads quality control manual and testing specifications to obtain data to test or calibrate specific devices. Selects and installs accessories, such as adapters, indicating gauges, or holding devices on test or calibration fixture, and connects instrument or device to fixture, according to specifications, using hand tools. Sets controls to regulate factors, such as current flow, timing cycle, pressure, temperature, or vacuum, according to specifications, and activates test or calibration equipment. Observes readings on meters and gauges, and other displays and performance of the device or instrument to identify functional defects and determine calibration requirements. Adjusts calibration mechanisms to obtain specified operational performance of the device or instrument, using hand tools and precision measuring and calibrating instruments and equipment. Applies sealing compound on calibration mechanism to prevent readjustment of

settings and loss of calibration. Rejects malfunctioning devices and routes devices to specified department for rework or salvaging of parts. May disassemble instrument or device to determine cause of defective operation and notify supervisory personnel of findings.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.1001

Calibration Technician

Calibration Technician sets, adjusts, validates or verifies mechanical, pneumatic, hydraulic, electrical, electronic, measuring and control instruments using reference standards in accordance with predetermined standard procedures.

Qualification Pack Details:

QP NOS Reference CSC/Q0801

QP NOS Name Calibration Technician

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

7311.1002

Calibration Engineer

Calibration Engineer tests and standardizes medical devices as per device manufacturer's specification or customer requirement. The individual at work compares the measurements of medical device with the master equipment and then certifies medical device as standardized or non-standardized as per

device manufacturer's specification or customer's requirement.

Qualification Pack Details:

QP NOS Reference ELE/Q8002
 QP NOS Name Calibration Engineer
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7311
 Title Precision Instrument Makers and
 Repairers

7311.1100 Calibrator, Other

Calibrators, other calibrate metal wood and synthetic material seals for linear and angular measurements using pantograph, dividing or other sensitive machine according to specifications. Set sized object accurately on machine using precision instruments and holding devices like dial indicator, combination set, clamps, mandrill, etc. Fit template or necessary gadgets and cutter in machine. Set machine in relation to object according to divisions required and mark extreme positions. Operate machine as per template or calculation and machine markings to divide object into specified number of divisions by short and long cuts as required. Check object with set standard to ensure accuracy. May copy from sample or standard scale.

ISCO 08 Unit Group Details:

Code 7311
 Title Precision Instrument Makers and
 Repairers

7311.1200 Orthopaedic Appliances and Limb Technician

Orthopaedic Appliance and Limbs Technician; Orthopaedic Technician; Artificial Limb maker, Surgical makes and repairs artificial limbs, braces, and other orthopaedic appliance according to prescription. Makes cast of limb or deformity and draws patterns from measurements of body members to be fitted. Cuts and fashions devices from material, such as metal, plastic and leather, using welding equipment, forge, riveting machine, drill and hand tools; shapes leather parts over lasts and rivets parts to braces; pads braces with felt and sponge rubber; polishes completed devices, using buffing wheel; adjusts nuts and screws at joints to insure free movement. Repairs worn-out or damaged appliance. May harness devices to limbs or stumps, using knowledge of functional anatomy. May instruct patient in use of device. May be designated according to type of appliance being made as ARTIFICIAL ARM MAKER, FOOT MAKER.

ISCO 08 Unit Group Details:

Code 7311
 Title Precision Instrument Makers and
 Repairers

7311.1400 Instrument Maker, Other

Instrument Makers, other (Except Electrical) include all other workers engaged in fitting, assembling, calibrating and repairing mechanical, hydraulic, optical and other types of instruments except electrical, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7311
 Title Precision Instrument Makers and
 Repairers

7311.9900

Precision Instrument Makers and Repairers, Other

Precision Instrument Makers and Repairers, other perform number of low skilled and routine tasks such as dismantling instruments, filing, making connections, operating vacuum machine, soldering, sealing covers, cleaning lenses etc., and is designated as Instrument Mechanic Mate, Instrument Mechanic Helper etc.

ISCO 08 Unit Group Details:

Code 7311

Title Precision Instrument Makers and Repairers

Family 7312

Musical Instrument Makers and Tuners

Musical-instrument makers and tuners make, assemble, repair, adjust, restore musical instruments and tune them to the required pitch with hand or power tools. They usually specialize in one type of instrument, such as string instruments, brass instruments, reed instruments or percussion instruments.

7312.0100

Musical Instrument Maker (String)

Musical Instrument Maker (Stringed) makes stringed instruments such as Sitar, Tambura, Violin and Veena from wood, ebonite, metal or other materials, using hand or power tools, selects and marks materials, saws out, drills, carves, shapes and finishes parts of instrument, glues or screws parts together; applies stain and several coats of varnish, attaches strings, pegs and other fittings; tests instrument and makes changes, if necessary to improve tone. May carve ornamental

designs on instrument. May repair instruments. May specialize in making a particular type of instrument and be designated according to type of instrument made such as VIOLIN MAKER, VEENA MAKER, SITAR MAKER, ESRAJ MAKER.

ISCO 08 Unit Group Details:

Code 7312

Title Musical Instrument Makers and Tuners

7312.0200

Harmonium Maker

Harmonium Maker makes harmonium by preparing different parts of instrument such as, cabinet reed board, keys, bellow and stoppers and assembling them using hand or power tools. Selects required type and size of wooden planks for making different parts of harmonium. Marks them with dimensions using tool rule, square, pencil, etc., and makes different parts by sizing, sawing and planing using carpentry tools. Assembles harmonium cabinet (wooden box) by nailing different parts together. Makes air compartment in inside bottom of box air-tight by gluing soft leather or strips along edges. Prepares bellow from card board by cutting card board strips and gluing with soft leather and coloured paper making necessary folds. Attaches bellow to harmonium cabinet by gluing and clamping it with nails and springs. Fixes necessary wooden bridge over air compartment in box. Prepares reed board by making required numbers of apertive and fixing reeds one side and rest pins on other sides. Makes necessary number of holes for different notes on reed board, fixes knobs for control of air from air compartment to apertives of reed board. Ensures that joints are air-tight by bellowing and reeds give proper tuning.

Tests and adjusts harmonium to produce required tune by filing, (opening and closing reed tongues and comparing notes by striking tuning fork). May fix metal handles to cabinet, leather or plastic cloth over reed frame and other decorative fittings. May polish box and give smooth finish. May repair Harmonium by dismantling and replacing different parts of instrument. May specialize in preparing particular parts of instrument.

ISCO 08 Unit Group Details:

Code 7312

Title Musical Instrument Makers and Tuners

7312.0300

Harmonium Key Maker

Harmonium Key Maker makes harmonium keys of required sizes by sawing, drilling, filing and smoothing soft wood and gluing celluloid strips on them. Selects soft wood pieces of required quality; marks, saws out curves and shapes wood to make harmonium keys according to specification; cuts celluloid strips of required size and glues it over wooden keys; screws keys to key board and fixes key board to wooden cabinet; drills holes on cabinet as per specification and designs and fits stoppers to control wind inside instrument; may fit reed frame to cabinet. May make bellows and fit them to instruments. May tune up instrument.

ISCO 08 Unit Group Details:

Code 7312

Title Musical Instrument Makers and Tuners

7312.0400

Harmonium Fitter

Harmonium Fitter makes inside of harmonium cabinet airtight by cutting and gluing soft leather strips along edges and fixing necessary fittings. Examines harmonium cabinets prepared by Carpenter are according to specification; cuts soft leather strips of required sizes and glues them to edges of cabinet; fits wooden frame or bridges inside box for fixing reed frame, key board and other harmonium parts; glues and screws key board and reed frame to cabinet. Fits keys and other attachments in to position; tests instruments and makes necessary adjustments to prevent air leak. May polish and apply varnish to cabinet. May tune harmonium for correct note and pitch. May repair harmonium.

ISCO 08 Unit Group Details:

Code 7312

Title Musical Instrument Makers and Tuners

7312.0500

Bellow Man (Harmonium)

Bellow Man (Harmonium) makes harmonium bellows by measuring, cutting card board strips and pleating them with soft leather and coloured paper. Selects card board of desired thickness; marks and cuts groove or channel on card board at parallel lines to permit folding; folds card board along slit edges. Pleats to form bellows; covers bellows with satin and cloth; glues leather or rexine and places metal guards on corners of bellows and screws, nuts or glues bellow to instrument cabinet and operates leak; bellow to test air lead by playing notes; operates bellow to check proper operation. May tune harmonium reeds and glue reeds in reed blocks. May fabricate metal parts using shop machines and tools. May repair used harmonium.

ISCO 08 Unit Group Details:

Code 7312
 Title Musical Instrument Makers and Tuners

7312.0600**Reed Fitter (Harmonium)**

Reed Fitter, Harmonium makes wooden reed board according to sample or specification and fits metal reeds and strings on board with screws. Selects wooden board; marks and chisels out grooves or slots to fit reeds according to sample or specifications; fits and screws reeds in slots on board and fixes assembled reed frame to cabinet. Operates harmonium to check reeds to give out correct tune when concerned key is depressed. May tune harmonium. May make wooden cabinet and fit key board to box. May repair used harmonium and replace old reeds.

ISCO 08 Unit Group Details:

Code 7312
 Title Musical
 Instrument Makers and Tuners

7312.0800**Finisher (Harmonium)**

Finisher, Harmonium gives finishing touches to harmonium by making and fitting stops for controlling air in harmonium and by cutting and fitting celluloid pieces for decorating cabinet. Examines assembled harmonium for any defect; polishes cabinet using colour stain and varnish to give required finish; fixes coloured celluloid strips on reed; fits wooden or plastic knobs to airholes and other attachments such as handles and decorative fittings. May make, assemble and fit various accessories to harmonium. May tune harmonium. May repair used harmonium.

ISCO 08 Unit Group Details:

Code 7312
 Title Musical
 Instrument Makers and Tuners

7312.1000**Organ Tuner**

Organ Tuner tests and adjusts organ pipes to produce correct tones and keeps playing mechanisms in good condition. Strikes tuning fork and compares tone with that of selected pipe. Adjusts distance between lips of pipe until tone coincides with that of tuning fork. Adjusts other pipes, comparing their tones by ear with that of pipe already adjusted. Replaces defective wiring, switches, blowers and other parts.

ISCO 08 Unit Group Details:

Code 7312
 Title Musical
 Instrument Makers and Tuners

7312.1200**Piano Tuner**

Piano Tuner tests and adjusts pianos to produce correct tone. Strikes tuning fork and compares tone with that of 'A' string of piano. Tightens or loosens strings by turning string pin until tone coincides with that of tuning fork. Adjusts other strings comparing their tones by ear with that of 'A' string already adjusted. May replace broken strings and make repairs.

ISCO 08 Unit Group Details:

Code 7312
 Title Musical
 Instrument Makers and Tuners

7312.1300**Tabla Maker (Musical Instrument)**

Tabla Maker (Musical Instrument) dome shaped wooden, metal or clay body open at one end. Collects cone or dome shaped wooden, metal or clay of required size open at one end and other instrument parts such as soft leather of desired thickness, leather straps, cords, brass rings as necessary for type of tabla to be made; cuts and sizes leather to close mouth of reed and punches holes round edge of leather cover; places punched cover over mouth of vessel and passes leather straps through holes; inserts guides through leather straps and fastens leather cover to body and secures it tightly at bottom of vessel ties to a brass or leather ring; applies special ink mixed with special wax on central portion of leather top for proper tuning; tests tone of tabla by striking or drumming with fingers; tunes tabla to required pitch by tightening leather straps and changing position of guides. May repair and tune used tablas.

ISCO 08 Unit Group Details:

Code	7312
Title	Musical
Instrument Makers and Tuners	

7312.1400

Drum Maker, Musical

Drum Maker, Musical makes musical drums by mounting animal skins on wooden or metal case open on one or both ends with metal rims and fitting adjusters to tune drum to required pitch. Collects wooden or metal case of desired size and specification; secures tightly leather or hide cover over metal or leather ring and fastens ring to mouth of shell with leather cord after fitting adjusters to it; adjusts tension of leather cover by moving adjusters. Applies special

compound on middle of upper surface of leather cover where necessary for correct tune, tests and tunes instrument by striking cover surface with hand or stick adjusting adjusters for required tone pitch. May specialize in making particular types of drum and be designated accordingly such as BRASS DRUM MAKER; SIDE DRUM MAKER; DHOLAK MAKER; MRIDUNG MAKER; TAVIL MAKER; KANJIRA MAKER. May use parchment leather for special type of drums. May repair drums by dismantling and replacing leather skins, tension rods, rims and shells.

ISCO 08 Unit Group Details:

Code	7312
Title	Musical
Instrument Makers and Tuners	

7312.1500

Clarinet Assembler

Clarinet Assembler makes clarinet by assembling mouth piece, shank, upper and lower pieces, bell and keys and tunes it to required pitch for correct tone. Collects parts such as springs, pins, keys, reed for making clarinet of desired type. Joins upper and lower part of body together; fits keys and other attachments in position; fixes reed to mouth piece through reed holder; tests instrument and makes changes, if necessary, to improve tone and tunes it to desired pitch with or without tuning fork. May repair used instrument. May be designated as FLUTE MAKER if engaged in making and tuning flutes.

ISCO 08 Unit Group Details:

Code	7312
Title	Musical
Instrument Makers and Tuners	

7312.1600**Bag Pipe Maker**

Bag Pipe Maker makes bag pipes by assembling finished wooden organ pipes in specially designed leather bags. Collects wooden pipes and leather bag according to specification; prepares bag pipe reeds by shaving and filing cane of specified variety; fixes reeds in mouth piece through reed holders; tunes organ pipes for tone of desired pitch; cuts holes in leather bag and fits in finished wooden pipes in holes in proper position; secures pipes to bag tightly with cord to prevent leakage of air from bag; fastens brass and tenor pipes with cords and tunes pipes to ensure correct pitch and tone. May specialize in one or more operations, such as marking act in parts or organ pipes and be designated accordingly.

ISCO 08 Unit Group Details:

Code	7312
Title	Musical
Instrument Makers and Tuners	

7312.1700**Brass Musical Instruments Assembler**

Brass Musical Instrument Assembler makes required types of brass musical instruments by fitting piston valves, valve tops, bell etc.; in metal body. Collects different parts of musical instrument to be made; joins parts by screwing, riveting or soldering as necessary to obtain desired shape; fits piston valves, valve tops, springs, washers, etc. Checks leakage, brazing etc. and tunes it to required pitch by fitting slide or further tooling as necessary. May specialize in any particular type of brass musical instruments such as cornet, baritone, euphonium, bugle, trumpet etc.

ISCO 08 Unit Group Details:

Code	7312
Title	Musical
Instrument Makers and Tuners	

7312.1800**Musical Instrument Repairer**

Musical Instruments Repairer repairs all kinds of musical instruments such as Violin, Veena, Tambura, Sitar, Harmonium, Guitar, Mandolin, Piano, and tunes them. Tests particular instrument to find nature of defect, dismantles instrument and examines parts for defects or damage. Repairs or replaces worn or damaged parts using hand tools, refits parts together to construct instrument; Sets repaired instrument for correct performance, tunes instruments by playing it and adjusting keys, strings, etc. May polish with colour stain or varnish to give good finish. May make new parts to replace damaged ones using hand tools. May be designated according to type of instrument repaired, such as VIOLIN REPAIRER, VEENA REPAIRER, HARMONIUM REPAIRER, PIANO REPAIRER, etc.

ISCO 08 Unit Group Details:

Code	7312
Title	Musical
Instrument Makers and Tuners	

7312.9900**Musical Instrument Makers and Tuners, Other**

Musical Instrument Makers and Tuners, Other include all other musical instrument makers engaged in making or assembling other types of musical instruments not

elsewhere classified as: Organ Pipe Maker casts sheets of organ metal; makes pipes therefrom and from zinc-makes air conduits of galvanised iron.

ISCO 08 Unit Group Details:

Code 7312
Title Musical Instrument Makers and Tuners

Family 7313 Jewellery and Precision Metal Workers

Jewellery and precious metal workers design, fabricate, adjust, repair, or appraise jewellery, ceremonial or religious items, gold, silver, other precious metals, or gems. They cut, file, polish and set precious and semi-precious stones including gems and diamonds and engrave designs on jewellery and precious metal articles. They cut and polish diamonds for industrial purposes.

7313.0100 Roller, Gold and Silver

Roller, Gold and Silver makes silver and gold sheets of varied thickness by process of rolling. Adjusts roll gap of rolling machine by means of handle operating gearing system machine. Takes required weight and size of metal piece (caste and annealed if necessary) and carefully inserts it in between roller, keeping it pressed against bottom roller. Checks thickness of sheet after each rolling, reduces roll gap and repeats process until required thickness is obtained. Ensures that texture of sheet or foil does not get spoilt during rolling. May prepare sheets or foils manually by process of hammering and flattening. May anneal sheet or foil after rolling.

ISCO 08 Unit Group Details:

Code 7313
Title Jewellery and Precision Metal Workers

7313.0101 Jewellery Polisher

Jewellery Polisher provides shine and lustre to the cast jewellery at different stages of its manufacturing such as pre-setting and final polish. The individual works with different types of tools, polishing compounds, soft and hard buffs fixed on high-speed rotating motor bench.

Qualification Pack Details:

QP NOS Reference G&J/Q3010
QP NOS Name Jewellery Polisher
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7313
Title Jewellery and Precision Metal Workers

7313.0102 Plater

Plater applies a layer of Rhodium, on the surface of the jewellery piece. The individual operates the plating plant or runs the manual process for applying Rhodium on the finished jewellery piece for giving bright white and reflective appearance to the precious metal jewellery.

Qualification Pack Details:

QP NOS Reference G&J/Q3212
QP NOS Name Plater
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

7313.0103

Filer and Assembler

Filer and Assembler works with numerous hand and machine tools to remove sprues from the cast jewellery piece; rectify casting defects such as porosity, blisters, bubbles, and cracks; and assemble the final jewellery components meant for linking.

Qualification Pack Details:

QP NOS Reference G&J/Q2909
QP NOS Name Filer and Assembler
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7313
Title Jewellery and Precision Metal
Workers

7313.0201

Wire Maker, Gold and Silver/Component Maker

Wire Maker, Gold and Silver makes silver and gold wires of specified thickness by heating and drawing metal in specially designed machine. Takes gold or silver rod of required size and weight and heats it up (dull red) in mild fire. Beats one end of rod to narrow point and passes it through one of larger holes of sizing plate or die. Places plate with rod securely in gap of drawing machine. Holds protruding end of rod with tongs and anchors it suitably in roller chain. Sets speed, starts machine and removes anchor from chain as soon as rod has been pulled through and formed into wire. Repeats process by passing wire successively through smaller holes until required size is obtained. May draw wire of desired thickness through series of dies (steel or diamond) of diminishing holes

and wind it on manually or mechanically operated drum. May also make wire manually by beating rod in sized pattern or mould.

Qualification Pack Details:

QP NOS Reference G&J/Q0606
QP NOS Name Component Maker
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7313
Title Jewellery and Precision Metal
Workers

7313.0202

Gem Stone Thread Maker

Gem Stone Thread Maker uses hands and fine needles to thread several beads or cabochon or faceted stones into a jewellery piece, as per design.

Qualification Pack Details:

QP NOS Reference G&J/Q6909
QP NOS Name Gem Stone Thread
Maker
NSQF Level 2

ISCO 08 Unit Group Details:

Code 7313
Title Jewellery and Precision Metal
Workers

7313.0301

Gold Curer, General/Gold Refiner

Gold Curer, General; Gold Refiner, General extracts pure gold from impure state by chemical process. Adds double quantity of silver to gold (in impure state) and melts them in charcoal or coke fired pit furnace. Quenches molten metal in water to form solid mass. Adds nitric acid and reheats in charcoal fired furnace to

dissolve impurities and silver. Removes gold separated from impurities by filtration and washes it numbers of times in water. Re-melts washed gold to form bar of pure gold. Extracts silver in same manner by adding requisite quantity of copper to solution.

Qualification Pack Details:

QP NOS Reference	G&J/Q3414
QP NOS Name	Gold Refiner
NSQF Level	6

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.0401

Gold Curer, Mint/Gold Melter and Refiner

Gold Curer, Mint; Gold Refiner, Mint refines impure gold by chemical process. Melts unrefined gold in furnace and injects chlorine into it. Removes Chlorides (chemical compounds of impurities with chlorine) thus formed by scoop and tongs and pours out purified gold. Re melts purified gold for testing fineness and sampling. Repeats process if necessary. May melt acid treated roasted precipitates of impure gold with oxidising agents and sand in steel trays on furnace, pour out molten gold into buttons and bar moulds and raise fineness of base bullion by refixing it using fair clay pipes and compressed air.

Qualification Pack Details:

QP NOS Reference	G&J/Q0404
QP NOS Name	Gold Melter and Refiner
NSQF Level	7

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.0500

Gold Foil Maker

Gold Foil Maker makes gold foils from wires for setting jewels in ornaments. Moulds gold into small bar and gets it drawn into wire of required gauge. Cuts convenient length of wire, heats it to specified temperature in mild fire and flattens it to extent possible by beating it with hammer on anvil. Reheats it in controlled low fire, cools and cleans it in chemical or solution of lemon juice and water and repeats process of beating on anvil until it turns into thin paper like foil. Ensures at every stage that foil is not cracked or broken. May also prepare silver foils from wire, and is designated as SILVER FOIL MAKER.

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.0600

Leaf Maker, Gold and Silver

Leaf Maker, Gold and Silver beats small strips of gold and silver into thin leaves for medicinal purposes, dressing sweet dishes, etc. Cuts small strips of desired metal into suitable size and places them individually in between sheets of special type of skin bound together. Covers sheets of skin holding metal inside thicker skin covering and beats them on anvil with wooden mallet. Checks extent of spreading frequently while beating and ensures that metal pieces do not get stuck to skin sheets. Removes metal leaves then formed and places them individually on

fine paper sheets. May use special type of paper instead of skin for beating. May light small coal fire to remove moisture from skin and avoid sticking of metal leaves on skin sheets.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.0700

Goldsmith

Goldsmith; Sonar prepares gold ornaments of required design and weight by heating, moulding, bending, drawing etc. Studies design or sample and takes required weight of gold by weighing in sensitive balance. Moulds piece of gold into small bars by heating on mild fire or takes required weight of sheet or wire according to design. Makes designed ornaments by stages using dies and hand tools, such as tongs, hammer, hand saw drill, file etc., and by heating metal according to necessity by means of oil lamp and blow pipe to facilitate working. Makes jewel setting arrangements (if so designed) in ornament uses lac as filling where necessary. Polishes ornament by cloth, special yarns, or buff. May make individual parts of ornament and finally join them together either by fusing them by heat or fixing them by wire. May also do jewel setting, enamelling (mina work) etc. May be designated as SILVERSMITH if employed in making silver wares and ornaments.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.0701

Polisher and Cleaner

Polisher and Cleaner finishes the jewellery frame and cleans it thoroughly in order to give the base frame the look that the design requires. Polishing is done at multiple stages of jewellery making with different types of materials or abrasives. Cleaning is also done at multiple stages of jewellery making using different types of techniques as applicable.

Qualification Pack Details:

QP NOS Reference G&J/Q0707

QP NOS Name Polisher and Cleaner

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.0702

Goldsmith Enameller

Goldsmith: Enameller works on handmade gold jewellery manufacturing prepares enamel colours of different types to paint vibrant patterns on the finished jewellery frame as per design. The individual at work in handmade gold jewellery manufacturing prepares enamel colours of different types to paint vibrant patterns on the finished jewellery frame as per design.

Qualification Pack Details:

QP NOS Reference G&J/Q0909

QP NOS Name Goldsmith: Enameller

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

7313.0703

Goldsmith Frame Maker

Goldsmith Frame Maker, works with machine and hand tools to create the base jewellery frame from gold as per design and for further embellishing with components, gemstones and enamelling and plating. The goldsmith is responsible for delivering quality gold jewellery with minimum gold or stone loss.

Qualification Pack Details:

QP NOS Reference	G&J/Q0606
QP NOS Name	Goldsmith Frame Maker
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.0801

Jewel Setter/Setter

Jewel Setter; Gem Setter sets jewels in ornaments according to design. Fixes jewels on wooden board or box by shellac according to design. Examines ornaments for jewel setting and makes necessary alternations if required. Lays ornament on table, heats shellac slightly on oil lamp, picks up jewels one at a time, sets them individually in pockets of ornament designed for fixing jewels and securely locks each one of them by bending metal points over jewel or by overlapping system. Is designated as KUNDAN WORKER if engaged in setting jewels by pressing pieces of thin gold foils with tweezers and needle.

Qualification Pack Details:

QP NOS Reference	G&J/Q0808
QP NOS Name	Setter
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.0802

Metal Setter

Metal setter works with numerous hand and machine tools to set diamond and gemstones as per design, and is responsible for delivering: levelled, damage-free and secured setting of stones while maintaining its brilliance.

Qualification Pack Details:

QP NOS Reference	G&J/Q3111
QP NOS Name	Metal Setter (Basic)
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.0803

Wax Setter

Wax setter (basic) works with numerous hand tools to set diamond and gemstones as per design. The individual is responsible for delivering: levelled, damage-free and secured setting of stones while maintaining its brilliance.

Qualification Pack Details:

QP NOS Reference	G&J/Q2707
QP NOS Name	Wax Setter
NSQF Level	3

ISCO 08 Unit Group Details:

Code 7313
 Title Jewellery and Precision Metal
 Workers

7313.0804**Wax Tree Maker**

Wax tree maker works with different types of waxes, wax soldering machine and consumables in order to assemble wax pieces in a tree like structure.

Qualification Pack Details:

QP NOS Reference G&J/Q2606
 QP NOS Name Wax Tree Maker
 NSQF Level 5

ISCO 08 Unit Group Details:

Code 7313
 Title Jewellery and Precision Metal
 Workers

7313.0901**Gem Sorter**

Gem Sorter; Jewel Sorter examines, selects and removes gems from rough stones by pincer. Lays pieces of rough stones on table. Cuts them in smaller pieces if necessary, examines them individually with magnifying glass and locates portion to be retained. Checks frequently portion to be cut and clips off surplus portion bit by bit by pincer or marks stones with Indian ink. Fixes them in sockets in brass rod, using adhesive solution (sicotine, plaster of Paris etc.) for sawing. Eliminates white veins from corals and sorts pearls by shape and size.

Qualification Pack Details:

QP NOS Reference G&J/Q0809
 QP NOS Name Sorter
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7313
 Title Jewellery and Precision Metal
 Workers

7313.0902**Rough Assorter**

Rough Assorter needs to divide rough diamonds into groups having similar characteristics, by looking at the rough through an eye glass under light, using his/her knowledge and experience. Each rough diamond is assessed according to its natural characteristics – judging specifically its colour, clarity, carat and model or shape.

Qualification Pack Details:

QP NOS Reference G&J/Q4101
 QP NOS Name Rough Assorter
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313
 Title Jewellery and Precision Metal
 Workers

7313.0903**Rough Marker**

Rough marker needs to mark assorted rough diamonds manually, using a marker pen for various requirements like identification, windowing, cleaving, laser or blade sawing, bruising, etc. A marker needs to use his/her experience and make precise marking as the accuracy of the following process depends on the accuracy of the marking. The marking must be made with the objective of maximizing the value, or any other as fixed by the company.

Qualification Pack Details:

QP NOS Reference G&J/Q4101
 QP NOS Name Rough Marker

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers**7313.1001****Gem Slicer/Gemstone Rough Cutter**

Gem Slicer cuts jewels for sizing by using thin rotating cutter. Applies cutting solution (solution of Multan clay, corundum and diamond powder) on cutter. Directs Lapidary Helper to rotate driving wheel at steady speed. Holds stone or jewel carefully with fingers, presses it against cutter, applies cutting solution frequently and cuts jewels as required. Checks stone or jewel frequently while cutting to ensure proper sizing. May slice jewels by machine having number of cutting blades. May also extract jewels from rough stone by slicing. Is also known as DIAMOND SAWYER if employed in sawing diamonds.

Qualification Pack Details:

QP NOS Reference G&J/Q6505
 QP NOS Name Gemstone Rough
 Cutter
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers**7313.1101****Gem Cleaver**

Gem Cleaver cuts or cleaves precious stones, previously marked, using knife and hammer. Sets marked stone in dop with shellac and fixes dop on cleaving table. Makes groove along marked line with

another diamond tool. Places cleaving knife on groove and carefully strikes with small hammer to split stone into two parts of required specifications. May repeat process if further splitting is required.

Qualification Pack Details:

QP NOS Reference G&J/Q4404
 QP NOS Name Gem Cleaver
 NSQF Level 5

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers**7313.1201****Inclusion Plotter**

Inclusion plotter uses different technologies such as M-Box, Immersion Glass (IG) and Galaxy, based on Helium/Sarin software, to view and manually or automatically plot different types of inclusions such cloud, surface cavities, blind spots, pin point inclusion, 3D, flat cracks, curved cracks. Inclusion plotting helps the planner determine what can be achieved in the cut stone, which will determine its ultimate value. Hence, precision is important in this job.

Qualification Pack Details:

QP NOS Reference G&J/Q4202
 QP NOS Name Inclusion Plotter
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers**7313.1202****Planner**

Planner uses the designing software and planning and marking machines to decide where to mark the diamond rough for generating the most profitable polished diamond for the company as per its policy of maximizing value or colour and weight retention.

Qualification Pack Details:

QP NOS Reference	G&J/Q4202
QP NOS Name	Planner
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1300

Gem Grinder, Hand

Gem Grinder, Hand; Jewel Grinder Hand; Lapidary, Hand grinds jewels to designed shape and size by hand operated grinding wheel. Embeds jewels on bamboo stick with shellac. Rotates grinding wheel backwards and forwards by operating bow with right hand. Applies water on wheel and grinds stone by pressing it against side of corundum grinding wheel. Checks stone frequently by sight and continues grinding until required shape and size is obtained. May hold bigger sized stones directly by left hand, grind it to shape and size by manipulation of fingers.

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1301

Manual Bruter

Manual bruter works on the doped diamond to be girdled and holds it against

a second diamond spinning in opposite direction to slowly round it into a cone shape. A bruter must be careful: so that excess bruting does not cause too much stone loss or sub-optimal bruting causes the girdle to disappear at a later stage of processing.

Qualification Pack Details:

QP NOS Reference	G&J/Q4505
QP NOS Name	Manual Bruter
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1302

Auto Blocker

Auto Blockers work with the auto-blocking machine and make the basic four (or eight) bottom and top facets of a diamond in order to make it ready for final polishing or brilliance. For auto blocking, the stone is set in a dop is fixed in the auto-blocking machine and held down on a revolving cast-iron scaife charged with diamond dust.

Qualification Pack Details:

QP NOS Reference	G&J/Q4606
QP NOS Name	Auto Blocker
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1303

Gemstone Facet Maker

Gemstone Facet Maker works with high-speed and angle indexed rotating scaife machines with diamond or steel laps in

order to grind facets on, mainly, transparent gemstones.

Qualification Pack Details:

QP NOS Reference	G&J/Q6707
QP NOS Name	Gemstone Facet Maker
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1304

Table Cutter

Table cutter works with table dop tang system and make the first, biggest and the most important facet of a diamond by polishing it on the polishing wheel or scaife in order to yield maximum brilliance and symmetry. It is very important to polish the table accurately as it is only through this facet that the light of the diamond can be seen.

Qualification Pack Details:

QP NOS Reference	G&J/Q4606
QP NOS Name	Table Cutter
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1305

Manual Blocker

Manual Blocker creates the basic four or eight bottom and top facets on the bruted diamond using the dop-tang system on the polishing diamond-dust charged scaife in such a way as to yield maximum brilliance and symmetry. The diamond is

set either in a lead dop or a mechanical-clamp.

Qualification Pack Details:

QP NOS Reference	G&J/Q4606
QP NOS Name	Manual Blocker
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1306

Auto Bruter

Auto Bruter works with bruting machine and another diamond or wheel (rotating in opposite direction to the diamond being bruted) to give the rough diamond round and cone shapes. A bruter must be careful: so that excess bruting does not cause too much stone loss or sub-optimal bruting causes the girdle to disappear at a later stage of processing.

Qualification Pack Details:

QP NOS Reference	G&J/Q4505
QP NOS Name	Auto Bruter
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1400

Gem Polisher, Hand

Gem Polisher, Hand polishes gems according to specification by special manually or mechanically operated polishing wheels. Holds jewels by shellac on small bamboo stock, Fits required type of polishing sheel (lead for soft stone such as emerald, spinel, yellow topaz, etc.;

copper for hard stones such as ruby, sapphire etc., and steel plates for diamonds) and starts wheel. Applies water to wheel and presses stone against its surface. Checks stone frequently while polishing for finish. Polishes stone finally in corundum polishing wheel in similar manner. May polish bigger stones by holding them directly by fingers and manipulating against revolving wheel.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

7313.1501

Diamond Assorter

Diamond Assorters have to separate polished diamonds and group them into lots having similar characteristics and reject which are not as per required quality. It is done by looking at the diamond through an eye glass under light and requires experience in spotting similar type of diamonds. Each diamond is assessed according to its characteristics of cut, carat, colour and clarity.

Qualification Pack Details:

QP NOS Reference G&J/Q2505
QP NOS Name Diamond Assorter
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

7313.1502

Polished Diamond Grader and Assorter (Basic)

Polished Grader and Assorter (Basic) mainly works with a tripod or table loupe

to segregate polished diamonds mainly less than 30 cents in size into two or three groups based on some common characteristic cut, carat, clarity or colour. The individual is responsible for delivering segregated diamonds with no loss.

Qualification Pack Details:

QP NOS Reference G&J/Q4909
QP NOS Name Polished Grader and
Assorter (Basic)
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

7313.1503

Polished Diamond Grader and Assorter (Advance)

Polished Graders and Assorters (Advanced) mainly work with a loupe to segregate polished diamonds into multiple groups based on its characteristics like cut, carat, clarity or colour. The individual is required to have knowledge of performing measurements of 4Cs on a diamond. The individual is responsible for delivering segregated diamonds with no loss.

Qualification Pack Details:

QP NOS Reference G&J/Q4909
QP NOS Name Polished Diamond
Grader & Assorter
(Advance)
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

7313.1504**Bottom Polisher**

Bottom polisher works with bottom dop tang system and makes the 24 bottom facets of a diamond by polishing it on the polishing wheel or scaife in order to yield maximum brilliance and symmetry. For polishing, the stone is set either in a lead dop or a mechanical-clamp and held down on a revolving cast-iron scaife (horizontal and circular disc) charged with diamond dust.

Qualification Pack Details:

QP NOS Reference	G&J/Q4707
QP NOS Name	Bottom Polisher
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1505**Gemstone Girdle Polisher**

Gemstone girdle polisher works with high-speed rotating machines with metal scaifes and buffs to produce a fully finished stone.

Qualification Pack Details:

QP NOS Reference	G&J/Q6707
QP NOS Name	Gemstone Girdle Polisher
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1506**Gemstone Polisher**

Gemstone Polisher works with high-speed rotating machines with metal plates and buffs to produce a fully finished stone. The polisher may work on pre-shaped (cabochon) stone or faceted stone.

Qualification Pack Details:

QP NOS Reference	G&J/Q6707
QP NOS Name	Gemstone Polisher
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1601**Gemstone Pre-shaper**

Gemstone Pre-shaper works with high-speed rotating scaife machines with diamond or steel laps in order to give the rough cut gemstone the shape as per plan. Pre-shaping determines the shape, size and weight of the processed final stone.

Qualification Pack Details:

QP NOS Reference	G&J/Q6606
QP NOS Name	Gemstone Pre-shaper
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1602**Gemstone Final Shaper and Calibrator**

The individual works with high-speed rotating scaife machines with diamond or steel laps in order to give the pre-shaped

gemstone the final shape as per planned weight and size. Final-shaping determines the shape, size and weight of the final stone.

Qualification Pack Details:

QP NOS Reference	G&J/Q6606
QP NOS Name	Gemstone Final Shaper and Calibrator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1701

Gem Driller

Gem Driller drills holes in precious stones according to design with bow drill. Fixes diamond bit to serve as cutter in drill (wooden piece having metal device to hold diamond bit) and sets sized wooden plate having carved pocket on drilling table. Holds stone to be drilled in pocket of wooden plate. Arranges continuous flow of water as coolant at drilling point. Holds drill in bow and drills stone according to stone design, frequently checking it for alignment and shape. Drills pearl by using sharp steel pin instead of diamond bit.

Qualification Pack Details:

QP NOS Reference	G&J/Q6808
QP NOS Name	Gem Driller
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1702

Window Opener

Window opener works with dop-tang system to make an opening or a window on the rough diamond by polishing it on the polishing wheel or scaife in order to observe and map internal features of the diamond prior to cutting and planning, while maintaining minimal weight loss.

Qualification Pack Details:

QP NOS Reference	G&J/Q4101
QP NOS Name	Window Opener
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.1800

Jewellery Engraver

Jewellery Engraver engraves ornamental designs or letters on ornaments and jewellery using fine chisels and hand tools. Draws in pencil required design to be engraved, on paper, if ornament is fairly big or else draws design on ornament itself using fine steel point. Transfers design from paper to ornament by placing designed paper on surface of metal coated with wax solution and rubbing surface of paper to leave impression of design on waxed surface. Holds ornament in special device or fixes it in shellac. Marks outlines of design on ornament using steel point. Engraves design by stages using different types and sizes of chisels and hand tools changing position of article on table as required. Scoops out excess material from metal using special tools, cuts it to required depth or height and prepares base for setting and mounting stone. May make simple designs on plate for goldsmith to work. May engrave or emboss by dies and polish ornaments to high finish. May use

compass for marking circular designs. May set and mount stones on gold article.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.1900

Engraver

Engraver cuts floral, artistic designs or letters on metal plates and other articles such as flower vases, cigarette cases etc., using small chisels and hammer. Applies chalk or wax solution on surface to be engraved and makes free hand sketch or traces design on metal surface. Holds article in special wooden device or fixes it in shellac in cases of round articles, such as plates, ash trays etc., and places it at convenient height. Marks outline of design with small chisel. Engraves design by stages with different chisels by careful manipulation of hands and fingers to required depth and finish. May use compass for marking circular designs. May also engrave without marking or any prepared design.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.2200

Embossor, Sheet

Embossor, Sheet embosses landscape, floral, artistic design etc. on soft metal sheets by means of hand tools. Melts powdered gum, mixes it with linseed oil and applies paste thickly on metal plate to serve as pad. Warms sheet to be embossed on red hot charcoal or coke fire and fixes it on pad. Applies chalk solution on sheet and traces design or draws

freehand sketch on it. Forms outline of design with punch and hammer. Regulates striking according to level of embossing required. Completes design using various types and sizes of punches and chisels and by manipulation of finger movements. Removes embossed sheet from base by warming it again on fire. May also emboss sheets by dies.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.2300

Inlayer, Metal

Inlayer, Metal sets gold or silver wire on metal plates according to design using hand tools and produces colour effect by heat treatment. Secures sized plate on base using lac. Applies chalk solution on plate and copies design or draws freehand-sketch on it. Cuts design on it with fine chisels in stages and inserts pieces of gold or silver wire of required thickness in them with long needle like tool. Files surface to make it even, polishes in buffing lathe and heats plate on over till it changes colour to required shade. Polishes plate by rubbing with special type of stone. May also set very thin gold and silver wire on steel plate (soft work) by first making surface rough by fine knife cuts and then pressing wire on it according to design, by fingers and knife.

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal Workers

7313.2401

Rubber Mould Maker

Rubber mould maker uses different types of rubber and works with vulcanising machine and various hand tools such as sterilised blade in order to create the mould.

Qualification Pack Details:

QP NOS Reference	G&J/Q2606
QP NOS Name	Rubber Mould Maker
NSQF Level	5

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.2402

Wax Piece Maker

Wax piece maker works with different types of waxes, injection moulding machine and consumables in order to produce the wax replica of jewellery piece.

Qualification Pack Details:

QP NOS Reference	G&J/Q2606
QP NOS Name	Wax Piece Maker
NSQF Level	5

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.2501

Boiling In Charge

Boiling In Charge places the finished diamond in a beaker with chemical solution like hydrochloric and sulphuric acid and places the beaker in a heating oven. This removes any residue of

diamond dust, dirt or other contaminants collected during the cutting or polishing process. This process may also remove/bleach some of the darker surface reaching inclusions (Naats). Boiling this is sometimes performed on rough as well to improve the appearance of the rough.

Qualification Pack Details:

QP NOS Reference	G&J/Q4808
QP NOS Name	Boiling In Charge
NSQF Level	2

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.2601

Final Quality Inspector

Final Quality Inspector ensures that the jewellery piece manufactured is as per design and defect-free before allowing it to be dispatched to the customer.

Qualification Pack Details:

QP NOS Reference	G&J/Q1010
QP NOS Name	Final Quality Inspector
NSQF Level	5

ISCO 08 Unit Group Details:

Code	7313
Title	Jewellery and Precision Metal Workers

7313.9900

Jewellery, Goldsmith and Silversmith Workers, Other

Jewellery, Goldsmith and Silversmith Workers, other include all jewellery and

precious metal workers not elsewhere classified.

Qualification Pack Details:

QP NOS Reference

QP NOS Name

NSQF Level

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

Family 7314

Potters and Related Workers

Potters and related workers prepare pottery, porcelain ware, sanitary ware, bricks, tiles and abrasive wheels by hand or by machine.

7314.0100

Mould Maker, Pottery and Porcelain

Mould Maker, Pottery and Porcelain makes moulds of plaster-of-Paris from models for production of pottery and porcelain ware. Collects requisite quantity of plaster-of-Paris and dissolves it in fixed amount of water to make semi-liquid substance; stirs liquid thoroughly with hand or stirring rod to acquire desired consistency; applies soap solution inside master mould to prevent plaster-of-Paris sticking inside mould; pours liquid plaster-of-Paris into master mould stirs plaster-of-Paris by hand inside master mould to remove air bubbles; allows plaster-of-Paris to settle and dry inside master mould; scrapes off the surplus plaster-of-

Paris from the master mould using steel scraper; opens master mould and removes mould into hot chamber for drying. May form porcelain wares using plaster-of-Paris moulds. May work from drawings without model.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0200

Caster, Pottery and Porcelain

Caster, Pottery and Porcelain casts clay and porcelain wares like cups, bowls, pots, etc. by pouring slip (semi-liquid clay) into plaster-of-Paris moulds. Selects moulds and cleans inside to remove dust and foreign matter; holds parts of mould together and ties around outer face with cord to prevent leakage of slip through joints; stirs slip thoroughly in container, adding water if necessary to obtain proper consistency; fills pitcher with slip and pours it into mould; pours excess slip from mould after shell of clay of required thickness has formed inside mould; places mould upside down to drip and dry; unties cord holding mould parts together, and removes partially dry moulded ware; scrapes ware with knife like tool; smoothens it with wet sponge and places it on drying rack. May fix attachments to ware where required.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0300

Clay Toy Maker/Hand moulder

Clay Toy Maker makes toys from clay. Mixes mud or special type clay with water to make wet or plastic clay of desired

consistency; selects appropriate wooden mould (in 2 pieces) of desired type of toys, figures, etc. to be made; presses wet mud or plastic clay or pours semi-liquid clay into mould and allows it to dry; dismantles mould blocks carefully and removes moulded figure or toy; fixes required attachments to toys to make complete unit; gives finishing touches to pieces with blade and wet cloth to give desired and distinct features and smoothness and allows them to dry in open sun or under shade; paints clay form with hand brush and desired colours to give final touch. May dress toys or dolls with appropriate dress and other accessories such as hairs and ornaments. May make simple toys by hand moulding by building form and features by deft use of fingers.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0400

Moulder, Hand (Ceramics)

Moulder, Hand (Ceramics) makes ceramic articles such as sanitary wares; abrasive wheels, bricks, tiles, etc. by pressing moist clay by hand in plaster of Paris or Wooden (Bihar) moulds and moulding it to desired shape or form. Kneads moist clay with hands and feet or by shood (Bihar) to give it required consistency or plasticity; applies thin coating of oil or clay dust or both, inside mould to prevent moist clay sticking to surface when filled; presses clay firmly into mould by hand, with mallet or by means of ramming tool to pack mould uniformly; scraps off projecting clay with sharp instrument to give moulded article smooth edge; allows clay to remain in mould for short time to dry and shrink slightly; removes semidry

ware from mould and places it in drying chamber, after checking defects, to form and shape. May specialize in particular branch, i.e. figures, tea pots, sanitary wares, etc.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0500

Maker (Pottery and Porcelain)/Jigger and Jolly Operator

Maker; Jigger Man; Jolly Machine Operator (Pottery and Porcelain) operates jigger or jolly machine for moulding damp and plastic clay or porcelain into articles such as jars, cups, saucers, etc. Selects proper shaping tool or metal die for desired shape of ware and fits it to the jollyarm of the machine; clamps mould covered with flat sheet or clay into holder of jigger or jolly; sets automatic screw to obtain desired thickness of ware; starts machine and releases pedal lever to allow holder to rotate; lowers jollyarm on clay to shape ware and applies wet sponge or cloth as necessary to keep proper consistency for shaping; turns hand lever in reverse direction to send back jollyarm to its original position; depresses pedal to stop holder from rotating and removes pressed and moulded article from machine and places it at a nearby rack; cleans holder and jollyarm with wet cloth or brush to remove stuck clay; repeats process. May fix handles and other fixtures to finished product. May repair and service machine.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0600**Turner Pottery and Porcelain**

Turner, Pottery and Porcelain operates pattern wheel to trim to desired shape unbaked pottery and porcelain ware formed by Caster, Maker and Thrower with appropriate hand tools. Fixes ware in wheel; sets and starts machine to rotate piece; selects appropriate trimming tool and presses and manipulates tool against ware to obtain desired shape; removes shaped ware from wheel. May smoothen and finish surface using sand paper.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0700**Bricks and Tile Moulder, Hand**

Brick and Tile Moulder, Hand moulds by hand bricks or tiles of various shapes and sizes using appropriate moulds. Smears inside of mould with thin coating of oil or dusts it with dry clay. Kneads lump of clay to obtain proper consistency and throws it into mould. Presses clay into mould by hand so as to fill in mould completely. Scrapes off excess clay from mould and turns mould upside down to remove moulded brick or tile.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0800**Abrasive Wheel Moulder**

Abrasive-Wheel Moulder tends hydraulic press to mould synthetic abrasive discs, hones and grinding wheels. Selects mould parts according to size and thickness of wheel desired and assembles parts to

form mould. Weights out specified amounts of abrasive, compound and adhesive, pours compound into mould on rotating turntable, and inserts bushings and hub nuts in centre of mould to form wheel. Places top plate on mould, positions mould in press and turns valves and leavers to close press and start pressing cycle. Removes pressed wheels from mould and places on plates for drying in kilns. May stamp or mark code numbers on pressed wheels. May mix grit, resin and clay to form abrasive compound, using mixing machine. May be designated according to type of abrasive used such as DIAMOND WHEEL MOULDER, EMERY-WHEEL MOULDER, etc.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.0900**Potter (Pottery and Porcelain)/Potter's Wheel Operator**

Potter; Thrower (Pottery and Porcelain) forms pottery or porcelain ware by moulding clay with hands as it revolves on the potters' wheel. Places lump or soft pliable clay in centre of flat wheel; rotates wheel by foot or machine, or by giving few quick turns using stick; centres clay on wheel by pressure of hands, and fashions ware of desired shape and size by softening clay with water and manipulating with hands; cuts ware from base with wet thread and removes it for drying. May knead, work and prepare clay and bake wares in kiln. May trim dried articles to desired shape by turning it using cutting tools.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.1000**Granulator Attendant (Cement)**

Granulator Attendant, (Cement); Nodulizer Man tends granulator (mixing machine) to splash raw materials of cement with spray of water to produce granules of material for burning in kiln. Starts machine and regulates feed to material (Cement dust) into granulator; sprays water into granulator through water pipe while machine rotates at speed; observes mixing of material and water to determine if uniform granules are being formed; regulates feed of material, rotation of pelletizer amount of water spray, and heat of oven to insure pellets are produced to specifications; opens inspection ports on oven and observes or removes pellets for examination to ensure specified hardness and heat.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.1100**Clay Maker (Pottery)**

Clay Maker (Pottery) prepares and makes clay for making pottery articles. Mixes different types of clay manually or in mixing machine fitted with double shafts and rollers; adds required quantity of water for mixing clay; stacks clay in yards for curing and drying; checks by sight and touch that moisture contents of clay are to required standard for pressing; adds more water if required; feeds conveyor with cured clay for dropping in mixing and pug mill or feeds mill manually with clay.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.1200**Checker (Ceramics)**

Checker; Examiner; Sorter (Ceramics) examines pottery and porcelain ware by touch and sight at different stages of production, rejects defective pieces and classifies goods according to quality.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.1300**Sorter, Brick and Tile**

Sorter, Brick and Tile; Checker, Brick and Tile sorts burned bricks, tiles or refractory goods according to colour (shade), hardness and quality. Removes product from kiln, examines it visually for colour, hardness and shape; taps product with finger or wooden rod to judge quality by sound; discards broken pieces; sorts and marks in chalk products according to shade, quality, etc. May be designated according to material sorted as BRICK SORTER; TILE SORTER, etc.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

7314.9900**Abrasive Wheel Formers, Potters and Related Workers, Other**

Abrasive Wheel Formers, Potters and Related Workers, other include workers who make pottery, porcelain ware, bricks, tiles and abrasive wheels not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7134

Title Potters and Related Workers

Family 7315**Glass Makers, Cutters, Grinders and Finishers**

Glass makers, cutters, grinders and finishers blow, mould, press, cut, trim, grind and polish glass, shape molten glass according to patterns.

7315.0100**Blower, Glass**

Blower, Glass blows molten glass into shape by means of blowpipe. Receives blowpipe with molten glass from Blower Helper and shapes glass by blowing into and manipulating pipe or by blowing glass into shape of mould. May specialize in blowing any particular object and be designated accordingly such as BOTTLE BLOWER, BULB BLOWER, etc.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.0200**Blower, Laboratory Apparatus**

Blower, Laboratory Apparatus; Table Blower (Glass) shapes glass tubing, by blowing and bending, according to specifications to form scientific apparatus such as flasks, retorts, stills and pipettes. Obtains glass tubing of suitable bore and length. Heats tubing to viscous condition by manipulating it over a Bunsen burner. Blows heated tubing into specified forms

with either compressed air or own breath. Shapes bends, or joins together sections of blown tubing using various glass forming tools. Checks capacities of apparatus to ensure correct specifications. May work from drawings or other specifications.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.0300**Blower Helper (Glass)**

Blower Helper (Glass) assists Blower in the manufacture of glass articles. Dips bubble prepared on blowpipe by Bubble Maker into molten glass and gathers required quantity of

molten glass for type of article to be made. Rolls gathered glass in cup-shaped metallic plate, containing water and oil to spread molten glass to bubble uniformly; takes blowpipe with glass bubble, and hands over blowpipe to Blower for blowing desired article. May act as Blower to mould required glass products when necessary. Bubbler (Glass) gathers molten glass from furnace on heated end of metal blowpipe for blowing desired article by Blower. Heats one end of metal blowpipe, dips it in tank of molten glass and rolls it round together required quantity of molten glass around its tip. Removes pipe end from tank and rolls

gathered glass over iron plate to give it uniform shape. Checks shape of glass bubble at tip end and blows through pipe to expand glass bubble slightly in size. Cools glass bubble in air for some time before further processing by Blower Helper. Bubble Holder (Glass) air cools glass bubble made by Bubble Maker. Blows gently by mouth through blowpipe

to expand bubble slightly, depending upon the size and shape of article to be produced. Rolls or waves blowpipe to air cool bubble. May work as BUBBLE MAKER, when necessary.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.0600

Mouldman (Glass)

Mouldman; Mould Catcher; Moulder (Glass) opens and closes metal mould for blowing of glass ware. Selects and places in position appropriate metal mould according to size and shape of glass ware to be produced. Heats mould to required temperature to ensure that mould is not too hot or cold when molten glass is blown into it, with a view to prevent cracking of glass. Opens mould to receive molten glass from tip of blowpipe and closes it; allows Blower to blow molten glass to desired shape of mould, and opens mould after blowing is over to remove blowpipe. Cools mould to required temperature by pouring cold water to remove product.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.0700

Bender (Glass)

Bender, Glass heats and bends glass tubing or pipettes to form articles such as neon signs and other articles. Fixes asbestos pattern on work bench. Marks and cuts glass tubing with file and breaks off required length. Ignites gas burner and

holds tube in flame at point where bend is desired, rotating tube to heat it uniformly. Places one end of rubber hose over end of tube and the other end in his mouth; blows through hose to prevent tube from collapsing and bends the tube. Places bent tube on asbestos pattern to check accuracy of bend, reheating and bending glass, if necessary; fuses together sections of bent tubing. Cools bended tubing by annealing it manually, ensuring uniform wall thickness. May specialize in a particular product and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.0800

Gatherer (Glass)

Gatherer (Glass) gathers specified amount of molten glass on end of iron rod and carries it to Pressman. Dips end of iron rod or blowpipe into pot in furnace containing molten glass; collects required amount of molten glass on end of rod or blowpipe and carries it to Pressman for further processing. May assist Blower by preliminary shaping or blowing.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.0900

Drawer (Glass)

Drawer; Tarwala (Glass) draws molten glass into wire of desired thickness for making bangles. Heats parison (intermediate shape produced in the manufacture of a glass article in more

than one stage) in oven, attached to one end of iron rod till glass becomes sufficiently viscous (semi-fluid); draws molten glass into thread to be wound into coil on steel roller by Roller Man.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1000

Bead Maker (Glass)

Bead Maker (Glass) makes beads from glass. Melts end of solid glass rod using gas burner or furnace. Takes small globule of molten glass on end of metal wire and spins wire till bead is formed, or rolls globule of glass in mould to form bead of desired size and shape. Cools and solidifies glass article by holding it over blast of compressed air. Opens mould and removes beads. May make beads by blowing process.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1100

Optical Worker

Optical Worker cuts and grinds optical components. Coats them by vacuum deposition. Cements optical glass lenses; etches, engraves and prints metals/non-metals using photographic or ruling techniques. Applies chemical and spray techniques in assembly of optical instruments. Cuts blanks from slabs/moulds and smothers and polishes on machine or by hand operation. Centres and edges the lenses. Carries out on line stage and interline stage inspection of

components. May make test plates, master and articulates by photographic techniques, thin film multilayer vacuum deposition for wide bend anti-reflection and laser mirror coating.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1200

Lens Grinder

Lens Grinder operates grinding machine to grind surfaces of lens blanks to required curvature and thickness. Selects metal grinding disc with required dioptric curve and clamps it on spindle of machine. Places metal block with mounted lens blank in position against grinding disc. Starts machine and applies various grades of abrasives or emery paste to disc as required periodically during grinding process for surfacing the lens blank; removes block from machine after specified time and examines blanks for defects. Uses different curvature metallic discs for surfacing both sides of the lens blank in case of cylindrical or spherical lenses. May mount blanks on metal block.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1300

Edger (Optical glass)

Edger; Lens Edger (Optical Glass) grinds and smoothens edges of lenses or lens blanks to reduce them to required size and shape. Selects metal pattern and inserts it into head of edging machine. Inserts rubber faced pad in lens holder,

smears lens with oil and places lens in holder. Aligns lens with pattern and clamps lens in holding device of machine. Manipulates levers to press lens edge against rotating wet grind-stone and removes lens when grinding is complete. Measures and inspects work for conformance to specifications. Smooths rough edges by holding lens against grinding wheel. May fit edged optical lenses into spectacle frames. May also dress grinding wheel.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1400

Lens Polisher (Optical)

Lens Polisher (Optical) sets and operates machine to polish surfaces of lens blank to high lustre. Selects and fits felt-lined polishing mould of required size and curvature on lower spindle of machine; position block on which lens blanks are mounted against polishing tool; starts machine and applies rouge or any other polishing compound to disc periodically during polishing process to polish blank to required level of lustre. Stops machine and removes block after specified time to examine blanks for defects. May operate battery of polishing machines. May operate cylindrical polishing machine.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1500

Lens Centerer and Edger (Optical Glass)

Lens Centerer and Edger (Optical Glass) locates optical centre of lenses used in

precision optical instruments, such as telescope, microscope or camera and grinds their edges concentric with optical axis. Positions lens in cement bed in chuck and sets chuck in spindle of lathe of centring machine. Starts machine; observes in revolving lens light reflected from mirror in machine; moves and positions lens in cement bed until image remains stationery denoting optical centre found. Hardens cement to secure lens in position and grinds edges to specified degree over revolving abrasive grinding stone. Inspects and measures work frequently as grinding proceeds. May fit glasses in frame according to prescription. May polish lens.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.1600

Wheel Grinder (Glass)

Wheel Grinder, Glass grinds and finishes rough edges of glass-white on flat grinding wheel. Examines glass articles processed by Glass Cutter and collects pieces with uneven and rough edges for grinding. Switches on grinding wheel, moistens surface of wheel by pouring water, applies and maintains adequate supply of moist emery powder or other suitable abrasive on centre of wheel so that it spreads out on its surface; holds by hand glass article on revolving grinding wheel to smoothen rough and sharp edges. Checks article for proper finish. Washes and cleans processed article. May cut glass. May polish surfaces.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders
and Finishers

7315.1700

Edge Finisher (Glass)

Edge Finisher, (Glass) smoothens sharp and rough, edges of beakers flasks, tumblers and other glass articles by melting edges on glass flame. Sets edge finishing machine, and lights gas burners in machine; places glass article on disc which rotates through gas flame. Regulates colour and intensity of flame by manipulating valve. Starts machine to rotate disc through flame to soften and smoothen edge. Stops machine to check smoothened surface; removes article with tong when smoothening is completed.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders
and Finishers

7315.1800

Cutter, Glass Bangles

Cutter, Glass Bangles cuts glass-wire-coil into rings of required size with Carborundum (silicon carbide-hard abrasive). Selects wooden rod of required size and girth and inserts it through glass-wire-coil; places wooden rod in position in work bench and scratches across glass coil with carborundum to cut into rings; draws out cut bangles by hand and passes them for further processing. May join two ends of cut ring to form complete bangle.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders
and Finishers

7315.1900

Cooling Man (Glass)

Cooling Man; Bench Man (Glass) separates moulded glass articles from blowpipe by chilling film of glass, joining blowpipe and moulded article. Receives moulded glass article fixed with blowpipe from Blower Glass; pours water on metal between tube and article and nippis off glass to separate moulded article from blowpipe. Removes glass article from mould; counts number of articles and passes them to carrier. May work as BUBBLER or MOULD CATCHER.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders
and Finishers

7315.2000

Glass Cutter, Other

Glass Cutter, Other; Glass Cracker; Glass Trimmer cuts glass tubes, rods, sheets or other articles to specified sizes and shapes, using hand tools or cutting machine. Lays stock of glass sheet, tubes or rods on padded surface of table, places pattern on glass article, marks out and cuts pattern with glass cutter tool; breaks away excess glass by hand or with notched tool. Stocks cut part aside for removal. May grind and smoothen edges, using belt sander.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders
and Finishers

7315.2100

Joiner, Glass Bangles

Joiner, Glass Bangles melts and joins both ends of glass ring cut by Cutter, Glass Bangles, using burner and blowpipe. Holds ring by tong, heats unjoined ends over gas

flame or burner to melt glass; blows blowpipe to melted ends to fuse both ends together to form glass bangles.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.2200

Crusher Attendant, Stone

Crusher Attendant, Stone operates machine in which lumps of stone are crushed to reduce them to desired size. Starts machine and regulates flow of stones from conveyor chutes or bins, shovels or throws stones into hopper of machine; prods large sized stone pieces to force them between crusher jaws with bar; breaks oversize stones with hand hammer; loosens clogged material in machine with bar; places empty containers at delivery-end to receive crushed materials; cleans, lubricates and makes minor repairs to machine. May operate machine fitted with conveyor system and may sieve powder into different grades.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.2300

Grinder (Stone and Clay)

Grinder; Edge Runner Attendant (Stone and Clay) tends and feeds grinding machine to grind pieces of rock or clay into fine dust. Adjusts clearance between rollers and bed stone (solid plate) of machine for fineness of grinding required; starts machine and feeds material into machine with shovel breaking loosens

clogged material in machine with bar; large pieces with bar or hammer if necessary; regulates water valve to let out requisite water into machine to settle dust. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.2400

Sorter, Glass Products

Sorter, Glass Products sorts finished glass products for uniformity, size and quality. Examines glass or glass ware for conformity to specification; measures and checks dimensions, shape, patterns and casting with measuring instruments or gauges; scrutinizes product for cracks, scratches, non-uniformity of colour and other flaws and sorts glass products into first second, third etc., quality depending upon finish of products; rejects imperfect product and piles them separately. May remove minor surface scratching by grinding surface with rouge and smooth rough edges using belt sander.

ISCO 08 Unit Group Details:

Code 7315

Title Glass Makers, Cutters, Grinders and Finishers

7315.9900

Glass Makers, Cutters, Grinders and Finishers, Other

Glassmakers, Cutters, Grinders and Finishers, other include workers who blow, mould, press and roll shapes from molten glass and cut, grind and polish glass not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7315
 Title Glass Makers, Cutters, Grinders
 and Finishers

Family 7316

Sign Writer, Decorative Painters, Engravers and Etchers

Sign Writers, Decorative Painters, Engravers and Etchers decorate articles made of wood, metal, textiles, glass, ceramics and other materials. They plan, lay out and paint letters, figures, monograms and designs to make signs and engrave and etch ornament and floral designs on glass and other articles.

7316.0100 Engraver, Glass

Engraver Glass; Glass Cutter engraves ornamental and floral designs, monographs etc. on glass ware using revolving copper or stone engraving wheel. Sketches or traces with crayon outline of design on surface of glass article; mounts copper or stone wheel of proper width and diameter on machine; starts wheel; moistens revolving wheel with water; holds glass ware with both hands against outer edge of wheel, so that it grinds and cuts into glass surface along outline of traced or sketched design. Changes wheels to make cuts of different sizes. May polish engraved pattern.

ISCO 08 Unit Group Details:

Code 7316
 Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.0200 Glass Etcher

Glass Etcher etches, with acid, decorative designs, calibration markings, numerals, lines and other markings on glass articles. Prepares acid bath; dips waxed glass, on which design or other markings have been drawn, into acid bath, or exposes it to acid fumes so that portions not covered with wax will be eaten away; rinses etched glass in cold water to remove acid and then in hot water to remove wax. May coat articles with wax.

ISCO 08 Unit Group Details:

Code 7316
 Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.0300 Sand Blaster (Glass)

Sand-Blaster; Froster Embosser; Obscuring Machine Operators (Glass) cuts artistic designs, according to pattern, in surfaces of glass articles, such as bowls and vases, using sand blasting equipment. Transfers drawing of desired design to outer side of adhesive tape; covers glass with tape, and cuts design out of tape with knife to uncover area of glass to be sand-blasted. Operates compressed air gun that blows fine sand against uncovered glass and cuts design into or frosts surface. Removes protective tape from glass. May make freehand drawing of design to be cut. May blast design into inside of bowl or vase to create raised rather than sunken effect.

ISCO 08 Unit Group Details:

Code 7316
 Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.0400 Volume Man/Calibrating Technician

Volume Man marks with special ink and pen measurements and units on outer surface of apparatus such as pipettes, burettes, flasks and measuring glasses for making permanent engraving on them. Positions glass article to be calibrated on levelling stand and pours required volume of water from automatic pipette. Marks out base of water level on outer surface of article with special ink and pen; pours out water on completion of calibration and passes it to Waxing Man, Glass.

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters, Engravers and Etchers

7316.0500

Waxing Man (Glass)/Helper Calibrator/Decorator, Glass

Waxing Man (Glass) applies coating of melted wax on exterior surfaces of glass-ware previously marked by Volume Man to be graduated, by dipping articles in molten wax. Heats and melts paraffin-wax cakes of specified quality in suitable vessel over heater; holds article, previously marked by Volume Man with tongs and dips it in molten wax, holding it for required time to give exterior surface of article thin uniform coating of wax. Removes article from wax to dry and cool for further processing by Graduator. Applies molten wax with brush to touch up unwaxed and defectively waxed portion of article. Scrapes off wax coating from surface of etched articles. May apply wax on article by pouring it on article from vessel.

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters, Engravers and Etchers

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters, Engravers and Etchers

7316.0600

Glass Enameller

Glass Enameller; Glass Painter, Hand enamels, paints or stains decorative free-hand designs on glass with hand brush and paint. Draws outline of design on surface of glass article; mixes paint, enamel or stain to obtain desired shade or colours; places objects on work bench, and applies paint or enamel of various colours to it by hand-brush and according to pattern. May place painted glass in furnace for prescribed period, so that colours are fused to glass. May mix own colours.

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters, Engravers and Etchers

7316.0700

Hand Painter (Ceramics)

Hand Painter (Ceramics) paints, free hand, designs on pottery or porcelain ware or tiles, using small hand brushes, according to pattern. Marks outline of design on surface of article with pencil; mixes paints to obtain desired shade or colours; places object on work bench and applies paints of various colours to it by hand brush and according to pattern; keeps painted ware on rack to dry. May heat articles by placing them in racks of electrically operated ovens at required temperature for fixed periods so that colours are fused to surface of object. May prepare own designs. May mix own colours.

ISCO 08 Unit Group Details:

Code 7316
 Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.0800

Decorator (Ceramics)

Decorator (Ceramics) transfer from paper transfer decorative or ornamental designs on pottery or porcelain ware. Selects paper transfer of suitable or specified design, and according to size and shape of the pottery; applies varnish to the surface of the pottery on which design is to be transferred; applies and presses the paper-transfer skilfully and uniformly, avoiding any air-gap between the surface of article and paper transfer; dips the article in water, removes the paper, and wipes off the extra varnish on the surface of article; dries the article for further firing. May prepare own designs.

ISCO 08 Unit Group Details:

Code 7316
 Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.0900

Spray Painter, (Ceramics)

Spray Painter (Ceramics) sprays paint on pottery, porcelain ware, bricks, tiles, or sprays liquid glaze on large pieces which cannot be dipped easily in a solution. Fills container of spray gun with paint or glaze of desired colour; fixes container to spray gun and couples gun to air-hose; starts compressor or opens valve on compressed air line; presses trigger and directs spray of liquid over surfaces of objects; places ware on rack to dry; cleans gun and hose with solvents. May use stencils for spraying various designs on objects. May mix own colours.

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.1000

Glazer, Pottery and Porcelain

Glazer, Pottery and Porcelain coats by dipping biscuit ware (pottery articles after firing but before glazing) with glaze solution. Cleans ware such as dish, plate or saucer to remove dust by spraying it with air gun or dusting it with clean cloth. Checks and rejects articles with cracks and other defects. Holds articles with tongs or fingers and dips it in tub containing liquid, glaze; stirs liquid solution with hand or stirring rod thoroughly from time to time to acquire desired thickness of glaze coating; removes it from tub and holds it just above surface of liquid, turning article around to ensure even coating and to throw off excess glaze; places ware on rack to dry and rubs glaze over spot where tongs or fingers touched; removes excess glaze from dry ware by rubbing it with a buffing wheel or other implement. May apply liquid glaze with spray gun on large pieces which cannot be easily dipped in a solution.

ISCO 08 Unit Group Details:

Code 7316
 Title Sign Writer, Decorative Painters,
 Engravers and Etchers

7316.1100

Mirror Silverer

Mirror Silverer, Silverer Mirror coats new and old mirror glass with silvering solutions. Weighs and mixes ingredients according to formula to prepare silvering solution of required consistency; places cleaned mirror glass on silvering table; covers surface of glass with silvering solution and levels glass by means of

wedges so that solution may not run off; allows silvering solution to remain on glass for prescribed period, drains excess of solution from glass and washes silvered glass in distilled water; dries mirror on drying table; coats silvered surface of glass with copper solution and protective paint to protect silvering from moisture. May spray silvering solution over glass surface using spray gun.

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters, Engravers and Etchers

7316.1200

Sign Writer, Decorative Painters, Engravers and Etchers, Other

Glass, Ceramics and Related Decorative Painters, Other include workers who decorate articles made of wood, metal, textile, glass, ceramics and other materials, and plan, lay out and paint letters and designs to make signs not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7316

Title Sign Writer, Decorative Painters, Engravers and Etchers

Family 7317

Handicraft Workers in Wood, Basketry and Related Materials

Handicraft workers in wood and related materials apply traditional techniques like seasoning, impregnation to prepare wood, straw, rattan, reeds, stone, clay, shells, and other materials, and carve, mould, assemble, weave, or paint and decorate various articles for personal or household use, or for decorative purposes. Basketry

weavers, brush makers and related workers select and prepare materials like bristles, nylon, fibre, bass, whisker and wire to make wicker furniture, brushes and brooms and weave various kinds of baskets.

7317.0100

Lamp Shade Maker

Lamp Shade Maker makes lamp shades from cardboard, parchment, plastics or cloth. Selects frames of required shapes and sizes. Cuts material of desired design to fit frame; winds tape spirally over upper and lower rings of frame to form foundation for attaching material; pins covering material between rings, distributing it evenly; sews temporary stitches to material around lower wire and then top wire, pulling material taut; sews material permanently to frame using various stitches depending on whether material is plain, rippled or pleated; trims off excess material with pair of scissors and sews in lining; sews trimming around top and bottom edges of shade or attaches trimmings to lamp shades. Glues parts of shades together, and secures shades made of paper, parchment or other materials into pre-fabricated wire frames. May fabricate wire frames by intertwining, welding together metal wires.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood, Basketry and Related Materials

7317.0300

Furniture Maker, Bamboo

Furniture Maker, Bamboo makes bamboo furniture by sizing and dressing bamboo pieces, drilling holes, building frames and

body with strengthening pieces. Studies pattern, size or design of furniture to be made; collects seasoned bamboo stakes (rods) them and soaks in water; removes stakes from bath when soft and cuts and removes thin splints and splits them into strips of desired size and thickness with selects cut bamboo into specific sizes, drills holes where necessary and sets them into required pattern; completes object by weaving seat, back and other parts as necessary and fastening ends either with bamboo or cane strips. May specialize in a particular article such as Table, Chair, Sofa set, etc. May also undertake repair work.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.0400

Furniture Maker, Reed

Furniture Maker, Reed makes reed furniture by sizing and dressing reeds and weaving them with rope to desired pattern. Studies pattern, size or design of furniture to be made; collects material, cuts them into required length and fastens them together with strings to desired shape; cuts off, conceals or weaves together loose ends, to finish edges; completes object by setting and fastening dry grass on handles, top, bottom and edges with rope. May use rexine or leather for decoration and durability on bottom, top, and handles. May specialize in fabricating a particular article or part of furniture and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.0500

Furniture Maker, Cane

Furniture Maker, Cane makes cane furniture by sizing and dressing required cane pieces, bending them to shape by heating, fastening parts together with cane strips and nailing. Studies pattern, size and design of furniture to be made; selects cane rods, cuts them to required length; shaves out pieces to remove projections, heats frame pieces and other sticks with blow torch, and bends them to desired shape; fastens sticks together with bolts, nails, and screws; weaves wickers in through and around frame cutting off and concealing or weaving together loose ends to finish edges; winds wickers around joints to strengthen and conceal them. May do polishing or painting of furniture. May fit cushions in chairs, sofa sets, etc. May undertake repair work of old furniture. May be designated according to article or part of furniture fabricated as BACK MAKER; CHAIR MAKER; SEAT MAKER.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.0600

Caner

Caner interweaves cane strips to make seat, back etc., of chairs, sofa sets and similar furniture. Soaks pre-cut rattan stakes (rods) in water to soften and bleach; removes stakes from bath when soft, cuts and removes splints and splits them into strips of desired size and thickness; interlaces strips through and

around frame of furniture to be made according to pattern, cutting off and concealing or weaving together loose ends to finish edges; winds wickers around joints to strengthen and conceal them. May specialize in weaving a particular article.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.0700

Basket Maker

Basket Maker makes baskets of specified size and shape by interlacing willow, rattan or other materials. Forms bottom of basket by interlacing strips of bamboo or similar material with framework of bamboo ribs; inserts ribs around edge of bottom and between woven sections of bottom to serve as framework of sides; bends ribs perpendicular to bottom and secures to hold them in position for weaving of sides; weaves strips through ribs until sides are completed; tapers or points ends of protruding ribs, and bends and inserts them into spaces in top edge of woven sides. May make solid bottom boards, using band saw, drill press, and carpenters' hand tools. May interlace reeds through stakes (rods), secured in screw blocks, to form parts of basket, such as woven bottom. May design baskets. May be designated according to type of basket woven as HAMPER MAKER; MARKET-BASKET MAKER; or according to material used as RATTAN WORKER; WILLOW WORKER.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.0800

Mat Weaver, Bamboo

Mat Weaver, Bamboo makes mats of seasoned and coloured bamboo strips according to pattern or design. Soaks pre-cut bamboo stakes in water to soften and bleach them; removes stakes from bath when soft, cuts and removes splints and splits them into strips of desired size and thickness; dresses bamboo strips to remove sharpness; colours strips according to desired pattern and weaves them into mat, cutting off and concealing or weaving together loose ends to finish edges; weaves thicker strips and ornamental borders on edge or end of mat. May make own designs. May weave window and door screens. May make fans, fruit baskets etc.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.0900

Mat Weaver, Grass and Leave

Mat Weaver, Grass and Leaves makes mat from palm, coconut tree leaves and grass materials. Removes central rib from leaves, dries the leaves in sun to remove extra moisture; cuts and dresses leaves to desired size; inter-weaves dressed leaves to form mat of required size and design, cutting off and concealing or weaving together loose ends to finish edges. May stitch them with twine for strength and durability.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.1000

Broom Maker

Broom Maker fastens material such as palm leaves, coconut leaf ribs, broom-grass or bamboo wickers together or to broom handles with rope or wire to form brooms. Selects and sorts material according to length and quality of broom to be made; examines and removes stems which are short, broken or do not otherwise meet standards; arranges and fastens material together or around end of wooden handle by winding and stapling wire, rope, leather or metal strips; trims broom material to uniform length. May be designated according to type of broom made or material used.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.1100

Chick Maker

Chick Maker makes reed or bamboo chicks by sizing and dressing reeds or bamboo wickers and fastening together by twine. Collects material, cuts and sizes them into thin strips according to design; assembles and fastens strips together with thin rope or twine to form into mat of desired size; trims edges and fixes cloth piping on four sides. May stitch coloured cloth over chicks.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.1200

Khas Thatti Maker

Khas Thatti Maker makes Khas Thatties; (screens made with Khas) a type of aromatic grass roots used for keeping room cool from summer heat when cold water is sprinkled on them. Collects dry khas roots; prepares bamboo frames of required size; spreads layers of khas roots to make bed of required thickness and fastens it into bamboo frame with bamboo splinters to support on both sides and binds them with thin rope or sutli; trims edges to complete screen.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials

7317.1300

Brush Material Preparer

Brush Material Preparer prepares hog bristles and other brush filling materials, such as horsehair, nylon and vegetable fibres for use in brushes. Aligns bristles to ensure that flagged ends are together and discards defective ones. Ties bundle of bristles to prevent bending and places it on rack. Lowers rack of bundles into vat of boiling water to remove natural curl of bristle. Removes rack after specified time and places it on dolly or in oven to dry. Places bundle of bristles in carton and labels carton according to length, origin, grade and colour of contents. Prepares other brush-filling materials by straightening, combing, cutting and tying them according to type of material and intended use. Holds bundle of material against grinding wheel to flag ends to trim butt ends, and to polish material. Selects filling material according to formula and lays it on work bench in prescribed manner prior to processing by mixing machine. May sterilise bristles and pack material in carton.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials**7317.1400****Brush Maker, Hand**

Brush Maker, Hand selects and prepares brush materials, such as bristles, fibre, nylon or wire, and sets them in brush handle or base. Grades and mixes filling material according to type of brush made and cleans and otherwise prepares it; sorts and arranges material in tufts; inserts them in prepared holes and secures them with glue, cement, pitch or wire; trims brush material to uniform length. May be designated according to type of brush made or material used.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials**7317.9900****Basketry Weavers, Brush Makers and Related Workers, Other**

Basketry Weavers, Brush Makers and Related Workers, Other include all other workers who make wicker furniture, brushes and brooms and weave baskets not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7317

Title Handicraft Workers in Wood,
Basketry and Related Materials**Family 7318****Handicraft Workers in Textiles,
Leather and Related Materials**

Handicraft workers in textile, leather and related materials apply traditional techniques and patterns to produce woven fabrics, knitted, embroidered, woven and other garments and articles for household use, as well as traditional footwear, handbags, belts and other accessories.

7318.0100**Candle Maker**

Candle Maker, Hand makes candle of special size or shapes by hand, dipping prepared wicks in molten wax, paraffin or similar material. Suspends candle wicks from metal frame and manipulates pulley system by hand to dip wicks into molten wax, paraffin or similar material until required thickness of wax adheres to wicks; removes and rolls candles under "rolling board", nibs end in "nibbing board", cuts to length, and places in racks to harden.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.0200****Candle Moulder**

Candle Moulder operates battery of multiple moulding machines in which candles are produced in metal moulds through which continuous wicks are fitted. Opens valve which fills moulds container with hot water, and fills moulding trough with hot liquid wax, using metal pail or metal ladle; operates valves which empty hot water from moulding trough and refill with cold water for cooling wax; allows poured material to harden in mould; cuts top of continuous wicks with long bladed knife; removes

excess of candle material in moulding trough with special bottom-cutting tool which shaves bottom of candles in mould and also cuts off wick; operates handle to eject candles up and into clamp frame above machine; carries away finished candles and stacks in storage racks ready for packing; replaces bobbins of continuous wicks in base of machine and fits through candle mould as necessary.

ISCO 08 Unit Group Details:

Code 7318
Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.0300

Carpet Weaver (Carpet and Rug)

Carpet Weaver (Carpet and Rug) operates one or more looms equipped with pile-wire mechanism to weave carpeting: Moves lever to open shed and inserts specified number of pile wires through shed in sequence to produce pile. Forces cop of filling into shuttle, using mallet, and inserts shuttle into loom. Places wax in holder to lubricate pile wires as wires enter and are withdrawn from shed. Starts loom and observes weaving to detect exhausted filling packages, mispicks, and irregular cutting of pile. Replaces exhausted filling, inserts pile wires into missed loops, and replaces dull cutting blades. May be designated according to type of carpet woven as Velvet Weaver (carpet and rug).

ISCO 08 Unit Group Details:

Code 7318
Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.0400

Knitting-Machine Operator, Automatic

Knitting-machine Operator, Automatic (Knitting) operates knitting machines to knit hose to shape of foot and leg: Places spools of yarn on spindles of machine and threads machine. Places welt rod in retaining notch of welt bar and turns lever to lower welt bar to knitting position. Pushes yarn carrier into position and turns bar to start machine to knit welt. Hooks draw-off straps from take-up roller to welt rod to hold welt and leg taut during knitting. Turns hand wheels to position picot bar to knit stitches joining welt to leg of hose and to raise picot and welt bars after welt is knitted. Stops machine and clips loose threads at welt and toe of completed hose, using scissors. Removes welt rods and hose from machine. Counts, bundles, and attaches identifying ticket to hose. Replaces and aligns needles and points of machine, using pliers. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7318
Title Handicraft
Workers in Textiles, Leather and Related
Materials

7318.0500

Hand Printer, Textile/Hand Block Printer

Hand Printer, Textile prints patterns of various designs and shades on textiles by hand using blocks, stencils, screen, spray gun etc. Mixes dyes to desired shade and thickness. May be known as CALICO PRINTER if engaged in printing cloth only.

ISCO 08 Unit Group Details:

Code 7318
Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.0600**Hand Dyer**

Hand Dyer bleaches and dyes textile fabric or yarn by hand. Fills tub with water and mixes chemicals to make bleaching solution of required strength according to type and quality of fabric or yarn to be bleached. Washes fabric or yarn in solution and then rinses it with water. Spreads fabrics or yarn to dry., Prepares dye solution by mixing dyes and chemicals with water in tub. Boils dye solution when necessary. Puts fabric or yarn in solution and stirs it until dyed evenly and to required shade. Spreads fabric or yarn on line to dry. May also dry yarn in drying chamber.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.0800****Repairer, Fabrics/Fabric Mender**

Repairer, Fabrics repairs faults in textile fabrics by plucking out knots and replacing broken or imperfect threads using hand tools. Inspects fabrics for markings that indicate faults. Plucks out knots with hand tool and gathers up slacks on loosely woven threads. Replaces broken or imperfect threads with needle and thread, in such a way as to make repair invisible. May examine fabrics. (Excluded are workers employed mainly on repairing fabrics by sewing).

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.0900****Bale Breaker Tenter,
Cotton/Blowroom Operator**

Bale Breaker Tenter, Cotton; Bale Opener, Cotton; Lattice Feeder, Cotton tends bale breaking machine for opening and mixing cotton of various grades and partially cleaning it. Presses switch to start bale breaking machine. Pulls out and collects armful of cotton layers from stack and spreads it on creeper lattice of machine for breaking and uniform mixing. Ensures regular feeding of cotton into lattice in prescribed proportion; Stops machine if jammed with cotton. Removes surplus cotton and regulates feed to avoid further jamming. Restarts machine and watches operation of cleaning by beater and exit of cotton through delivery cage under guidance of Mistry. Cleans waste, trash and dust periodically from dust chamber. Removes wastes cotton from machine and cleans machine. May perform any other miscellaneous work in blow room.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.1000****Batching Worker, Wool**

Batching Worker, Wool; Batching Supervisor, Wool checks bags of wool received from godown to ensure correct quality, colour and weight of wool to be mixed and supervises batching work. Receives bags of wool from stores and checks them for correct specifications. Allots bags of wool to Batching Man and directs him to spread wool of different quality, colour and weight in layers one upon another in required proportion to be mixed. Supervises mixing of wool by

Batching Man and checks formation of batch to ensure that wool of correct quality, colour and weight is used. Maintains record of quantity and quality of wool received from store and batches formed. Controls and supervises work of Batching Man and Teaser Man.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.1100

Wool Sorter

Wool Sorters; Wool Picker sorts and grades wool according to length, colour and quality of wool judging by touch and sight. Picks fleece and wool and breaks them by hand into pieces. Separates them into heap according to colour, quality, etc. Picks out foreign matter such as sticks, knots etc. May use knife for cutting out sewn edges of old garments and removing unwanted portion.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.1200

Selector, Jute

Selector, Jute opens bales of jute and sorts, grades and classifies contents according to colour, softness, strength and texture. Receives bales of jute from godown and cuts ropes of bales with knife to open them. Spreads jute on floor manually, picks up samples to examine softness, strength, texture and colour of fibres by touch and sight and places

different grades of jute separately for classification. Prepares jute by twisting ends of form Morahes (twisted jute) for stacking. May cut long and hard roots with knife. May carry jute to Softener Feeder for processing.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.1300

Grader, Coir

Grader, Coir sorts coir yarn according to grade. Examines thickness and colour hanks of coir yarn and separates them into lots accordingly.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.1500

Waste Machine Man (Cotton Textile)/Waste Collection Machine Operator

Waste Machine Man (Cotton Textile) tends machine for cleaning cotton waste for re-use by beating and pulling it apart. Lifts waste roving, yarn or other matted cotton and spreads it on feeder apron or lattice of waste machine. Takes out by hand surplus cotton from machine when machine becomes jammed. Stores cleaned cotton in gunny bags. Cleans and oils machine. Is designated as WILLOW TENTER; ROVING WASTE OPENER; THREAD EXTRACTOR MAN; BONDA MACHINE MAN; etc. according to type of machine on which worked.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.1800****Scouring Man, Wool/Wool
Washing and Scouring Operator**

Scouring Man, Wool; Scouring Machine Man, Wool; Scourer, Wool tends scouring machine for washing raw wool in chemical solution to prepare it for dyeing and carding. Receives instructions from Scouring Supervisor and prepares chemical solution by mixing soda, soap and other scouring agents in proper proportion in hot water tank. Pours it into bowls of machine. Operates scouring machine and uniformly spreads wool by hand on feeder hopper of machine to obtain even flow of wool at delivery end. Regulates flow of wool from one bowl to another. Collects clean wool at delivery end and feeds wool on lattice of drying machine. Regulates flow of feeds and removes wool from drying rollers. Cleans machine and bowls periodically.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.1900****Cooker (Silkworm)**

Cooker (Silkworm) boils cocoons to kill pupa inside cocoon and trace end of silk filament for reeling silk. Fills tube containing water with cocoons and lets in steam to heat it. Allows cocoons to remain in boiling water for specified period. Ensures that all pupa inside cocoon are killed and water is kept at prescribed temperature. Stirs cocoons and

boiling water with wooden stick to which they get attached. Collects in ladle cocoons whose filaments are drawn out. Delivers such cocoons at reeling section for Reeler to draw silk. May reel silk over reeling machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.2000****Softener Feeder and Receiver, Jute**

Softener Feeder and Receiver Jute tends softener machine for moistening and softening jute. Starts softening machine, picks up handful of jute (moral) or jute cuttings placed near feed-end of machine and places it evenly upon travelling apron or lattice of softening machine. Ensures that jute is uniformly and continuously fed. Stops machine when choked and removes surplus jute to clear choking. Receives softened stricks or portion of jute while working at receiving end, and gives twist to stricks lunch of handled jute. Ties them up and places them on barrow or semi-cylindrical containers for removal for further processing. Watches steady flow of emulsion through valve to ensure required quantum of moisture for processing as directed. Cleans and oils machine and reports defects in machine for rectification. May bring sorted jute from bins and stack it near feed-end of machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.2100****Root Cutter, Jute**

Root Cutter, Jute cuts hard and surplus roots of jute by knife. Carries softened jute from file to root cutting knife. Picks up handful of softened jute and arranges hard and surplus jute ends evenly. Places root ends over knife at Breaker dollop table, clips them off and carries root cuttings to weighing scale. Ensures that usable jute is not cut and wasted. May carry jute to softening machine. Is designated as CHOPPER, JUTE if engaged in chopping off hard root ends of special quality jute by heavy knife and combing large morah (twisted jute) prior to selection by Selector, Jute.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.2200

Teaser (Feeder and Receiver) Jute

Teaser (Feeder and Receiver), Jute tends teasing machine which breaks up matted jute fibre and remove dust and foreign matter. Starts teaser machine. Picks up handful of waste jute, cuttings, hard roots, thread waste, ropes, etc. placed near feed end and spreads them evenly on lattice of machine. Ensures continuous feeding to obtain regular flow of teased and cleaned jute and delivery end. Stops machine when jammed and removes surplus jute to clear obstruction. Reports defect if any for rectification. Receives teased and cleaned jute at delivery end. May carry teased material to breaker feeding line. May also oil and clean machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.2300

Fibre Preparer, Coir

Fibre Preparer Coir prepares fibre from coconut husks. Dumps coconut husks in convenient place in lake, covers them completely on top with strong net or palm leaves and places stones over dump to sink coconut husks under water. Keeps dump under water for specified period. Removes husks (now called retted husk) from water to open space to drain off water. Holds one small piece of retted husk on wooden block with one hand and beats it with iron or wooden rod with other to release fibres from husk. Pulls out outer cover of husk by hand. Continues beating till all fibres in husk are released. Spreads fibres in sun for drying. Collects dried fibre in one place, beats them with long thin stick; removes remnant of pith; if any and loosens and softens fibre. May spin coir yarn from fibre by hand or hand spinning wheel (charkha).

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.2700

Card Tenter, Cotton/Carding Tenter

Card Tenter, Cotton; Liner; Can Carrier; Can Minder; Can Boy (Cotton Textile) tends carding machine which cleans and transforms lap of cotton into sliver (rope like untwisted strand). Fixes and adjusts laps of cotton on brackets at back of machine for carding. Places end of lap (roll of cotton sheet) between feed roll and feed plate. Places empty cans in front machine to receive sliver. Starts and cleans machine after stripping (removing of short fibres) of cylinder and doffer done by Card Strippers. Collects web (thin fibres

formed of matted fibres), ensuing from doffer, threads it through calender rolls and pieces (joins) with sliver in can. Ensures regular feeding of cotton into machine and attends to breaks in web and sliver front (delivery end). Replaces filled cans with empty ones. Removes filled cans to draw-frame section and fetches empty ones. Locates operational defects in machine, and sets them right. Reports major defects to Jobber for rectification. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.2800

Set Framer, Silk

Set Framer, Silk operates set frame machine to make silk into silver. Switches on set frame to move comb up and down which carries fibres through it. Feeds silk laps one after another. Pieces broken ends with hand to keep continuous flow. Condenses fibres coming out through trumpet (part of machine) into one sliver. Oils and cleans machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.2900

Sliver-Lap-Man/Combing Preparatory Operator

Sliver-Lap-Man; (Cotton Textile) tends sliver lap-machine to convert several slivers into single lap for feeding ribbon lap or combing machine. Collects and arranges sliver cans at feed end of sliver-lap-machine. Pulls out ends of slivers and

feeds them on to rollers through guides by hand. Starts machine, watches sliver ends running through machine and joins broken ends. Maintains continuous flow of sliver by regular feed avoiding jamming. Stops machine when jammed and draws out surplus sliver to clear jamming. Moves wheel with hand to remove lap cover. Pulls out spindle wheel to facilitate removal of lap at delivery end. Removes lap from delivery disc and places it on creel and re-fixes bobbin, cover, etc. Starts machine to transform lap. Cleans machine and removes sliver dropping. Locates operational defects on machine and removes them. May carry lap to Ribbon-Lap-Man of Comber and bring back empty spools. May tend ribbon-lap-machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.3400

Comb Minder/Combing Preparatory Operator

Comb Minder; Comber (Woollen Textile) tends combing machine for combing wool to remove foreign matter and to separate short fibres from long fibres required for worsted yarn. Places balls of sliver on creel of machine. Passes ends of sliver from balls through guides and places ends on comb circle. Starts machine and threads sliver, coming out of drawing rollers, through funnel into can at delivery end. Joins broken ends and places new balls on creel of machine when necessary. Replaces full cans with empty ones at delivery end. Removes noil (short fibres of wool separated from longer fibres by combing) from underneath machine. Oils and cleans machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.3500****Gill Box Man**

Gill-Box-Man; Gill-Box Minder (Woollen Textile) tends gill-box machine for placing wool fibres in line and blending several slivers of wool into one sliver of uniform thickness. Places cans or balls of sliver in positions on floor at feed end of machine. Takes ends of sliver from each can or ball, passes them through back roller, and squeezes them through gathering eye to front roller. Starts machine Passes end of sliver combing out at delivery end through guide into receiving can or loops it around spindle or empty bobbin. Watches processing from feed to delivery end. Joins broken ends as and when necessary. Fixes new balls to replace exhausted balls at feed end to ensure regular feed. Removes fibres from leather sheet after sopping machine when jammed. Collects processed sliver and removes filled cans, wound balls or full bobbins at delivery end. Removes waste from machine and leather sheet. Cleans machine. May operate finishing gill-box-machine on which sliver balls are fixed at creel and bobbin at delivery end.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.3600****Spreader Feeder, Jute**

Spreader Feeder, Jute tends goods jute spreader machine to spread, smoothen

and transform jute into sliver. Starts machine and feeds jute by hand to lattice feeder of machine to carry hard jute through rollers, fast chain, slow chain, etc. for softening and transforming jute into sliver. Spreads jute by hand, uniformly on lattice. Watches indicator to check weight for regulating feed. Switches off machine when jammed and pulls out surplus or jammed jute by hand to clear jamming. Cleans and oils machine. May work on jute softener machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.3700****Spreader, Receiver, Jute**

Spreader Receiver, Jute removes balls of jute sliver from delivery end of goods jute spreader machine and carries them to Breaker Feeder. Guides flow of jute by hand into Emerson tray. Sprays emulsion (Emerson solution) through pipe to moisten jute. Observes Emerson watch reading and regulates feed of solution according to requirement. Watches formation of sliver lap into rolls by automatic roll former. Avoids jamming at delivery end. Removes sliver roll from automatic roll stand and carries it to feed end of breaker feeder machine for further processing. Cleans delivery end of spreader. May tend spreader feeder machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.3800**7318.4000****7318.4200****Hand Spinner (Cotton and Woollen Textile)**

Hand Spinner, (Cotton and Woollen Textile) spins yarn from cotton or wool using 'charkha' (spinning wheel). Loops small length of yarn around spindle of charkha, holds end of yarn length along with sliver of cotton or wool in left hand, turns spinning wheel by right hand simultaneously withdrawing left hand slowly to draw and spin yarn. Stops charkha when arm length of yarn has been drawn and spun and winds yarn on spindle. Removes cop of yarn from spindle when it is full. May also spin yarn using 'Takli'(hand spinning spindle).

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.4300****Piecer**

Piecer; Ring Spinner; Ring Piecer; Sider (Cotton and Woollen Textile) tend number of spindles on ring frame for converting rovings into spun yarn. Puts bobbins filled on inter or roving machines in creel of ring machine and threads ends through guides and drafting rollers. Locates broken ends of yarn, lifts bobbin from live spindle and unreels some yarn from it, replaces bobbin on spindle, threads yarn through guide and ring traveller and joins it with other end. Replaces empty roving bobbins in creel with filled ones, joining tail end with leading end. Gets filled yarn bobbins replaced with empty ones by Doffer,

Spinning. Cleans top clearers and machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.4500****Spinner, Jute**

Spinner, Jute tends number of spindles on spinning frame for converting jute sliver received from drawing frame into yarn. Arranges sliver cans at back of spinning frame. Lowers spindles on frame and directs Doffer to fit empty bobbins on spindles. Pulls ends of sliver on bobbins and passes them through guides and drafting rollers. Switches on spinning frame to get slivers spun and converted into yarn. Pieces (joins) broken ends and ensures regular flow of slivers from cans. Replaces filled bobbins by empty ones. Checks jamming of machine, removes surplus jute yarn, and ensures that machine and bobbins run properly. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials**7318.4600****Spinner, Coir**

Spinner, Coir spins coir yarn from coconut fibres by using spinning wheel. Collects small quantity of fibre and puts it in lap, Loops fibre on spindle of spinning wheel. Rotates wheel by turning its handle. Walks backward with twisted fibre in hand and feeds required fibre from lap to form coir yarns. Stops rotation of wheel when yarns on both spindles reach specified length.

Pieces together ends of two yarns and loops it on spindle of another spinning wheel placed opposite to first. Rotates wheels of both spinning wheels. Holds oblong wooden device with grooves in between two yarns. Moves wooden device and second spinning wheel forward to get two yarns twisted and form into one yarn. Removes ends of yarn loops on spindle of first spinning wheel and twists two ends together by hand. Makes hank of yarn by hand and keeps hank aside. May prepare coir fibre from retted coconut husk.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.4700

Twister

Twister; Doubling Piecer; Doubling Sider; Thrower (Textile) tends twisting machine for twisting yarn to give it strength. Mounts filled bobbins, cheeses or ones on creel of machine. Places empty bobbins on spindles of machines. Threads ends of yarn from filled bobbins through guides and travellers and loops them on empty bobbins. Starts machine. Joins ends when yarn breaks. Removes bobbins when filled with twisted yarn. Is known as DOUBLER when twisting two or more strands of yarn.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.4800

Doffer, Spinning/Ring Spinning Doffer

Doffer, Spinning; Doffer, Ring Frame; Gaiter; Shifter replaces filled bobbins with empty one on spindles of spinning frame. Brings and arranges sliver canes behind spinning frame. Brings empty bobbins in doffing boxes or baskets and set them in spindles of spinning frame. Watches winding of yarns on bobbins. Lifts filled bobbins from spindles and collects them in tray or baskets. Collects waste and removes them to godown. Keeps machine sides and department clean. May help Piecer in piecing broken ends of yarn and creeling and changing ring travellers. May clean bobbins. May perform miscellaneous duties as required.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.4900

Knotter, Silk

Knotter, Silk tends reeling machine to draw composite silk filament from reeling basin to wooden reel. Collects and mounts wooden reel on machine. Draws and wraps ends of silk filament on reel. Switches on machine by releasing brake to wind filament on reel. Watches operation and joins ends when filament gets broken. May do reeling and cooking of cocoons.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5000

Beam Gaiter

Beam Gaiter; Beam Binder (Textile) prepares loom for weaving cloth. Checks that warp beam is properly mounted on

brackets of loom. Sets healds, reed and drop wires into position, ties warp ends to tail ends of cloth beam and places weft bobbins in shuttles. Operates loom manually to check movements of healds, shuttle and reed and makes necessary adjustments. Hands over loom to Weaver, Power loom for operation.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5100

Lacer, Hand

Lacer, Hand (Textile) laces together punched cards in proper sequence to be used on jacquard; loom for weaving cloth of different designs. Collects punched cards and arranges them in proper sequence on lacing table or stand. Cuts required length of lace. Passes lace by hand through holes made particularly for tying cards together to make design to be used on jacquard machine for weaving cloth of different patterns. Carries card chain to loom. May fix card chain on jacquard loom. May assist in handling defective jacquard.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5200

Lattice Pegger

Lattice Pegger; Lattice Man fixes pegs on lattice (wooden pattern chain) used on dobby loom for controlling fancy pattern weaving. Collects graph paper with marked draft and peg plan. Calculates number of pegs of lattice required to make out complete design. Studies peg

plan to know places where warp is to be raised over weft. Inserts wooden pegs into lattice as per diagram to control pattern on cloth to be woven. Carries lattice to dobby loom. Fixes and adjusts heald and pegged lattice on loom. Repairs old, broken and defective lattice. May assist in handling dobbies. May make draft, prepare peg plan and sketch designs on graph paper. May cut and lace cards.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5300

Reacher, Hand (Textile)

Reacher, Hand (Textile) assists Drawer in drawing ends of yarn through healds and reeds. Picks up correct ends of yarn and lays them over drawing hook to be pulled by Drawer. Cleans healds and reeds.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5500

Weaver Power Loom

Weaver Power Loom operates and tends power loom to weave cloth, checks that shuttles are in position and supplied with full weft bobbins, no wrap yarn is broken and that set-up is ready. Starts loom. Watches looms under his charge for defects in weaving. Locates broken ends of warp yarn, ties short length of yarn to broken end from warp beam, draws end through drop wire, healds and reeds using reed hook, ties it to other end with a weaver's knot, and starts loom again. Stops loom to remove defects caused by mispicks. Cuts and pulls out filling of weft

yarn up to point of defect, adjusts and starts loom. Replaces empty bobbin in shuttles. Cuts cloth when cloth roll becomes full.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5800

Weaver, Handloom

Weaver Handloom weaves cloth from yarn on handloom. Mounts warp beam on loom. Sets heald frame in position. Draws ends of warp yarn from beam through comb and fastens them together to cloth winding roll. Places full bobbins of weft yarn in shuttle. Operates loom by pressing and relieving two foot levers alternately to raise and lower heald, simultaneously pulling string with jerk with one hand so as to throw shuttle across warp yarn from side to side and by moving comb forward and backward with other hand to properly fill weft yarn. Draws broken ends of yarn through heald and comb and knots them. Replaces empty bobbins in shuttles. Removes cloth from roll when required length has been woven. May size and dye yarn, wind yarn on bobbins or beam and draw ends of yarn from warp beam through healds preparatory to weaving.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.5900

Carpet Weaver, Hand Knitting

Carpet Weaver, Hand Knitting weaves woollen or cotton carpets and druggets on handloom. Studies design and colour combination from chart. Determines

number of knots involved in pattern by counting graphical squares as instructed. Counts and determines number and length of warp strands required in single colour weaving of particular size of carpet. Prepares cotton yarn for warp by processes of bleaching, dyeing as required. Wind by hand requisite number of cotton strands on warp beam according to quality and number of stitches required. Draws ends from warp-beam and ties them to carpet beam. Collects woollen yarn and winds it by hand into balls. Hands woollen balls from roof near loom to facilitate pulling and weaving of yarn. Sets and adjusts loom. Determines number of weavers required according to size of carpet. Passes and draws weft yarn through alternate warp strands by hand to weave fringe of carpet. Ties knots of woollen yarn on each strand of warp. Cuts yarn after each knot at fixed length to maintain required thickness. Moves heald (part of loom mechanism) through control string for interlacement of warp; Passes and adds two layers of thread or jute yarn through warp sheds for holding woollen knots or pile; presses knots and weft filling by hand work to ensure even stiffness. Trims off extra fibre at intervals using hand shears.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6000

Carpet Clipper, Hand

Carpet Clipper, Hand; Carpet Trimmer, Hand clips extra fibres from upper side of carpet to give it smooth finish. Spreads carpet on even surface and rubs and scraps surface with scraper or metal comb to align and raise fibres. Clips excess fibres

with and shears. May mend and repair carpets.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6100

Carpet Embosser

Carpet Embosser; Carpet Carver trims edges of floral designs or patterns on carpet to give raised appearance. Spreads carpet on even surface. On floral design cuts wool with hand scissors to give raised appearance to design. Chalks around or stencils outline of designs on carpet and creates embossed effect by clipping wool either wholly under or wholly outside design. May prepare designs.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6200

Carpet Repairer

Carpet Repairer repairs and gives final finish to carpets and rugs. Stretches carpet on flat surface. Rubs red or coloured chalk on separate string. Sets it straight against edge of stretched carpet. Strikes coloured string over edge of carpet to mark straight line. Cuts marked edges, using knife, to bring carpet to required measurement. Binds and trims cut edges using needle and thread. Checks front and back of carpet for gaps in knots and badly woven parts, and corrects any defects by stitching loose knots and repairing cuts and damaged portions. May apply stiffening solution to back of loosely woven carpet.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6300

Coir Weaver (Matting)

Coir Weaver (Matting) weaves coir matting on handloom. Mounts wrap beam on loom. Sets heald frame in position. Draws ends of warp yarn from beam through healds and reeds (beater) and fasten ends to mat winding roll. Places quill of required colour into shuttle. Presses and relieves levers alternately to raise and lower heald according to weaving design, operates shuttle from end to end to weave matting. Moves beater forward and backwards forcibly by hands to fill weft yarn. Passes wooden rod between weft and beater and moves beater forward and backward again to fill weft. Removes rod and repeats operation using quills of specified colour according to pattern of matting required. Draws broken ends of yarn through heald and reed and knots them. Cuts fibres projecting upwards with shears according to thickness of mat required. Rolls matting on mat winding roll by pressing lever. Removes matting from roll when required length is woven. May do bleaching and dyeing of coir.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6400

Net Maker, Hand

Net Maker, Hand makes nets and meshes by weaving twine and thread with netting needle or shuttle. Selects design of netting and kind of twine or thread required.

Plaits (interweaves) and knots twine or thread with netting needle or shuttle to prepare selected patterns. Waxes twine while weaving to smoothen and strengthen it. Trims excess twine or thread.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6500

Crochet Worker, Hand

Crochet Worker Hand; Crocheter, Hand; Lace Maker, Hand knits lace, trimmings, etc. with hand crocheting hook or needle. Selects pattern of lace or trimmings to be prepared and studies it for size and number of stitches to be made. Selects suitable colour and quality of thread and required type of crocheting needle. Rolls thread into balls for convenience of knitting. Threads hand crocheting needle and moves it around thread for making loops and knots to knit desired pattern. Checks work while knitting to ensure conformity with pattern and smoothen out knitted article on finish. May operate crocheting machine.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6600

Knitter, Hand

Knitter, Hand knits sweaters, dresses, socks and other articles by hand with woollen yarn according to specified pattern. Decides shade, number and type of woollen yarn to be used and selects pair of knitting needles accordingly.

Measures sample or determines size of article to be knitted and knits it by making loops and picks with knitting needles, according to specified or selected pattern. Knits article part by part and finishes it by sewing them together and pressing. May use single flexible wire needle or more than two needles for knitting specific items according to pattern of knitting desired. May knit articles with cotton or silk yarns.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.6700

Braid Maker, Hand

Braid Maker, Hand makes braid by hand. Interlaces and entwines strands of wool, silk, linen or thread to make ribbon-like or cord-like fabrics for binding or for ornamental purposes.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

7318.9900

Handicraft Workers in Textiles, Leather and Related Materials, Others

Weavers, Knitters, and Related Workers, Other include all other workers engaged in knitting articles by hand or machine, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7318

Title Handicraft Workers in Textiles,
Leather and Related Materials

Family 7319 Handicrafts Workers, Not Elsewhere Classified

This family covers handicraft workers who perform traditional handicrafts not classified elsewhere. For instance, the family includes traditional handicraft workers in non-precious metals and stone.

Group 732 Printing Trades Workers

Printing Trades workers compose and set type prior to printing, set up and operate printing presses, bind and finish printed products, and prepare stencils and operate screen printing equipment

Occupations in this Group are classified into the following Families:

7321	Pre-press Technicians
7322	Printers
7323	Print Finishing and Binding Workers

Family 7321 Pre-press Technicians

Pre-press Technicians proof, format, set and compose text and graphics into a form suitable for use in various printing processes and representation in other visual media.

7321.0100 Compositor, Hand

Compositor, Hand, sets type by hand for printing. Picks up type from case and assembles them into words and lines in composing stick. Arranges even spacing of

lines. Transfers composed matter to galley. Follows manuscript rigidly but breaks up words at end of a line when necessary. Revises composed matter according to corrections made in proof. May create matter by positioning blocks and arranging type for effective display. May also distribute type into case after matter is printed.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0200 Impositor

Impositor; Imposer removes composed matter from galley and arranges it on imposing stone in prescribed pattern so that, when printed, pages can be conveniently arranged in number series. (Pattern differ according to number of pages on each printing sheet). Fixes spacing of margin using wooden chips, leads and hammer and locks matter in chase.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0300 Distributor (Letter Press)

Distributor (Letter Press) distributes types and other material utilised in composing to their respective cases and racks in store room. Unlocks chase, separates spacing material, types and blocks, if any, and keeps them in respective cases and racks; packs and labels composed material in paper for further use if required; separates types and spacing material surplus to requirements, and keeps them

aside for melting. May do composing and imposing work.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0400

Composing Room Operatives

Composing Room Operatives perform variety of routine and low skilled tasks, such as pulling galley proof or cylinder proof, stacking formes in racks or carrying them from racks for printing, washing composed matter, etc., and be known as: Forme Carrier carries formes from composing room to Printing-Machine Man, cleans type-heads in formes with water and wire brush to remove ink and dust; carries formes to distributors. Proof Pressman (Galley/Forme) pulls proof for proof reading in galley forme in initial stages of printing, or when type-formes have been imposed and locked in chase. Galley Proof Man if operates flat bed printing machine to obtain impression on paper from types heads in galley; places galley with composed type on bed of machine; applies printing ink with ink roller manually; places sheet of paper on type and manually operates machine to press paper on to type; removes printed paper and checks clarity of impression. May take galley proof to Proof Reader. Oils and cleans machine.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0500

Stereo Matrix Moulder

Stereo Matrix Moulder; Matrix Maker operates hydraulic or hand press to obtain print impressions on flong (specially prepared thick sheet of paper) for casting printing plates used in rotary printing. Damps flong, places it on forme, spreads chase or page rubber sheet or extra sheets of thick paper on flong for padding to protect flong from damage on application of pressure from press head; sets machine and adjusts press head for correct pressure to be applied on flong; starts machine and lowers press head on assembly to impress type into flong; stops machine and releases pressure from matrix and carefully strips matrix from chase; checks surface of matrix for any unevenness in imprint and smoothens surface with blunt wooden blade and trims edges of matrix with scissors; turns mould face down and fills in hollows on back of mould with pieces of heavy paper or felt to prevent it bending during casting process; applies French chalk powder over entire surface of matrix and cleans it with fine hand brush. Delivers prepared matrix to Stereo Type Caster for casting rotary printing plates with it. Cleans and oils machine. May dress printing plate (metallic plate cast by pouring molten metal over matrix in casting machine) on routing and cutting machine. May cast printing plate.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0600

Stereotype Caster

Stereotype Caster; Rotary Caster prepares plates for rotary or flat-bed printing by operating casting machine. Dries matrix on roaster and places it in correct position in casting box. Checks supply of metal at

correct temperature for casting and operates machines to pump molten metal from crucible against matrix. Removes plates after cooling, for finishing. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0700

Electrotyper

Electrotyper performs all or several tasks in making printing plates from set-up type by electro-plating process, using hand tools, electro-plating equipment and metal casting, trimming and forming machines. Places set up type on bed of hydraulic press. Lays wax-coated sheet of metal or sheet of plastic or lead on type and presses it to make mould. Removes mould from press and trims its edges. Sprays or coats mould with electro-conductive substances and places it in electrolytic bath until shell of desired thickness has formed on mould. Removes shell from mould by rinsing it in hot water and fills back of shell with molten lead to form plate, using pouring lead or casting machine. Examines plate with magnifier to detect imperfect formation of halftone dots, lines and types and rectifies them using engraver's hand tools. Shaves, trims, smoothens and bends plate using hand tools and machines as required, in readiness for printing. May print proof from plate and make new plate if necessary. May be designated according to tasks performed such as ELECTROTYPE CASTER, ELECTROTYPE MOULDER, etc.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.0800

Lithographic Artist

Lithographic Artist exposes sensitized metal plate to positive or negative film, using vacuum frame, to produce offset lithographic printing plates. Increases or reduces size of photographic dots by chemical or photomechanical methods on halftone negatives or positives to be used in preparation of lithographic printing plates. Punches holes in light-sensitive plate with register punch and insert register pins in holes to prepare plate for contact with positive or negative film. Places plate on bed of vacuum frame and inserts positives or negatives on register pins to align positives or negatives with each other. Places masking paper on areas of plate not covered by positives or negatives to prevent exposure of those areas. Examines film on light table to determine specified colour and colour balance, using magnifying glass or densitometer. Compares proof print of colour separation negative or positive with customer's original sample or copy and standard colour chart to determine accuracy of reproduction. Identifies and marks colour discrepancies on print and film. Prepares dyes or other chemical solutions according to standard formulas and applies solution to produce colour effect by chemical method. Blocks out or modifies colour shades of film, using template, brushes, and opaque. Places masks over separation negatives or positives and exposes film for specified time, using contact frame and automatic film processors to reduce size of photographic dots to increase or reduce colour. Applies opaque to block out blemishes and pinholes.

ISCO 08 Unit Group Details:

Code 321

Title Pre-press Technicians

7321.0801

Circuit Imaging Operator

Circuit Imaging Operator imprints the requisite circuit with the help of UV rays through machine on to the laminated board. A Circuit Imaging Operator captures the requisite circuit on the laminated panel. A positive UV translucent film is placed on the photo sensitised board. The film is required to be opaque in regions where the circuit trace is necessary and is clear elsewhere. On exposure to UV, the photo resist under the clear portions of the film get cured without affecting the area under opaque portions of the film. A Circuit Imaging Operator captures the requisite circuit on the laminated panel. A positive UV translucent film is placed on the photo sensitised board. The film is required to be opaque in regions where the circuit trace is necessary and is clear elsewhere. On exposure to UV, the photo resist under the clear portions of the film get cured without affecting the area under opaque portions of the film.

Qualification Pack Details:

QP NOS Reference ELE/Q2101
 QP NOS Name Circuit Imaging Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7321
 Title Pre-press Technicians

7321.0802

Circuit Imaging Operator-Photo Imaging

Circuit Imaging Operator-Photo Imaging is also known as 'Photo Imaging Operator',

the Circuit Imaging Operator imprints the circuit design layout on the laminated printed circuit board (PCB) with ultraviolet (UV) light exposure. The individual at work places the circuit design layout printed on a 'positive' translucent film on the laminated and photo-sensitive PCB panel and exposes it to UV light, thereby curing the photo-resist under the clear portions of the film in order to get the circuit printed onto the panel.

Qualification Pack Details:

QP NOS Reference ELE/Q2201
 QP NOS Name Circuit Imaging Operator-Photo Imaging
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7321
 Title Pre-press Technicians

7321.0900

Retoucher, Lithographic

Retoucher, Lithographic; Photoengraving Finisher; Process Artist-Lithographic-Colour-Artist Retoucher; Tone Artist refines or corrects imperfections in design on lithographic printing plates by drawing on them with scribbling tools, crayons, pen and ink to make them fit for printing. Intensifies or reduces unsatisfactory tone values, blanks out or changes shades of colours of details to make them less prominent, adds missing details, etc.

ISCO 08 Unit Group Details:

Code 7321
 Title Pre-press Technicians

7321.1000

Mounter/Mounting Machine Operator/CNC Mounting Machine Operator

Mounter fixes etched type or image plate on wooden block for printing. Cuts plate to size, levels its sides, drills holes on bevelled portions and mounts plate on wooden block by nailing.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.1100

Router

Router reduces level of non-type or image portions of mounted plate to make it non-printable. Clamps block on bed of routing machine, fixes needle to holder, adjusts its height, operates machine and regulates movement of needle which reduces level of portions of plate not required for printing.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.1200

Cameraman, Photomechanical

Cameraman, Photomechanical; Lithographic Cameraman; Photolithographer photographs illustrations or type set material to obtain line, half tone, continuous tone and colour negatives for use in printing. Places illustrations or types material on copy board of copying frame. Adjusts lights and camera, focuses with help of ground-glass focusing screen, loads plate in dark room, mounts it on camera and exposes it. Uses screen to break up shadings of copy into

dots for half-tone printing and uses different colour filters for preparing separate colour-wise plates for printing. May also prepare photo-sensitive glass plate for use in camera.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.1300

Microstat Cameraman

Microstat Cameraman; Microfilm Cameraman; Microstat Camera Operator reproduces documents, maps, charts, etc., photographically on special type of camera known as Microstat. Places copy on copy board or copying frame, loads filmstrip in camera, focuses camera, adjusts light and exposes film which is automatically processed. May also enlarge with special enlarging device fitted to this camera.

ISCO 08 Unit Group Details:

Code 321
Title Pre-press Technicians

7321.1400

Photostat Camera

Operator/Photocopier Operator

Photostat Camera Operator; Photostat Machine Operator produces copy of drawings, manuscripts and other documents directly on prepared paper by means of a Photostat camera. Mounts document to be copied in glass frame and arranges it under camera lens, places roll of photographic paper in the camera, adjusts distance, focus, time and lights and takes photographs. Cuts and rolls out exposed section of paper into developer which automatically develops the print.

Arranges for its drying either in a cabinet or between blotting pads.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.1500

Transferor, Photomechanical

Transferor, Photo Mechanical; Photoengraving Printer; Proof-plate Maker; Helio Operator; Vandyke Printer transfers impression from photograph negatives to metal plates for subsequent processing or for direct use in lithographic printing. Measures negative for cutting plates (zinc or copper) to size, sensitizes plate by pouring solutions, places plate and negative in contact frame, exposes plate to light, develops it with photo-developing chemicals and dries it.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.1600

Etcher Photo Engraving

Etcher, Photo Engraving Photo Engraver; Etcher Litho-Printing etches designs on surface of photographically printed or pantographically engraved printing rollers and plates, employing knowledge of colours, fabrics and etching and printing techniques. Studies design sheet and determines etching requirements based on colours in design, type, weight of fabric and printing sequence. Lifts roller into brackets of rinsing vat with aid of helper and tapes ends of roller with masking tape to limit etching to specified width, cleans roller or plate preparatory to etching, using sponge, cleaning chemicals and water. Transfers roller from rinsing vat to

acid vat with aid of helpers and hoist, agitates acid solution with compressed air and starts machine to start roller in solution to get it etched by acid reaction. Applies acid resisting material on photo-printed design on plate, places it in etching machine and starts machine to spray acid as uncoloured portion of plate to get it etched by acid reaction for etching photo-engraved flat bodies and metal plates. Checks depth of etching periodically by measuring with depth gauge, touch and magnifying glass and processes roller through series of acid baths or regulates period of acid spray as necessary to etch photo-engraved roller or plate to required depth, watches and dries treated plate or roller, applies acid resistant powder or charcoal into etched cavities and repeats etching process if necessary. Cleans off charcoal and acid resistant coating by washing and brushing with alkali solution and water. May touch up defective areas by hand etching.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.1700

Barman, Lino Machine

Barman, Lino-Machine cleans space band, mould surface and metal pot of lino-typesetting machine and removes types which are stuck when bar of machine gets jammed. Unlocks mould surface from machine and cleans it with wire brush applying graphite with rag to remove metallic particles and dust to prevent clogging during operation; cleans metal pot to remove traces of metal particles from inside surface; removes matrices which cause obstruction to movement of distribution bar on machine for removing defects. Oils various parts of machine.

May change measurement lines in mould of machine, if required, and supply lead bricks to metal pot.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

7321.9900

Pre-Press Technicians, Others

Pre-Press Technicians, Others include workers who engrave lithographic stones and printing plates, rollers, dies and blocks by various processes not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7321
Title Pre-press Technicians

Family 7322 Printers

Printers set up and operate digital, letterpress, lithographic, flexographic, gravure, newspaper and other printing presses.

7322.0100

Job Printer

Job Printer composes matter by hand and prints it on manually operated machine. Sets type by hand, takes and corrects proof, imposes matter in galley and prints by manually operated printing machine, thus performing duties of Hand Compositor, Proof Reader, Impositor, Handpress Man, Handprinting Machine Man.

ISCO 08 Unit Group Details:

Code 7322
Title Printers

7322.0200

Lino Operator

Lino Operator; Lino-typesetting Machine Operator; Intertype Machine Operator; Composing Machine Operator lino type operates key-board (similar to that of typewriter) of lino-type setting or inter-type setting machine, to cast lines of type called slugs. Adjusts machine according to size of type and length of line to be formed. Presses keys of keyboard to assemble matrices to form words and lines following manuscript rigidly. Breaks up words if necessary at end of each line. Presses button at end of each composed line to enable machine to cast whole line of type automatically. Casts new lines removing errors pointed out by Proof Reader. Ensures that Barman cleans machine and space band, distributes matrices into magazine of machine and keeps metal pot full.

ISCO 08 Unit Group Details:

Code 7322
Title Printers

7322.0300

Mono Operator

Mono Operator; Monotype Key-Board Operator; Composing Machine Operator, Monotype which makes perforations on spool of paper used for casting types of printing. Sets machine to ensure correct spacing and adjusts line-length indicator. Mounts spool of paper on machine and operates key-board following manuscript at end of each line. Tears off perforated strip from spool when all matter of manuscript has been transferred on it.

Qualification Pack Details:

QP NOS Reference
QP NOS Name

NSQF Level

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.0400**Mono Caster**

Mono Caster; Caster Operator; Monotype Caster tends automatic machine that casts and composes types. Places on machine spool of paper perforated by Mono Operator and attaches it to winding roll. Sets composing stick to required length, inserts matrix case of required size of type and locks galley on bed of machine. Starts machine. Ensures that metal pot is adequately supplied with metal and maintains proper temperature of molten metal. Stops machine when galley is full or casting is completed. Removes galley from machine for taking proof. May clean and oil machine.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.0500**Type Caster**

Type Caster operates type-casting machine for casting types for printing. Selects and fits appropriate metal mould and matrix to machine, depending on size and nature of types to be cast; sets machine to required performance, aligns matrix and mould using gauzes, screws etc., and closes die case bridge of machine; cleans lead chamber and nozzle of plunger of lead chamber with metal rod; fills lead chamber with lead blocks for melting; switches on electrical mechanism in machine or lights coal in fire-box below lead chamber to heat metal pot to melt lead blocks. Checks and maintains correct

temperature of molten lead to ensure proper moulding; starts machine, opens water circulation system of machine to cool dies during casting operation and observes machine pumping molten lead into die mould, casting types and delivering caste types along table channel; checks whether caste type conforms to specifications; removes slag from molten lead chamber periodically to keep molten liquid free from impurities; cleans and oils machine. May clean and dress caste types. May caste brass or other metal types.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.0600**Maker-up, Photo Type Setting**

Maker-up, Photo-Type-Setting arranges photo-composed type film and fixes it on paper (positive) in readiness for reproduction on printing plates. Examines lay-out of copy. Marks positive to guide in arranging type and draws lines on positions for decoration purposes and tabular matter. Waxes proof-sheets of photo-composition and cuts out letters and lines as required. Places cut-out pieces in position on paper using measuring instruments for guidance. Presses sheet of tissue paper over photo-composition to ensure that wax holds pieces in position. Checks arrangement of composition and makes necessary alterations. Passes on completed positive for printing reproduction.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.0700**Photo Type Setting Machine Operator**

Photo Type-Setting Machine Operator operates key-board of machine which reproduces letters on film or sensitized paper for reproduction in printing. Places unexposed film or sensitized paper in photographic element of machine. Examines lay-out copy for typographical indications, such as spacing, typefaces and length of lines. Starts machine and sets its dial according to typographical instructions on layout copy. Reads copy and depresses keys of keyboard to reproduce required letters on film or sensitized paper. Manipulates machine controls as necessary to change type size and spacing, adjust camera light and eliminate incorrect lines. Removes container with exposed film or sensitized paper on completion of operation and sends it to developing room.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.0800

Type Dresser

Type Dresser; Type Cutter dresses cast types by cutting and grinding to make them uniform for use in composing. Arranges cast type on grooved stick, transfers and secures them to metal dressing rod by screw. Places metal rod in position on table and files side surfaces of types to remove unevenness; cuts, groove on one side of type using metal planer to chip off bottom portion to make them uniform in height; checks dressed types for burr and sharp edges and removes them by grinding and polishing with emery paper to obtain smooth surface; transfers dressed type back to wooden stick for sorting and packing. May sort

types into founts (different types of letters, figures, etc.) for packing.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.0900

Roller Maker, Paper Printing

Roller Maker, Paper Printing casts rollers from roller composition (product of glue and glycerine) for use in printing. Cuts composition into small pieces and melts them in glue-pot; cleans and oils inside surface of cylindrical mould; winds jute cord round steel stalk and places it inside mould; melts composition in electric furnace controlling heat to prevent molten composition from over burning; fixes mould in metallic stand, pours molten solution in mould to required level and allows it to set; removes roller from mould, trims and polishes surface. May do repair work. May evolve own composition.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1000

Braille-Duplicating-Machine Operator (Printing and Publishing)

Braille-Duplicating-Machine Operator tends equipment to reproduce Braille-embossed pages, using one of following methods: (1) Places master page on screen bed. Places roll of treated paper on stand. Threads paper through equipment and locks paper in clamping frame. Pulls heat unit over clamping frame. Depresses pedal or handle to lower clamping frame onto screen bed and to create vacuum that forms braille impressions. Pushes heat unit from bed. Releases pedal or

handle to raise clamping frame, and releases catch on frame to draw reproduced copy through equipment. Repeats process to make required number of copies. Cuts copies apart, using scissors. Writes identifying information, such as page number or title, on each copy. (2) Positions master page on screen bed. Places sheet of heat-sensitive plastic paper over page and lowers clamping frame to lock page into position on bed. Pulls heat unit over clamping frame to activate vacuum pump trip-lever. Holds heat unit over frame to form braille impressions. Pushes heat unit from bed to release vacuum. Raises frame to release individual copy. Repeats process to make required number of copies.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1100

Stencil Cutter, Silk Screen Printing

Stencil Cutter, Silk Screen Printing cuts stencils by hand, according to design, for use in silk-screen printing. Superimposes shellacked transparent paper on design of matter, to be reproduced and cuts with knife outline of design in shellac without cutting paper. Irons paper on silk screen to transfer shellac stencil to it. Cuts different stencils for each colour to be reproduced. May draw design directly on screen and fill in surfaces around design with glue lacquer or paper. May operate silk-screen printing equipment. May cut stencils for use in making computer circuit plug boards and be designated as SILK SCREEN LAY OUT DRAUGHTSMAN.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1200

Silk Screen Printer

Silk Screen Printer prints on paper, metal textile and other materials by means of silk-screen process. Mounts stencil of matter to be printed on silk screen. Stretches and fits silk screen on printing frame. Bolts printing frame to hinged outer frame on printing table. Places paper or other material to be printed accurately in position and lowers screen on to it. Draws squeegee dipped in paint across screen to transfer design to object. Lifts screen, removes printed material and repeats process to obtain required number of prints. Cleans screen with solvent at end of run or when colour of print is to be changed. May use different screens for each colour to be reproduced.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1300

Printing Jobber

Printing Jobber; Printing Machine Man; Printer (Textile) prints patterns of various designs and colours of cloth by operating printing machine. Checks condition of belts, gears, doctor blade, lapping of drum or cylinder etc. Sets engraved rollers. Runs test piece of cloth through machine and compares it with sample. Makes necessary adjustments to rollers and doctor blade. Regulates pressure and speed. Grinds and sharpens doctor blade when necessary. Supervises work of Frontman and Printing Machine Operatives. Ensures proper colour mixing, colour matching, quality of printing production and upkeep of machine, etc.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1400**Colour Maker (Textile Product)**

Colour Maker (Textile Product) operates machines to mix or grind daub, printing ink colour, and colour pigments, for artificial leather: Calculates batch size according to roll yardage to be coated. Weighs and measures, according to formula, components, such as ball mill mix, colour pigments, and oils to attain colours and specified consistency. Moves components to agitator or ball mill mixers and roll grinders for processing, using hand truck. Dumps ingredients into and starts machines that grind and mix them. Collects colour sample and compares it with colour standard. Adds ingredients, such as white, clear, or coloured pigments, or thinner to correct colour discrepancies. Prepares new colour batches when drum content in inventory storage is low. Lifts and moves drums, using portable air-operated hydraulic hoist.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1500**Precision Printing Worker**

Precision Printing Worker performs variety of precision printing activities, such as duplication of microfilm and reproduction of graphic arts materials. Operates automatic processor to develop photographs, plates, or base material used in single or multicolour proofs. Sets up and operates bindery equipment to cut, assemble, staple, or bind materials. Maintains printing machinery and

equipment. Examines and inspects printed material for clarity of print and specified colour. Mixes powdered ink pigments, using matching book and measuring and mixing tools. Reviews layout and customer order to determine size and style of type. Measures density levels of colours or colour guides on proofs, using densitometer, and compares readings to set standards. Prints paper or film copies of completed material from computer. Scans artwork, using optical scanner, which changes image into computer-readable form. Enters, positions, and alters size of text, using computer, to prepare and arrange pages to produce printed materials.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1600**Frontman**

Frontman; Assistant Printer; Assistant Printing Machine man (Textile) assists printer in printing patterns of various designs and colours of cloth. Checks operational efficiency of printing machine, adjusting various parts if necessary, and reports defects to Printer. Prepares colours to correct consistency by mixing ingredients in suitable vessel, and test checks shade of colour; fills front colour tray with prepared colour paste; fits and locks printing roller, engraved with design/pattern in position on machine; supervises rolling of cloth into machine ensuring smooth run through various rollers. Starts and stops machine as directed by Printer. Watches printed cloth coming out from engraved rollers for defects in print or shade. May carry out routine repairs on printing machine.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1700**Pressman (Flat-Bed, Letter Press)**

Pressman (Flat-Bed Letter Press); Pressman; Hand Fed sets and operates Flat-bed letter press (printing machine in which separate sheets of paper are pressed by means of cylinder or plate (platen) on inked rollers and oils machine; fills ink fountain and regulates flow of ink on inking rollers; locks type in position on bed of press by means of wedges; places wooden block over type and taps it with mallet to level printing surface; packs surface of cylinder, or platen with tissue paper; starts press and pulls proof sheets; examines proof sheets to ensure legibility and uniformity of printing, adjusts press controls, inking fountains, and automatic feeders, and repacks cylinder or plate with overlay to equalize off-level areas as required; pulls out several proof sheets and makes necessary adjustments until evenly printed proof is obtained; sets and adjusts paper guides and feeding mechanism; starts press and ensures that printing proceeds correctly; stops press when printing is completed. May mix inks to match colours, feed paper sheets into machine by hand, or direct helpers to do so, prepare pages of type. May also do minor repairs. Is designated as TREADLE MAN OR PLATEN MACHINE PRESSMAN if works on Hand-fed or automatic platen machine, and CYLINDER PRINTING MACHINE MAN if works on Hand-fed or automatic cylinder printing machine.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1800**Machine Man , Hand Printing**

Machine Man, Hand Printing operates cylinder or platen hand press for printing. Fixes imposed type on bed of printing machine and levels them. Checks up supply of ink in duct, adjusts roller parts, changes packing (paper lining) and runs machine for printing. Ensures uniformity of inking and impression.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.1900**Machine Man, Automatic Printing**

Machine Man, Automatic Printing operates cylinder or platen automatic printing machine. Fixes imposed type on bed of machine. Adjusts roller, flow of ink, automatic feeder and speed of machine, changes packing of platen, places paper on automatic feeding board and runs machine for printing. Ensures uniformity of inking and impression. May clean and oil machine.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.2000**Machine Man, Rotary Printing**

Machine Man, Rotary Printing; Machine Minder, Rotary Printing; Rotary Operator, Printing sets and operates rotary printing machine that prints on continuous roll of paper by means of stereotype plates locked in a revolving cylinder. Cleans inking rollers and oils machine; fills ink fountains and regulates flow of ink on inking rollers; locks printing plates in

position on cylinders. Supervises loading of paper rolls on machine; threads paper through machine guides and rollers; adjusts rollers and paper folding and cutting mechanism; makes trial run; checks legibility and uniformity of printing, regulates speed and makes further adjustments as necessary, restarts press and runs it to full speed; checks printed copies at regular intervals and ensures that printing, folding and cutting proceed correctly; re-threads paper if web breaks; stops press when required number of copies have been printed, and removes plates. Keeps record of production. May file and grind cutting blades. May load supply rolls of paper in press at beginning and during run. May do minor repairs.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.2100

Machine Man, Offset Printing

Machine Man , Offset Printing; Offset Printer operates offset printing press in which impression from plate is first received on rubber blanket and then transferred to paper. Washes plate with chemical solutions to render non-image portions ink-repellent and to ensure clear impression. Clamps plates firmly on cylinder, places paper roll on automatic feeding stand and fills ink in fountain in machine. Runs machine for printing. Regulates speed of machine and ensures uniformity of inking and impression. Supervises work of Inkers. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.2200

Machine Man, Direct Lithographic Printing

Machine Man, Direct Lithographic Printing; Litho Printer operates direct litho press in which impression is transferred directly from plate or stone to paper. Washes plate with water and positions it on bed of machine. Places paper for printing on feeding board. Adjusts rollers and dampers. Runs machine for printing. Ensures uniformity of inking and impression.

7322.2300

Pressman, Roto Gravure

Pressman, Roto Gravure sets and operates rotary-type press to print illustrative and other subject matter on continuous roll of paper from photo-engraved plates or cylinders upon which printing matter is etched below surface. Cleans inking rollers and oils machine. Installs engraved copper printing cylinder in press, using hand tools. Fills ink fountains and regulates flow of ink. Threads paper through machine guides and rollers and adjusts rollers and paper folding and cutting mechanism. Sets focus of electronic scanners on guide line of paper (for multi-colour printing) to automatically control colour registration. Sets and adjusts scraper blade to remove excess of ink from surface of plate or cylinder. Makes trial run, checks legibility and uniformity of printing on paper and further adjustments, if necessary. Restarts machine, raises it to full speed. Inspects printed copies at regular intervals and adjusts press as required to produce printed matter to specifications. Directs workers in feeding and unloading press, replenishing ink supply in fountains, cleaning equipment and other press operations. Stops press when required

number of copies have been printed and removes plates or cylinders from machine. Maintains prescribed records of production. May file and grind scraping and cutting blades.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

7322.9900

Printers, Others

Printing Press Operatives perform variety of routine and low skilled tasks such as applying ink on type set in hand press, cleaning and oiling printing machines, feeding paper, mounting paper reels and clamping printing plates on rotary machines etc., and be known as: Inkman If fills ink trough on printing machine with liquid ink and applies ink manually with roller on type set in hand press. Machine Attendant If mounts paper reels in position and passes paper through rollers to proper position for printing, clamps printing plates on rotary machines. Feeder Man If feeds paper, piled up on feeding platform, into machine for printing and checks flow of paper sheets into machine and regulates speed of feeding. Deliveryman If takes delivery of printed sheets of paper on printing machine; checks quality of printing and shows periodically samples of printing to Machine Man for necessary adjustment of machine to ensure quality of impression.

ISCO 08 Unit Group Details:

Code	7322
Title	Printers

Family 7323

Print Finishing and Binding Workers

Print finishing and binding workers bind books and other publications, and finish printed products by hand or machine.

7323.0100

Book Binder

Book Binder assembles printed or written pages in the form of books, magazines, ledgers, etc. Performs all or any of operations connected with book binding such as reeling, perforating, cutting, stitching, fixing covers, fixing leather or calico back and corners, embossing letters on covers, gold finishing, etc.

ISCO 08 Unit Group Details:

Code	7323
Title	Print Finishing and Binding Workers

7323.0200

Map and Chart Mounter

Map-and-Chart Mounter glues muslin backing or back board to paper maps and charts for reinforcement. Spreads muslin on table and cuts it to specified dimensions, using scissors; applies glue to back of maps and charts with brush or by inserting them between rollers of gluing machine; places glued side of sheet on muslin strip or pre-cut back board and smoothens surface with stiff brush and flat piece of bone; glues paper mounting strip to top edge and oil cloth, reinforcing strip to bottom edge of roll type maps and charts and hangs them on drying rack; applies gelatine sizing and varnishing material on surface of map for preservation and good finish; folds or gathers maps to suitable sizes for easy and convenient handling. May fix wooden rollers for roll type maps and charts. May do segment map mounting.

ISCO 08 Unit Group Details:

Code 7323

Title Print Finishing and Binding
Workers**7323.0300****Book Mender**

Book Mender; Book Repairer mends and repairs damaged and worn books, manuscripts, and other records to put them in condition for re-use or resale. Examines damaged books, manuscripts and records and assesses extent of damage; numbers pages and erases disfigurements; cuts covers loose from body and body stitches with knife; cuts or tears carefully damaged pages or linings; repairs damaged pages with transparent tapes; resews body firmly; pastes linings in place, reinforcing as necessary with cloth or paper; trims edges of pages with knife or mechanical cutter; replaces repaired cover or new ones to body; clamps book in press for specified time to bond. May imprint or emboss lettering on cover.

ISCO 08 Unit Group Details:

Code 7323

Title Print Finishing and Binding
Workers**7323.0400****Book Binding Worker**

Book Binding Workers bind book and perform operations such as those who set and operate machines to fold printed sheets, gather and sew book signatures, make covers and glue them on book edges with plain, mixed colours or gold leaf, etc.

ISCO 08 Unit Group Details:

Code 7323

Title Print Finishing and Binding
Workers**7323.0500****Book Binding Operatives**

Book Binding Operatives perform variety of routine and low-skilled tasks connected with book binding, such as, cutting paper to specified size, ruling blank sheets, applying gum, etc.

ISCO 08 Unit Group Details:

Code 7323

Title Print Finishing and Binding
Workers**7323.9900****Book Binders and Related Workers,
Other**

Bookbinders and Related Workers, Other include workers who bind covers to books and perform book-finishing operations not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7323

Title Print Finishing and Binding
Workers**Sub Division 74****Electrical and Electronics Trades
Workers**

Electrical and electronics trades workers install, fit and maintain electrical wiring systems and machinery and other electrical apparatus, electrical transmission and supply lines and cables, and electronic and telecommunications equipment and systems.

The work is carried out by hand and by hand-powered and other tools which are

used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of the work organization, the materials and tools used, and the nature and purpose of the final product.

Tasks performed usually include: installing, maintaining, fitting and adjusting electrical and electronic wiring systems, machinery and equipment; examining blueprints, wiring diagrams and specifications to determine sequences and methods of operation; inspecting and testing electrical and electronic systems, equipment, cables and machinery to identify hazards, defects, and the need for adjustment or repair; installing maintaining and repairing electrical and telecommunications transmission lines; joining electrical, telecommunications and data cables; maintaining, troubleshooting, fitting, adjusting, testing and repairing electronic equipment such as commercial and office machines and electronic instruments and control systems, computers, telecommunications and data transmission equipment.

Occupations in this Sub Division are classified into the following Groups:

741	Electrical Equipment Installers and Repairers
742	Electronics and telecommunication Installers and Repairers

Group 741 **Electrical Equipment Installers and Repairers**

Electrical equipment installers and repairers install, fit and maintain electrical wiring systems and related equipment, electrical machinery and other electrical

apparatus and electrical transmission and supply lines and cables.

Occupations in this Group are classified into the following Families:

7411	Building and Related Electricians
7412	Electrical Mechanics and Fitters
7413	Electrical Line Installers and Repairers
7419	Electrical and Electronic Equipment Mechanics and Fitters and Related Workers, Not Elsewhere Classified

Family 7411 **Building and Related Electricians**

Building and related electricians install, maintain and repair electrical wiring systems and related equipment and fixtures.

7411.0100 **Electrician, General**

Electrician, General installs, maintains and repairs electrical machinery equipment and fittings in factories, workshops power house, business and residential premises etc., Studies drawings and other specifications to determine electrical circuit, installation details, etc. Positions and installs electrical motors, transformers, switchgears. Switchboards, Microphones, loud-speakers and other electrical equipment, fittings and lighting fixtures. Makes connections and solders terminals. Tests electrical installations and equipment and locates faults using megger, test lamps etc. Repairs or replaces defective wiring, burnt out fuses and defective parts and keeps fittings and fixtures in working order. May do armature winding, draw wires and cables and do simple cable jointing. May

operate, attend and maintain electrical motors, pumps etc.

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.0101

Access Controls Installation Technician

Access Controls Installation Technician, is also called 'Access Control Device Installer'. The Access Control Installation Technician provides after sale support services for access control devices and systems such as point of sale scanners, finger print or iris scan. The individual at work is responsible for installing the access control system at the customer's premises. The individual undertakes site assessment, installs the hardware and integrates the system to meet customer's requirement.

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.0102

CCTV Installation Technician

Access Controls Installation Technician: Also called 'Access Control Device Installer', the Access Control Installation Technician provides after sale support services for access control devices and systems such as point of sale scanners, finger print or iris scan. The individual at work is responsible for installing the access control system at the customer's premises. The individual undertakes site assessment, installs the hardware and integrates the system to meet customer's requirement.

Qualification Pack Details:

QP NOS Reference ELE/Q4605

QP NOS Name CCTV

Installation Technician

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.0200

Electrician (Mines)

Electrician (Mines) studies the details of the mines and relevant drawing, etc. to determine the electrical circuits, installation details, etc. Installs in mines, lights and switches, motors, transformers, switchgears, switch board fittings and lighting fixtures whether flame proof or not within the mine or relating to the mines. Maintains and repairs the electrical machinery equipment, cap lamps, other fittings in mines, etc. Tests the electrical installations and equipment as prescribed under the mines regulations and Indian Electricity Rules. Locates the faults using megger, test lamp, etc. Repairs defective wiring, burnt out fuses and defective parts and keeps fittings and fixtures in working order. Operates or maintains electrical motors, pumps, etc. including those which are in flame proof fitting, intrinsically safe apparatus, etc. Conversant with general rules of maintenance of the electrical equipment and wiring as per the mines regulations and Indian Electricity Rules. Knows how to test for methane gas and able to switch off electricity from the concerned part of the mine where percentage of methane gas is more than 1.25%. Observes all safety precautions on the switching side avoiding sparking. Knows conversion of AC and DC; conversant with the electrical hazards within the mines. He is also responsible

for thorough examination of all apparatus (including the testing of conductors and metallic coverings for continuity) as often as may be necessary to prevent danger, examination and testing of all apparatus erected or re-erected in the Mine before it is put into service in a new position. He is personally responsible for the maintenance at the mine of a log-book made up of daily log sheets prepared in the prescribed form.

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.0301

Wireman, Light and Power

Wireman, Light and Power installs various kinds of electrical wiring such as cleat, conduit, casing, concealed etc. in houses, factories, workshops and other establishments for light and power supply. Studies diagram and plan of wiring and marks light, power and other points accordingly. Fixes wooden pegs, sizes tubes, saws casings, etc. by common carpentry fitting and other processes, according to type of wiring needed. Erects switch boards and fixes switch box casings cleats, conduits ceiling roses, switches, meters etc. according to type and plan of wiring. Draws wire in two way or three-way wiring system as prescribed and makes electrical connections through plugs and switches to different points exercising great care for safety and avoiding short circuit and earthing at any stage of wiring. Fixes fuses and covers as per diagram and insulates all naked wires at diversions and junctions to eliminate chances of short circuit and earthing. Fits light brackets, holders, shades, tube and mercury lights, fans etc. and makes electrical connection as necessary. Tests

checks installed wiring for leakage and continuity using megger, removes faults if any and certifies wiring as correct for connecting mains. Checks existing wiring for defects and restores current supply by replacing defective switches, plug sockets, blown fuse etc. or removing short circuits and faulty wiring as necessary. May repair simple electrical domestic appliances.

Qualification Pack Details:

QP NOS Reference ELE/Q7302

QP NOS Name Wireman-Control
Panel

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.0500

Meter Sealer, Electrical

Meter Sealer, Electrical seals electrical meters, main switch boards and consumers cut outs using special sealing plier, wire and lead to prevent tampering and pilferage of current. Visits consumers premises, industrial places etc., connected with electric supply. Checks current supply equipment such as meters, fuse boxes, cut outs etc. for proper fixing. Seals meters main switch cover and cut outs where necessary using wire lead and sealing plier, to ensure that no one can open or tamper with without breaking their respective seals. Makes periodical visits to premises to check whether meter seals and switches are intact and are not tampered with for illegal use of electric current. Reports to superiors of illegal tapping from supply lines. May attend calls to replace fuses.

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.0600

Electrician, Stage and Studio

Electrician, Stage and Studio controls lighting equipment, such as flood lamps, strip lights, and spotlights from projection room and front or backstage areas of theatre to cast spotlight on stage performers. Places spotlights in specified locations in theatre and connects wiring for lighting. Moves spotlight to follow movements of performers with beam of light, according to instructions on prepared cue sheet. Turns colour wheel, causing light to be diffused through varicoloured gelatine disks to change colour of light. Cleans and adjusts light, replacing carbons or bulbs as needed. May insert varicoloured gelatine sheets in frame to assemble colour wheel.

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

7411.9900

Building and Related Electricians, Other

Building and Related Electricians, other include all other electricians engaged in installation, maintenance and repairing of electrical wiring systems and related equipment not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7411

Title Building and Related Electricians

Family 7412 Electrical Mechanics and Fitters

Electrical mechanics and fitters fit, adjust, install and repair electrical machinery and other electrical apparatus and equipment in buildings, factories, workshops, or other places.

7412.0100

Mechanic, Precision Instrument, Electrical

Mechanic Precision Instrument Electrical; Meter Repairer, Electrical repairs and sets electrical parts of precision instruments such as megger, voltmeter, ammeter, condensers, galvanometers, etc., to high accuracy for recording correct readings by reviving, replacements and necessary adjustments. Studies drawings, circuit diagrams and other specifications and examines instrument visually to locate any apparent loose connection, short circuits etc. Dismantles instrument using insulated screw drivers, pliers, special spanners etc., and checks components, insulation wiring, fittings and other features with precision mechanical and electrical measuring instruments to locate wear and tear, short circuits and other defects. Cleans necessary or any fluid used in instrument and their various parts using special brushes. Checks gear shell, bearing jewels and other operating parts and repairs or replaces worn out and damaged ones. Assembles parts, replaces insulation and makes electrical wiring and connections according to diagram and prescribed specification. Examines assembled or repaired instrument by standard tests, makes necessary adjustments and ensures correct reading and desired performance within prescribed limits. Seals cut-outs, meters etc. to avoid manipulation. May wind coils, set new resistance and perform other electrical functions, if required.

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0101**Automation Specialist**

Individuals at this job are responsible for providing support to production operations through maintenance of process control systems installed at shop floor for various manufacturing processes.

Qualification Pack Details:

QP NOS Reference ASC/Q6807

QP NOS Name Automation Specialist

NSQF Level 5

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0102**In-circuit Testing Machine Operator**

In-Circuit Testing (ICT) Machine Operator conducts tests on assembled printed circuit boards (PCB) to identify manufacturing defects. The individual at work is responsible for testing the PCB assembly by using the ICT machine to check for short circuits, open circuits, missing components, incorrect components and incorrect placing of components – that is parts with limited or known variations.

Qualification Pack Details:

QP NOS Reference ELE/Q6602

QP NOS Name In-circuit Testing Machine Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0103**Automated Optical Inspection Operator**

Assembly Operator assembles all parts and modules of a patient monitoring device (PMD) or X-Ray machine to complete the product. The individual at work fits together different electronics and electro-mechanical parts and modules and connects them to manufacture the PMD or X-Ray machine as per product design.

Qualification Pack Details:

QP NOS Reference ELE/Q6601

QP NOS Name Automated Optical Inspection Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0104**Bare Board Testing Operator**

Bare Board Testing Operator conducts electrical test on printed circuit board (PCB), post manufacturing. The individual at work operates a scanner to verify each circuit connection of the manufactured PCB in order to check for any 'shorts' or 'open' on the single or multilayer boards ensuring that the bare board performs as per original circuit design.

Qualification Pack Details:

QP NOS Reference ELE/Q2401

QP NOS Name Bare Board Testing Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0200**Electrical Fitter**

Electrical Fitter fits and assembles electrical machinery and equipment such as motors, transformers, generators, switchgears, fans etc., Studies drawings and wiring diagrams of fittings, wiring and assemblies to be made. Collects prefabricated electrical and mechanical components according to drawing and wiring diagrams and checks them with gauges, megger etc. to ensure proper function and accuracy. Fits mechanical components, resistance, insulators, etc., as per specifications, doing supplementary tooling where necessary. Follows wiring diagrams, makes electrical connections and solders points as specified. Checks for continuity, resistance, circuit shorting, leakage, earthing, etc. at each stage of assembly using megger, ammeter, voltmeter and other appliances and ensures stipulated performance of both mechanical and electrical components filled in assembly. Erects various equipment such as bus bars, panel boards, electrical posts, fuse boxes switch gears, meters, relays etc. using non-conductors, insulation hoisting equipment as necessary for receipt and distribution of electrical current to feeder lines. Installs motors, generators, transformer etc. as per drawings using lifting and hoisting equipment as necessary, does prescribed electrical wiring, and connects to supply line. Locates faults in case of breakdown and replaces blown out fuse, burnt coils, switches, conductors etc. as required. Checks, dismantles, repairs and overhauls electrical units periodically or as required according to scheduled procedure. May

test coils. May specialize in repairs of particular equipment manufacturing, installation or power house work and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0201**Fitter-Electrical and Electronic Assembly**

Fitter-Electrical and Electronic Assembly assembles the electrical panels, equipment/systems and electronic products, inclusive of components, sub-assemblies, or completed equipment/systems. Along with soldering techniques and anti-static protection techniques assemble with the mechanical equipment.

Qualification Pack Details:

QP NOS Reference CSC/Q0402

QP NOS Name Fitter-Electrical and
Electronic Assembly

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0202**Mechanical Fitter**

Mechanical Fitter follows assembly drawings in order to install various devices such as meters, switches, LEDs at defined slots in the panel. The individual at work is responsible for fitting the control devices of the panel at defined slots, once the outer casing of the panel has been assembled.

Qualification Pack Details:

QP NOS Reference ELE/Q6302
 QP NOS Name Mechanical Fitter
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.0203**Iron and Steel Fitter: Electrical Assembly**

Iron and Steel: Fitter Electrician Assembly identifies the operations required to assemble various components of the machine by studying their engineering drawings, fitting different components of the machine and testing the assembled machine.

Qualification Pack Details:

QP NOS Reference ISC/Q0901
 QP NOS Name Iron & Steel: Fitter
 Electrician Assembly
 NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.0300**Adjuster, Relays**

Adjuster, Relays tests and adjusts relays (electrical equipment) used for controlling flow of electric current. Sets relay on testing table, checks flow of current, insulation and condition of various components and repairs or replaces defective parts. Cleans, aligns and measures gap between contact points and sets clearance to specified standard by tightening or loosening adjustment screws, nuts and bolts, sets tension of

relay springs, and connects new or adjusted relay to test board. Switches on, records flow of current by meter reading and adjusts spring tension and gap between relay contacts to flow. Maintains record and cleans relay periodically. May wind primary and secondary coils.

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.0400**Armature Winder**

Armature Winder winds and repairs armatures, field coils, etc. of motors and dynamos. Dismantles motor and removes armature to examine and test for continuity. Cleans segments, of commutator with abrasive cloth or sand paper and cleans carbon brushes for even and smooth movement. Examines burnt out armature and checks type of winding to determine gauge (thickness) and number of turns of wire required. Cuts out all wiring from slots and cleans slots with blunt knife and sand paper. Mounts cleaned core horizontally on frame for easy rotation by hand and covers bottom of each slot with insulating paper. Selects correct gauge of wire for winding and fastens one end of it to core of armature. Determines type of winding to be done either by calculation or from examined sample and winds each set of slot with wire by rotating armature on frame to pass wire from slot to slot to form coil. Stops winding after required number of turns and length of wire have been wound to form coil. Covers all exposed wire with insulating tape and solders free ends of wire according to calculation and type of winding with respective segments of commutator using hand soldering iron. Pushes prepared wire coils in position in

insulated slots in heavy duty or high power armatures and assists Fitter, Electrical in soldering terminals to respective commutator segments in proper positions. Tests rewound armatures for efficiency and continuity, before further processing by Operator, Impregnation Plant. Replaces armature and coil in shell and assembles motor. Tests performance of motor under normal working conditions and makes necessary replacements of parts like carbon brushes, insulating, etc. May wind coils on machines. May impregnate armature and coils with varnish in impregnation plant to insulate them.

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0500

Coil Winder, Machine

Coil Winder, Machine; Coil Winding Machine Operator operates coil winding machine to make coils of required shape and size used in electric motors, dynamos, transformer, radios and other electrical equipment. Fits metals or wooden core of required shape and size on revolving mechanism of machine. Places roll of wire of required gauge at correct height on machine stand. Draws free end of wire over core through guides in machine and sticks it at its edge. Adjusts meter fitted to machine to record specified number of turns of core. Starts machine and watches meter to wind required number of turns of wire over core. Cuts wire, bends its free end slightly to keep coil in position and removes coil from machine. Wraps insulation cloth and tape over coil. Maintains account of output and wire used. May wind coils manually and test

for continuity. May clean and oil coil winding machine.

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0600

Electrician, Aircraft

Electrician, Aircraft installs and services electrical wiring and equipment in aircraft. Tests electrical installation and equipment, supply of current, and continuity of electrical circuit in aircraft, using megger, voltmeter, avometer etc. and locates faults. Repairs or replaces defective wiring, connector plunge, blown fuses, defective parts and electrical fittings and fixtures and maintains them in working order. Adjusts voltage regulators, actuators etc. as scheduled. Ensures that all connections to various lighting system such as landing light, anti-collision lights, wink tip lights etc. are intact covered and insulated. Ensures that storage battery in aircraft is kept fully charged and that acid level is above batter plates. Checks voltage, polarity, phase rotation etc. and supplies electric power from ground power trolley (ground generator) to start aircraft engine before taking off. Tests defective motors, generators etc. using testing equipment and gets burnt coils or armature re-wound by Armature Winder. May do armature winding. May repair batteries.

ISCO 08 Unit Group Details:

Code 7412

Title Electrical Mechanics and Fitters

7412.0701

Electrician, Automobile

Electrician, Automobile installs, repairs replaces and overhauls wiring, starters, generators, distributors and other electrical equipment of motor vehicles. Examines vehicle battery, checks voltage and specific gravity using special equipment such as voltmeter hydrometer, heavy discharge tester, etc. and ensures that battery is in good condition. Checks vehicle wiring, locates faults and rectifies defects by replacing damaged wire or connecting ends with insulation tape. Starts engine to check whether alternator is charging correctly, and if distributor, condenser coil and cut out are functioning properly. Estimates nature of defects and reports components to be replaced or repaired. Dismantles and repairs electrical units and components such as generator, distributor etc. where required. Replaces repaired kit or unit in vehicle and connects it with battery. Conducts thorough examination of various electrical fittings such as lights, panel indicators, fuel pumps, etc. and rectifies defects. Checks condition and makes necessary adjustments. May do armature winding. May drive vehicles on road. May charge batteries.

Qualification Pack Details:

QP NOS Reference ASC/Q1408
 QP NOS Name Automotive Electrician
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.0801

Maintenance Assistant/Helper

Maintenance Assistant/Helper is responsible for providing assistance to the maintenance personnel in repairing of the

breakdown equipment by fetching the tools, spares and providing material handling support.

Qualification Pack Details:

QP NOS Reference ASC/Q6806
 QP NOS Name Maintenance Assistant/Helper
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.0901

Potting and Curing Operator

The Potting and Curing Operator fills the auto electronic assembly with epoxy compound for resistance from vibration and protection from environment. The individual at work is responsible for preparing potting compound, filling the auto electronic assembly with potting and curing them in oven for setting.

Qualification Pack Details:

QP NOS Reference ELE/Q6603
 QP NOS Name Potting and Curing Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.1001

Mechanical Fitter-Control Panel

Mechanical fitter – Control Panel: The Mechanical Fitter follows assembly drawings in order to install various devices such as meters, switches, LEDs at defined slots in the panel. The individual at work is

responsible for fitting the control devices of the panel at defined slots, once the outer casing of the panel has been assembled.

Qualification Pack Details:

QP NOS Reference ELE/Q7303
 QP NOS Name Mechanical Fitter-
 Control Panel
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.1002

Site Engineer-Control Panel

The Site Engineer provides after sales support and is responsible for installing and commissioning the control panel at customer's site. The individual at work is responsible for installing the control panel at customer site and ensure its operation on being powered up.

Qualification Pack Details:

QP NOS Reference ELE/Q7501
 QP NOS Name Site Engineer-
 Control Panel
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7412.9900

Electrical Mechanics and Fitters, Other

Electrical Mechanics and Fitters, other include all other workers engaged in fitting, assembling, repairing and maintaining electrical equipment, machinery, appliances, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

Family 7413 Electrical Line Installers and Repairers

Electrical Line Installers and Repairers install, repair and join electrical transmission and supply cables and related equipment.

7413.0100

Lineman, Light and Power

Lineman, Light and Power erects and maintains overhead electric power lines to conduct electricity from power plant to place of use. Erects poles and small towers at specified distances with assistance of other workers. Climbs poles and towers and fixes insulators, lightning arresters, cross-brass etc. and other auxiliary equipment at proper heights. Strings and draws cables (wires) through insulators fixed on cross bars, exercising great care to leave proper sag in wires to avoid breakage under changing atmospheric conditions. Joins cable by various methods, fixes joint-boxes at specified places, replaces fuses and faulty components as necessary and tests for electrical continuity. Checks overhead lines in allotted section as necessary and maintains them in order for carrying electricity by effecting repairs of defective lines, poles, towers and auxiliary equipment as directed. May install and repair overhead power lines for electric trains, trams or trolley buses. May work on high tension or low tension power lines.

ISCO 08 Unit Group Details:

Code 7413
 Title Electrical Line Installers and
 Repairers

7413.9900 **Electrical Line Installers, Repairers and Cable Jointers, Other**

Electrical Line Installers, Repairers and Cable Jointers perform number of routine and low skilled tasks in erecting and maintaining overhead lines, joining cables, etc., and are designated as Lineman's Mate; Cable Joints Helper; etc., according to work performed.

ISCO 08 Unit Group Details:

Code 7413
 Title Electrical Line Installers and
 Repairers

Family 7419 **Electrical and Electronic Equipment Mechanics and Fitters and Related Workers, Not Elsewhere Classified**

This Family covers workers not elsewhere classified in the Group 724, Electrical and electronic equipment mechanics and fitters. For instance, occupations involving inspection of television receivers during final assembly, checking of telephone and telegraph equipment, doing armature and coil winding, repairing and charging battery, replacing blown out fuses etc.

7419.0100 **Senior Functioner (Telephone Equipment Manufacturing)**

Senior Functioner (Telephone Equipment Manufacturing) checks, locates faults and sets various kinds of complex telephone

equipment. Studies blue prints and wiring diagrams of equipment to be checked and examines connections, circuits and links of group selector, final selector and un-selector racks. Connects equipment to testing instrument and tests it to detect faults, if any. Records defects and faults to be rectified, gets them removed and retest it after rectification to ensure conformity with prescribed specifications and operational efficiency. May design test sets to examine complex circuits and equipment.

ISCO 08 Unit Group Details:

Code 0
 Title Electrical Mechanics and Fitters;
 Electronics Mechanics and
 Servicers

7419.0200 **Junior Functioner (Telephone Equipment Manufacturing)**

Junior Functioner (Telephone Equipment Manufacturing) performs operational tests of repetitive nature on assembled telephonic apparatus, gets defects removed and ensures operational efficiency. Mounts apparatus such as automatic switching apparatus, step by step telephone switches, relay sets, group selector, final selector, un selector, racks, etc. on standard test unit. Operates testing apparatus and observes readings. Notes faults and defections detected by readings observed for repairs particularly with reference to circuit diagrams and functioning instruction sheet of each apparatus. Tests apparatus again after rectification of faults, and certifies tests checked apparatus for operational efficiency. May conduct minor repairs of standard test unit.

ISCO 08 Unit Group Details:

Code 0
 Title Electrical Mechanics and Fitters;
 Electronics Mechanics and
 Servicers

7419.0300

Wiring Inspector and Bank Tester (Telephone Equipment Manufacturing)

Wiring Inspector and Bank Tester (Telephone Equipment Manufacturing) tests operational efficiency of switch wiring, bank multiple wiring, rack wiring and cables, and gets defects removed. Checks wiring for colours and gauges to ensure conformity with prescribed specifications. Tests wiring for continuity and leakage using buzzer and megger (testing instruments). Records defects in charts for rectification. Tests and approves wiring for conformity with prescribed specifications after removal of wiring defects and other faults.

ISCO 08 Unit Group Details:

Code 0
 Title Electrical Mechanics and Fitters;
 Electronics Mechanics and
 Servicers

7419.0400

Inspector, Assembly (Telephone Equipment Manufacturing)

Inspector, Assembly (Telephone Equipment Manufacturing) inspects assemblies and sub-assemblies of switches, phones and other telephone and telegraph equipment and gets defects removed. Checks wiring and different components of apparatus for conformity with specifications, using simple tests, sets and gauges. Checks assembly with charts, blue prints and other prescribed

standardized procedures and records defects and faults of assembly on quality control charts. Tests apparatus after rectification and certifies assembly to be in conformity with requirements.

ISCO 08 Unit Group Details:

Code 0
 Title Electrical Mechanics and Fitters;
 Electronics Mechanics and
 Servicers

7419.0500

Battery Servicing Man

Battery Servicing Man; Battery Charger charges storage batteries used in motor vehicles, aircraft and other electrical equipment. Places batteries on table, unscrews caps of cell and checks specific gravity of electrolyte (acid solution) in cell with hydrometer. Pours required amount of distilled water or dilute acid into cell as necessary to submerge cell plates with electrolyte solution and adjust its strength. Connects battery with charging set as prescribed and switches on flow of current. Observes flow of electricity and rate of charging from ammeter readings, regulates it as necessary by control switch and keeps battery on charge for specified period. Switches off charging set and checks specific gravity of electrolyte and voltage acquired by battery, using hydrometer and voltmeter respectively. Fixes cell caps of battery securely to avoid splashing of electrolyte solution. May repair batteries and maintain account of batteries charged. May charge number of batteries simultaneously by connecting their terminals in series to battery charger.

ISCO 08 Unit Group Details:

Code 7412
 Title Electrical Mechanics and Fitters

7419.0600**Operator, Impregnation Plant
(Telephone Equipment
Manufacturing)**

Operator, Impregnation Plant (Electrical Equipment Manufacturing) operates impregnation plant to dip assembled coils and armatures in tank containing molten insulating material like wax or varnish and dries dipped articles in baking plant (electric drying chamber). Feeds solid wax or varnish into heating tank of plant. Switches on electric heaters and observes thermometer readings to heat and melt insulating materials completely. Dips coils or other materials to be insulated into tank either manually or with hoisting equipment and keeps them in solution for prescribed period. Shuts lid of tank and operates vacuum pump of machine to ensure that all parts of dipped articles are completely covered with insulating materials. Removes dipped articles and hangs them to drip of excess insulation. Places articles in electrical baking plant and dries them at fixed temperature for set period of time. Cleans plant and maintains account of articles handled.

ISCO 08 Unit Group Details:

Code 0

Title Electrical Mechanics and Fitters;
Electronics Mechanics and
Servicers

7419.9900**Electrical and Electronic Equipment
Mechanics and Fitters and Related
Workers, Other**

Electrical and Electronic Equipment Mechanics and Fitters and Related Workers, Other include all other workers engaged in fitting, assembling, repairing

and maintaining electronic and electrical equipment, machinery, appliances, etc., not elsewhere classified

ISCO 08 Unit Group Details:

Code 0

Title Electrical Mechanics and Fitters;
Electronics Mechanics and
Servicers

**Group 742
Electronics and Telecommunication
Installers and Repairers**

Electronics and telecommunications installers and repairers fit, maintain, adjust and repair electronic equipment such as commercial and office machines and electronic instruments and control systems and install, repair and maintain telecommunications equipment, data transmission equipment, cables, antennae and repair, fit and maintain computers.

Occupations in this Group are classified into the following Families:

7421	Electronic Mechanics and Servicers
7422	Information and Communications Technology Installers and Servicers

**Family 7421
Electronic Mechanics and Servicers**

Electronics mechanics and servicers fit, maintain, adjust and repair electronic equipment such as commercial and office machines and electronic instruments and control systems.

**7421.0100
Electronics Fitter, General**

Electronics Fitter, General fits, assembles and repairs various kinds of electronic equipment in factory or workshop or at place of use. Examines drawings and wiring diagrams; checks parts for accuracy of fit and minor adjustments; assembles parts or mounts them on chassis or panels with aid of hand tools; installs and connects wiring, soldering joints equipment, diagnoses faults with aid of electronic testing equipment; dismantles equipment if required and replaces faulty parts or wiring.

ISCO 08 Unit Group Details:

Code 7421

Title Electronic Mechanics and Servicers

7421.0101

Iron and Steel Fitter: Electronic Assembly

Iron and Steel Fitter Electronic Assembler assembles and wires up electronic equipment and systems to mechanical equipment. It involves the assembly of electronic products, inclusive of components, subassemblies or completed equipment and systems. Along with soldering and anti-static protection technique assembly with mechanical components.

Qualification Pack Details:

QP NOS Reference ISC/Q0902

QP NOS Name Iron &
Steel_Fitter_Electro
nic Assemble

NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7421

Title Electronic Mechanics and Servicers

7421.0200

Electronics Fitters, Other

Electronics Fitter, other include all other workers engaged in fitting, assembling, repairing and maintaining electronic equipment, machinery, appliances, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7421

Title Electronic Mechanics and Servicers

7421.0300

Electronic Mechanic

Electronics Mechanic; Electronic Equipment Mechanic repairs electronic equipment, such as computers, industrial controls, radar systems, transmitters, and telemetering control systems following blueprints and manufacturer's specifications and using hand tools and test instruments. Tests faulty equipment and applies knowledge of functional operation of electronic units and systems to diagnose cause of malfunction. Tests electronic components and circuits to locate defects, using instruments, such as oscilloscopes, signal generators, ammeters and voltmeters. Replaces defective components and wiring and adjusts mechanical parts, using hand tools and soldering iron. Aligns, adjusts and calibrates testing instruments. Maintains records of repairs, calibrations and test. May install equipment in industrial or military establishments and in aircraft.

ISCO 08 Unit Group Details:

Code 7421

Title Electronic Mechanics and Servicers

7421.0401

Field Technician, Air Conditioner

Field Technician, Air Conditioner is also, called AC repair Technician, this is an after sales service job for installing and providing support to the air conditioner buyers. The individual at work installs the air conditioner and interacts with customers to diagnose the problem and assess possible causes. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q3102
QP NOS Name	Field Technician: Air Conditioner
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.0501

Field Technician, Refrigerator

Field Technician, Refrigerator is also, called 'Fridge Technician', the Refrigerator Field Technician provides installation and after sales service to the refrigerator buyers. The individual at work interacts with customers to install the refrigerator and diagnose the problem to assess possible causes of malfunction. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q3101
QP NOS Name	Field Technician: Refrigerator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.0601

Field Technician, Washing Machine

Field Technician, Washing Machine is also, called 'Washing machine Repair Technician', this job is about providing after sales service to customers. The individual at work installs the washing machine, interacts with customers to diagnose the problem and assesses possible causes of fault reported. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q3103
QP NOS Name	Field Technician: Washing Machine
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.0701

Field Technician, Other Home Appliances

Field Technician, Other Home Appliances is also called, 'Home Appliance Repair Technician', this is an after sales service job for installing and providing support to the water purifier, mixer/grinder buyers. The individual at work installs the appliance and interacts with customers to diagnose the problem and possible causes. Once the problem and causes have been identified, the individual

rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q3104
QP NOS Name	Field Technician, Other Home Appliances
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.0801

Field Technician: UPS and Inverter

Field Technician: UPS and Inverter is also called, 'UPS repair Technician', this is an after sales service job for installing and providing support to customers of different types of UPS and inverters. The individual at work installs the newly purchased UPS or inverter. The individual also and interacts with customers to diagnose problems in them, assesses possible causes, rectifies faults or replaces faulty modules or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q7201
QP NOS Name	Field Technician: UPS and Inverter
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.0901

Field Technician: Digital Camera

Field Technician: Digital Camera is also called, 'Camera Repair Technician', the Digital Camera Field Technician provides after sales service to camera buyers. The individual at work interacts with customers to diagnose the problem to assess possible causes of malfunction. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts.

Qualification Pack Details:

QP NOS Reference	ELE/Q3107
QP NOS Name	Field Technician, Digital Camera
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.1001

Field Engineer-RACW

Field Engineer-RAWC is also, called 'Service Engineer', the Field Engineer provides installation and after sales service on multiple appliances such as refrigerator, air conditioner and washing machine. The individual at work interacts with customers to install the appliance and diagnose the problem to assess possible causes of malfunction. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q3105
QP NOS Name	Field Engineer- RAWC
NSQF Level	4

ISCO 08 Unit Group Details:

Code 7421
Title Electronic Mechanics and Servicers

7421.1101**Repair Assistant: Switches**

Repair Assistant is responsible for diagnosing the faulty sub system and addressing first-level complaints and servicing of industrial-communications switches. The individual at work diagnoses and carries out repairs communication switches by dismantling, removing and replacing faulty systems or sub systems or assembly.

Qualification Pack Details:

QP NOS Reference ELE/Q8103
QP NOS Name Repair Assistant:
Switches
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7421
Title Electronic Mechanics and Servicers

7421.1201**Auto-Tester Capacitor**

Auto-Tester programs the auto testing machine for segregating defective capacitors from passed ones. The individual at work is responsible for testing the capacitor using automated testing machine for electrical, tan-delta and capacitance as per machine specifications.

Qualification Pack Details:

QP NOS Reference ELE/Q0103
QP NOS Name Auto-tester
Capacitor
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7421
Title Electronic Mechanics and Servicers

7421.1202**Testing Technician**

Testing Technician sorts, inspects and tests the resistors and capacitors to check value and conformance with specified standards. The individual at work is responsible for testing the resistor or capacitor using test and measuring equipment, jigs and visual aids in order to ensure that they are of correct value, and are painted and marked as per company's specifications.

Qualification Pack Details:

QP NOS Reference ELE/Q0111
QP NOS Name Testing Technician-
Passive components
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7421
Title Electronic Mechanics and Servicers

7421.1301**TV Repair Technician**

TV Repair Technician is also, called 'Field Technician-TV', the TV Repair Technician provides after sales service to customers. The individual at work interacts with customers to install the TV as well as diagnose the problem and assess possible causes of fault reported. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference ELE/Q3105

QP NOS Name	TV Repair Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.1302**Field Engineer TV**

Field Engineer TV is also called, 'Service Engineer – TV', the TV Field Engineer provides installation and after sales service to buyers of TV and other consumer electronic products such as home theatre system, DVD and Blu-ray players, audio systems, headphones etc. The individual at work interacts with customers to install the entertainment system and diagnose any problems to assess possible causes of malfunction. Once the problem and causes have been identified, the individual rectifies minor problems or replaces faulty modules for failed parts or recommends factory repairs for bigger faults.

Qualification Pack Details:

QP NOS Reference	ELE/Q3108
QP NOS Name	Field Engineer TV
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.1401**Solar Panel Installation Technician**

Solar Panel Installation Technician is also known as 'Panel Installer', the Solar Panel Installation Technician is responsible for installing solar panels at the customers' premises. The individual at work checks the installation site, understands the

layout requirement as per design, assesses precautionary measures to be taken, installs the solar panel as per customer's requirement and ensures effective functioning of the system post installation.

Qualification Pack Details:

QP NOS Reference	ELE/Q5901
QP NOS Name	Solar Panel Installation Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.1402**Solar Photo Voltaic System
Installation Technician**

Solar PV System Installation Engineer is responsible for designing and installing the solar photovoltaic system at the customer's premises to meeting their power requirement. The individual at work evaluates the installation site, designs the installation, plans and arranges for materials, and ensures smooth installation process. The individual also supervises the installation technicians' work.

Qualification Pack Details:

QP NOS Reference	ELE/Q5902
QP NOS Name	Solar PV System Installation Engineer
NSQF Level	5

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7421.1403**PV System Installation Engineer**

Solar PV System Maintenance Technician is responsible for maintenance and effective functioning of the installed solar panels.

The individual at work cleans the installed solar modules, checks the photovoltaic system for uninterrupted power output and identifies faults in the PV system.

Qualification Pack Details:

QP NOS Reference	ELE/Q6001
QP NOS Name	PV System Installation Engineer
NSQF Level	4

ISCO 08 Unit Group Details:

Code 7421
Title Electronic Mechanics and Servicers

7421.9900**Electronic Mechanics and Services, Other**

Electronic Mechanics and Servicers, other include all other workers engaged in installing, servicing and repairing radios and television sets and other audio equipment, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7421
Title Electronic Mechanics and Servicers

Family 7422**Information and Communications Technology Installers and Servicers**

Information and communications technology (ICT) installers and servicers install, repair and maintain

telecommunications equipment, data transmission equipment, cables, antennae and conduits and repair, fit and maintain computers.

7422.0100**Installation Mechanic**

Installation Mechanic (Telephone) installs telephone equipment in telephone exchange. Studies designs, blue prints, circuit diagrams and other specifications for installation of equipment to be done. Sets and installs switch board selector racks, relay set racks, automatic telephone system, key board, morse sets and tele printer as per plan and makes necessary electrical connections according to circuit diagram. Tests installation as prescribed to check mechanical and electrical adjustments of each component. Solders terminals of wires. Test checks operational efficiency and makes necessary adjustments. Installs batteries and battery charging equipment and fits and maintains protective devices. May install telephone sets at subscriber's premises.

ISCO 08 Unit Group Details:

Code 7422
Title Information and Communications
Technology Installers and Servicers

7422.0200**Maintenance Mechanic**

Maintenance Mechanic (Telephone) tests, analyses defects, and maintains telephone equipment using test meters and hand tools. Tests wiring and operation of electrical and mechanical components of telephone apparatus, checks operational efficiency and locates faults using voltmeter, resistance meter, watt meter,

capacity meter and other instruments as necessary. Replaces defective components, if required, and installs, repairs and adjusts equipment such as switches, relays amplifiers etc. using hand tools. Removes connections or wire distributing frames and solders wires to terminal lugs according to diagram. Conducts test checks periodically to maintain apparatus in operational efficiency. May maintain telephone-switching equipment at private establishments. May maintain and repair power apparatus and storage batteries.

ISCO 08 Unit Group Details:

Code 7422
Title Information and Communications
Technology Installers and Servicers

7422.0201

Fault Management Engineer

Fault Management Engineer is responsible for monitoring network from NOC location and maintaining network uptime by ensuring that faults are effectively resolved within shortest period of time. He is also responsible for directing and co-ordinating with the field team to carry out corrective/change activities on site in case field support is required.

Qualification Pack Details:

QP NOS Reference TEL/Q6500
QP NOS Name Fault Management
Engineer
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7422
Title Information and Communications
Technology Installers and Servicers

7422.0202

Grass Root Telecom Provider (GRTP)

Grass Root Telecom Provider (GRTP) is responsible to keep ONT site operational on 24x7 basis; maintain and repair basic faults/issues at ONT site; promote local devices and provide services.

Qualification Pack Details:

QP NOS Reference TEL/Q6202
QP NOS Name Grass Root Telecom
Provider (GRTP)
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7422
Title Information and Communications
Technology Installers and Servicers

7422.0203

Handset Repair Engineer (Level II)

Handset Repair Engineer is responsible for performing handset repair including hardware and software components and testing the handset for adequacy post repair.

Qualification Pack Details:

QP NOS Reference TEL/Q2201
QP NOS Name Handset Repair
Engineer (Level II)
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7422
Title Information and Communications
Technology Installers and Servicers

7422.0204

Infrastructure Engineer

Infrastructure Engineer is responsible for ensuring site uptime through preventive

and corrective maintenance of passive infrastructure at sites. He also coordinates infrastructure upgradation activities and ensures timely payments of rent, diesel and electricity charges after validating the vendor bills.

Qualification Pack Details:

QP NOS Reference TEL/Q6100
 QP NOS Name Infrastructure
 Engineer
 NSQF Level 5

ISCO 08 Unit Group Details:

Code 7422
 Title Information and Communications
 Technology Installers and Servicers

7422.0400

Lineman, Telephone

Lineman, Telephone and Telegraph installs, repairs and maintains telephone and telegraph lines, telephone instruments, key boards etc. in his allotted section. Erects poles manually for telephone and telegraph lines, ensuring proper spacing, alignment, stability etc., Climbs erected poles to fix insulators, lightning arrestors, etc. at proper levels and positions. Draws and signs wires on poles as directed by Sub-Inspector Telephone and Telegraph allowing required length for expansion and contraction of wires. Installs telephone equipment and key boards at subscriber's premises, checks them periodically and on breakdowns, locates faults and removes defects by repairs or replacement of faulty components and wiring. Maintains lines within allotted section free of faults. May repair and lay underground cables.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
 Technology Installers and Servicers

7422.0600

Fault Controller, Telephones

Fault Controller, Telephones; examines reports on defects of telephone lines, and arranges for their rectification. Examines reports regarding defects in telephones, telephone lines, etc. traces faults in internal system or advises Line Inspector Telephone for getting faulty lines or equipment examined and repaired by maintenance staff. Advises subscribers or customers about removal of defects and rectification of faults. Maintains record of repairs done or defects in important cases personally.

ISCO 08 Unit Group Details:

Code 7422
 Title Information and Communications
 Technology Installers and Servicers

7422.0700

Carrier Attendant (Telephone)

Carrier Attendant (Telephone) operates and maintains carrier equipment for connecting and arranging alternative lines with outside stations. Attends to and maintains telephone carrier equipment which enables multiple transmission to be made on single line. Tests trunk telephone lines.

ISCO 08 Unit Group Details:

Code 7422
 Title Information and Communications
 Technology Installers and Servicers

7422.0800

Cable Jointer

Cable Jinter joins multi-conductor telegraph or telephone cable consisting of number of various coloured wires on the surface or underground. Selects strands of wires to be joined from cable ends according to colour code and removes insulation from end of wires in cables, slips separate pieces of copper or lead sleeves with linear slits over ends of cables and brings ends of naked wires of cables in overlapping contacts according to colour code. Twists overlapping ends of naked wires to join strands and solders or brazes each strand of wire of one cable with corresponding one of other. Dries joint and wraps it with insulating material. Adjusts sleeves over joint keeping slits face to face and heats and solders sleeves together to strengthen and protect joint made. Screws soldered cable in position in cable junction box by tightening bolts and fuses upper portion of box with pitch or other compound to completely insulate cable against leakage and moisture. Tests pairs of wires for electrical continuity and insulation, using testing equipment. May be designated as CABLE JOINTER, TELEPHONE AND TELEGRAPH OR CABLE JOINTER LIGHT and POWER according to type of cables joined.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.0801

Optical Fibre Technician

Optical fibre technician is responsible for maintaining uptime and quality of the network segment (both optical media and equipment) assigned to him by undertaking periodic preventive maintenance activities and ensuring effective fault management in case of

fault occurrence. He is also required to coordinate activities for installation and commissioning of Optical Fibre Cable (OF) as per the route plan.

Qualification Pack Details:

QP NOS Reference TEL/Q6401

QP NOS Name Optical Fibre
Technician

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.0802

Optical Fibre Splicer

Optical fibre splicer is responsible for ensuring efficient splicing of the optical fibre cables and supports in optical fibre installation and in carrying out fibre testing using OTDR and power meter.

Qualification Pack Details:

QP NOS Reference TEL/Q6400

QP NOS Name Optical Fibre Splicer

NSQF Level 3

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.0900

Radar Mechanic

Radar Mechanic; Radar Craftsman installs, services and overhauls radar units. Studies diagrams and manufacturer's specification and installs radar transmitting and receiving equipment. Tests equipment for continuity, frequency, performance, etc., detects faults by application of knowledge of functional operation of electronic units and systems and removes defects by

replacing defective parts, soldering or tightening loose and broken connections, using oscilloscopes, signal generators, wave meters, pulse modulators, echolox, avometer, megger and other instruments and hand tools. Aligns, adjusts and calibrates equipment according to specifications. Operates and flight checks radar equipment on aircraft and makes necessary repairs and adjustments to ensure desired efficiency. May operate and repair other electronic and missile control systems.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1000

X-Ray Mechanic

X-Ray Mechanic installs, repairs and services high frequency X-ray, ultra-violet-ray and other radio therapy equipment in hospitals and clinics. Studies circuit diagrams and manufacturer's instructions for installation. Assembles x-ray and other physiotherapy units such as diathermy, ultra-violet-ray, infra-red units etc. and installs them in hospitals and clinics. Gives necessary power connections to x-ray and other units. Sets up and tests auxiliary units such as potter bucky table, tube columns, serial changers etc., rectifies defects if any and ensures that they are working smoothly and efficiently. Tests x-ray machines and accessory equipment, locates operating difficulties and removes them by replacing fused tubes, meters, indicators, powder cables, etc. as necessary. Repairs mechanical equipment such as bucky table, hand time switch, locking devices etc. as required. Services units periodically by filling transformer with oil, cleaning and oiling mechanical

parts of x-ray units, refilling tube heads, etc. Maintain records of types and serial numbers of units handled, prepares job sheets and obtains job completion certificates. May follow circuit diagram and trace electrical faults. May do simple drilling and tapping using hand or power drilling machines.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1001

Installation and Service Engineer

Installation and Service Engineer is also called Field Support Engineer, the Installation and Service Engineer provides after sale support services to customers at their premises. The individual at work is responsible for installing medical devices, attending to problems making them functional.

Qualification Pack Details:

QP NOS Reference ELE/Q8001

QP NOS Name Installation and
Service Engineer

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1100

Television Installation Man

Television Installation Man installs and adjusts television receivers and antennas, using hand tools. Selects antenna according to type of set and location of transmitting station. Bolts cross arms and dipole elements in position to assemble

antenna. Secures antenna in place with bracket and guy wires, observing insurance codes and local ordinances to protect installation from lightning and other hazards. Drills and waterproofs holes in building to make passage for transmission line. Connects line between receiver and antenna and fastens it in place. Tunes receiver on all channels and adjusts screws to obtain desired density, linearity, focus and size of picture. Orients antenna and installs reflector to obtain strongest possible reception. May operate radio broadcasting unit.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1200

Cable Television Installer

Cable Television Installer installs cable television cables and equipment on customer's premises, using electrician's tools and test equipment: Measures television signal strength at utility pole, using electronic test equipment. Computes impedance of wire from pole to house to determine additional resistance needed for reducing signal to desired level. Installs terminal boxes and strings lead-in wires, using electrician's tools. Connects television set to cable system and evaluates incoming signal. Adjusts and repairs cable system to ensure optimum reception. May collect installation fees and explain cable service operation to subscriber. May communicate with SUPERVISOR, using two-way radio or telephone, to receive instructions or technical advice and to report problems to be repaired. May report unauthorized use of cable system

to SUPERVISOR. May clean and maintain tools, test equipment.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1201

Set Top Box Installer/Service Technician

Set Top Box Technicians are required for installing/servicing of set top boxes for either DTH (Direct to Home) or DAS (Digital Addressable System) through Cable service providers. With the digitalization of this industry made mandatory, their role and requirement has become imperative for the industry. Set Top Box Technician is responsible for installing the set top box at client's site and also addresses the first level complaints and servicing, he also co-ordinates with the technical team for activation of new connections.

Qualification Pack Details:

QP NOS Reference	ELE/Q8101
QP NOS Name	Set Top Box Installer/Service Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code 7421

Title Electronic Mechanics and Servicers

7422.1202

DTH Set-top Box Installer and Service Technician

DTH Set-Top Box Installer and Service technician installs set-top boxes and provides after sales service for Direct to

Home (DTH) system. The individual at work installs the set-top box at customers' premises; addresses the field serviceable complaints and co-ordinates with the technical team for activation of new connections.

Qualification Pack Details:

QP NOS Reference	ELE/Q8101
QP NOS Name	DTH Set-top Box Installer and Service Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7422.1203

DAS Set-top Box Installer and Service Technician

DAS Set-Top Box Installer and Service technician installs set-top boxes and provides after sales service for Digital Addressable System (DAS) type. The individual at work installs the set-top box at customers' premises; addresses the field serviceable complaints and co-ordinates with the technical team for activation of new connections.

Qualification Pack Details:

QP NOS Reference	ELE/Q8102
QP NOS Name	DAS Set-top Box Installer and Service Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7422.1300

Television Service and Repairman

Television Service and Repairman repairs and adjusts radios and television receivers, using hand tools and electronic testing instruments. Tunes receiver on all channels and observes audio and video characteristics to locate source of trouble. Adjusts controls to obtain desired density, linearity, focus and size of picture. Examines chassis for defects. Tests voltages and resistance of circuits to isolate defect following schematic diagram and using voltmeter, oscilloscope, signal generator and other electronic testing instruments. Tests and changes tubes, solders loose connections and repairs or replaces defective parts, using hand tools and soldering iron. Repair radios and other audio equipment. May install television sets.

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.1302

Television Repair Technician

Television Repair Technician job role is applicable to both Television manufacturing facilities as well as electronics service centres. This role pertains to rectify faults identified during testing of TV on in manufacturing process and providing after sales assistance and ensuring appropriate functioning of television sets. A TV repair technician identifies the section in the TV that is not functioning. If the problem identified is in the Printed Circuit Board (PCB), the technician identifies the specific fault in the PCB and corrects it. Replaces the dysfunctional PCB with a new one, if the damage identified requires fixing at the service centre.

Qualification Pack Details:

QP NOS Reference	ELE/Q3101
QP NOS Name	Television Repair Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7421
Title	Electronic Mechanics and Servicers

7422.1400**Radio Technician (Radio Manufacturing)**

Radio Technician (Radio Manufacturing) tests assembled radio sets with testing equipment to ensure that assembly soldering, frequency, performance, etc. are in accordance with prescribed standards. Places assembled radio set in position and visually examines it to ensure that position of components, connections, soldering, wiring, etc. are in order. Switches on and operates different knobs to check calibration, audibility and general performance of set by varying its tone and listening to various stations and frequencies. Tightens loose nuts and screws, locates faults, replaces defective components and conducts necessary changes. Approves correctly assembled sets for further processing and rejects defective ones for rectification. May tests sets at different stages of assembly. May service, repair and overhaul radio sets.

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.1500**Radio Mechanic**

Radio Mechanic; Radio Repairer tests, repairs, services and maintains radio

receiving sets in accordance with diagrams and manufacturers specifications, using hand tools and electrical measuring instrument. Removes radio cabinet from chassis and examines equipment for damaged components and loose or broken connections and wires either by connecting set with current supply or otherwise. Replaces defective components and parts according to specifications such as tubes (valve), condensers, transformer resistors etc. using hand tools. Makes necessary electrical connections according to diagrams and solders or tightens loose ones. Tests equipment for output frequency, noise level, audio quality, dial calibration and other factors using oscilloscopes radio frequency and watt meters, ammeters, volt-meters, valve testers etc. Tunes and aligns radio frequency and watt meters, ammeters, in battery sets and gets them charged or replaces them if necessary. May repair transistors and television sets. May repair and service electronic equipment such as microphones, record player, tape recorders, etc.

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.1600**Radio Craftsman, Installation**

Radio Craftsman, Installation; Radio Mechanic Installation (Aircraft) installs, tests and repairs aircraft radio equipment during test flights. Studies circuit diagrams, drawings and other specifications for installation of radio equipment in aircraft. Tests and replaces defective radio instruments, components and parts such as radio compass, maker,

beacon receptor, radio tubes, transformer etc. using hand tools and electrical measuring instruments. Installs radio equipment in aircraft as specified and solders or tightens loose and broken connections. Operates and tests equipment during tests flights for output, audio quality, frequency, calibration etc. and does necessary repairs and adjustments to ensure efficient performance. Signals ground station and adjusts frequencies of radio sets by turning sets screws. May check batteries and keep them fully charged. May service battery charging set and generator. May conduct maintenance repairs of radio equipment.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1700

Radio Craftsman, Maintenance

Radio Craftsman, Maintenance, Radio Mechanic Maintenance (Aircraft) tests, repairs, services and maintains aircraft radio receiving and transmitting sets in accordance with diagrams and prescribed specifications using hand tools and electrical measuring instruments. Examines equipment for damaged components and loose or broken connection and wires. Tests and replaces defective radio components and parts such as tubes (valve), condensers, transformers, resistors, etc. using hand tools. Makes necessary electrical connections according to diagrams and solders or tightens loose ones. Tests equipment for factors such as power output, frequency power, looseness of antennas and transmission lines, noise level, audio frequency and watt meters,

ammeters, voltmeter, tube testers and other appropriate instruments, adjust receivers for sensitivity and transmitters for maximum output. Tests batteries with hydrometers, ammeter, etc., and maintains them fully charged. Performs scheduled test checks of radio equipment during test flights to ensure airworthiness of aircraft. Removes radio instruments and components for bench-checks, servicing, calibrating and over hauling of radio apparatus as and when necessary. May effect alternations and modifications to radio equipment under guidance of Radio Engineer, Telecommunication.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1801

Site Surveyor/R F Site Surveyor

R F Site Surveyor is responsible for identification offsite location, estimation of tower height and determination of antenna height and direction as per clutter.

Qualification Pack Details:

QP NOS Reference TEL/Q4103

QP NOS Name R F Site Surveyor

NSQF Level 4

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

7422.1901

Assembly Line Operator

Assembly Line Operator assembles together separate modules of the IT hardware equipment. The individual at

work is responsible for assembling the different modules in the IT hardware to complete the product. The individual receives different electronic and electromechanical modules, fits and assembles them together. The operator may assemble multiple modules and/or products by following operating procedures for different models.

Qualification Pack Details:

QP NOS Reference ELE/Q4301
 QP NOS Name Assembly Line Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7422
 Title Information and Communications Technology Installers and Servicers

7422.2001

Field Technician (Computing and Peripherals)

Field Technician (Computing and Peripherals) is also called 'Service Technician', the Field Technician provides after sale support services to customers, typically, at their premises. The individual at work is responsible for attending to customer complaints, installing newly purchased products, troubleshooting system problems and configuring peripherals such as printers, scanners and network devices.

Qualification Pack Details:

QP NOS Reference ELE/Q4601
 QP NOS Name Field Technician (Computing and Peripherals)
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications Technology Installers and Servicers

7422.2002

Installation (Computing and Peripherals)

Installation (Computing and Peripherals) is also called 'Field Technician', the Installation Technician provides after sale installation support services to customers, typically, at their premises. The individual at work is responsible for installing newly purchased products, troubleshooting system problems and, configuring peripherals such as printers, scanners and network devices.

Qualification Pack Details:

QP NOS Reference ELE/Q4609
 QP NOS Name Installation (Computing and Peripherals)
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7422
 Title Information and Communications Technology Installers and Servicers

7422.2101

Field Technician (Networking and Storage)

Field Technician (Networking and Storage) is also called 'Service Technician', the Field Technician provides after sale support services to customers, typically, at their premises. The individual at work is responsible for attending to customer complaints, installing newly purchased products, troubleshooting system problems and, configuring hardware equipment such as servers, storage and other related networking devices.

Qualification Pack Details:

QP NOS Reference	ELE/Q4606
QP NOS Name	Field Technician (Networking and Storage)
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.2201**Test and Repair Technician**

Test Repair Technician: Also called 'IT Repair Technician', or 'Hardware Technician', the Test Repair Technician diagnoses and performs rework and repairs on the faulty module in the hardware. The individual at work is responsible for rectifying faults in the faulty module in of the IT hardware equipment brought in by the Field Technician. The individual receives the faulty module, diagnoses the problems, decides on the action to be taken, reworks and repairs on them.

Qualification Pack Details:

QP NOS Reference	ELE/Q4602
QP NOS Name	Test and Repair Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.2301**Smartphone Repair Technician**

Smartphone Repair Technician diagnoses problems and repairs the faulty module of the smartphone. The individual at work is

responsible for rectifying faults in the smartphone brought in by the customer. The individual receives the faulty Smartphone, diagnoses the problems, performs front end or hardware level repair as required, resolves software issues and ensures effective functioning before delivering back to customer.

Qualification Pack Details:

QP NOS Reference	ELE/Q8104
QP NOS Name	Smartphone Repair Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.3001**Tower Technician**

Tower Technician is responsible to maintain site live24x7, maintain and repair level-1 faults/issues at telecom tower site, level-1preventive and corrective maintenance and report faults to the supervisor in time. Individual also needs to travel inter-state and work during odd hours, when required.

Qualification Pack Details:

QP NOS Reference	TEL/Q4100
QP NOS Name	Tower Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7422
Title	Information and Communications Technology Installers and Servicers

7422.9900

Information and Communications Technology Installers and Servicers, Other

Information and Communications Technology Installers and Servicers, Other include installers and servicers who install, repair and maintain telecommunications equipment, data transmission equipment, cables, antennae and conduits and repair, fit and maintain computers not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7422

Title Information and Communications
Technology Installers and Servicers

Sub Division 75 Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers

Food processing, wood working, garment and other craft and related trades workers treat and process agricultural and fisheries raw materials into food and other products, and produce and repair goods made of wood, textiles, fur, leather, or other materials.

The work is carried out by hand and by hand-powered and other tools which are used to reduce the amount of physical effort and time required for specific tasks, as well as to improve the quality of the products. The tasks call for an understanding of the work organization, the materials and tools used, and the nature and purpose of the final product.

Tasks performed by workers in this sub-major group usually include: treating and processing meat, fish, grain, fruit, vegetables and related materials into food stuffs, and tobacco into tobacco products;

tasting and grading food products and beverages; treating and processing natural fibres, skins and hides; making and repairing furniture and other goods made of wood; preparing hides, skins and pelts for further use; making and repairing textiles, garments, hats, shoes and related products. Supervision of other workers may be included.

Occupations in this Sub Division are classified into the following Groups:

751	Food Processing and Related Trade Workers
752	Wood Treaters, Cabinet-makers and Related Trades Workers
753	Garment and Related Trades Workers
754	Other Craft and Related Workers

Group 751 Food Processing and Related Trade Workers

Food processing and related trades workers slaughter animals, treat and prepare them and related food items for human and animal consumptions, make various kinds of bread, cakes and other flour products, process and preserve fruit, vegetables and related foods, taste and grade various food products and beverages, or prepare tobacco and make tobacco products.

Occupations in this Group are classified into the following Families:

7511	Butchers, Fishmongers and Related Food Preparers
7512	Bakers, Pastry-Cooks and Confectionery Makers
7513	Dairy Products Makers

7514	Fruits, Vegetables and Related Preservers
7515	Food and Beverage Tasters and Graders
7516	Tobacco Preparers and Tobacco Products Makers

Family **7511** **Butchers, Fishmongers and Related Food Preparers**

Butchers, fishmongers and related food preparers slaughter animals, clean, cut and dress meat and fish, remove bones and prepare related food items or preserve meat, fish and other foods and food products by drying, salting or smoking.

7511.0100

Butcher

Butcher slaughters animals, trims carcasses and prepares standard meat cuts. Kills or stuns animal and thrusts knife into jugular vein to drain off blood; flays carcass, opens it and removes entrails; removes offal and washes down meat; cuts and chops carcasses into standard meat cuts and into smaller portions according to customers' requirement. May specialize in slaughtering particular type of animal or in particular method of slaughtering such as 'halal' or 'Jhatka'. May perform one or more operations such as FLAYER, SKINNER, MEAT DRESSER, MEAT PROCESSOR and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

7511.0200

Slaughterer

Slaughterer slaughters animals, flays and trims carcasses in readiness for meat cutters. Kills or stuns animal; thrusts knife into jugular vein to drain off blood; flays carcass, opens it and removes entrails; cuts and dresses carcass and washes down meat. May remove offal from carcasses and place carcasses in cold storage rooms.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

7511.0300

Sausage Maker

Sausage Maker prepares ingredients for sausages and operates sausage making machine. Weighs out various meats, spices and other ingredients according to formula and dumps them into mixing machine. Chops, minces and mixes ingredients by machine as required. Feeds sausage meat into machine and gathers sausage casing over machine spout. Starts machine to force meat into sausage casing. Pinches and ties end of filled casing. Empties mixed ingredients into containers. May grind meat. May fill casings with bulk sausage. May be designated according to kind of sausage made.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

7511.0400

Briner

Briner immerses fresh fish fillets in brine solution to condition them for wrapping or freezing: Places fish fillets in wire basket and submerges basket in salt and water solution for specified time. Removes basket from brine tank and dumps fillets on conveyor belt.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

7511.0500

Pickler (Meat Product)

Pickler loads cuts of meat into pickling vats or barrels to cure meat preparatory to smoking: Packs and arranges meat in vats or barrels by hand or with meat hook to ensure maximum saturation. Turns valves to admit curing solution into vats or pours in solution by hand. Covers vat or barrel to keep meat protected and submerged in solution. Sticks trier (hook) into meat and smells trier to determine degree of curing. Opens valves or pulls bungs to drain vats and barrels, and removes cured meat for further processing. Dumps frozen meat in water tank to defrost it preparatory to curing. May roll barrels to rearrange meat and ensure maximum saturation. May flush or blow marrow from ham bones. May clean vats with water and steam hoses.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

7511.0600

Shactor

Shactor works in slaughtering, meat packing, or wholesale establishments

performing precision functions involving the preparation of meat. Work may include specialized slaughtering tasks, cutting standard or premium cuts of meat for marketing, making sausage, or wrapping meats. Trims head meat and otherwise severs or removes parts of animals heads or skulls. Wraps dressed carcasses and/or meat cuts. Trims, cleans, and/or cures animal hides. Removes bone and cuts meat into standard cuts to prepare meat for marketing. Grinds meat into sausage. Slaughters animals in accordance with religious law and determines that carcasses meet specified religious standards when slaughtering is performed for religious purposes. Slits open, eviscerates, and trims carcasses of slaughtered animals. Cuts, trims, skins, sorts, and washes viscera of slaughtered animals to separate edible portions from offal. Washes and/or shaves carcasses. Shackles hind legs of animals to raise them for slaughtering or skinning.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

7511.9900

Butchers, Fishmongers and Related Food Preparers, Other

Butchers, Fishmongers and Related Food Preparers, Other include all other workers those who slaughter animals, kill fish, clean, cut and dress meat and fish and prepare related food items or preserve meat, fish and other foods and food products by drying, salting or smoking not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7511

Title Butchers, Fishmongers and Related Food Preparers

Family 7512
Bakers, Pastry-Cooks and Confectionery Makers

Bakers, pastry-cooks and confectionery makers make various kinds of bread, cakes, and other flour products, as well as handmade chocolate and sugar confectionery.

7512.0100
Baker (Baking Products)

Baker (Baking Products); Confectioner (Flour Confectionery) mixes and bakes ingredients according to recipes to produce breads, pastries, and other baked goods. Measures flour, sugar, milk, butter, shortening, and other ingredients to prepare batters, doughs, fillings and icings, using scale and graduated containers; dumps ingredients into mixing machine bowl or steam kettle to mix or cook them according to specifications; rolls, cuts, and shapes doughs to form sweet rolls, pie crust, tarts, cookies, and related products preparatory to baking; places dough in greased or floured pans, moulds, or on sheets and bakes in oven or on grill; controls temperature of oven by regulating thermostats or by adjusting dampers; checks progress of baking by observing colour of products and noting length of time in oven; removes baked products and places them on cooling racks; applies glaze, icing, or other topping to baked goods, using spatula or brush. May specialize in making one or more types of products such as breads, rolls, pies, or cakes and be designated accordingly as BAKER, BREAD; PASTRY MAKER; CAKE MAKER. May decorate

cakes. May develop new recipes for cakes and icings.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

7512.0200

Mixing Machine Attendant

Mixing Machine Attendant; Dough Mixer, Machine (Bakery) mixes flour, water, milk, sugar and other ingredients by machine according to instructions or specified formula to make dough for cakes, biscuits, wafer etc. Measures various ingredients such as flour, sugar, water and milk in required proportions and dumps them into mixing machine; turns knobs to set mixing time and maintain temperature of dough; starts machine; observes operation of mixing and automatic formation of dough in machine; feels dough for desired consistency; stops machine and dumps dough into trough. Pushes troughs of sponge dough into room to ferment for specified time; dumps raised sponged dough into mixer and adds ingredients to complete mixer; records number of batches mixed. May be designated according to type of dough mixed as BREAD DOUGH MIXER; PASTRY MIXER; COOKIE MIXER.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

7512.0300

Oven Man (Bakery Products)

Oven Man (Bakery Products) tends stationary or rotary hearth oven that bakes bread, pastries, and other bakery

products. Heats oven to required temperature; places pans of unbaked goods on blade of long handled paddle; opens oven door and slides leaded paddle into oven; jerks paddle from under pans to deposit them on hearth; regulates and controls heat and humidity of oven by observing gauges, turning valves or other methods; notes colour of products during baking to ensure uniformity of finished products; removes baked goods from oven with paddle, and places them on tiered racks for cooling, flips switch to position hearth for loading and unloading when tending rotary hearth oven. May prepare doughs and wrap papers. May be designated according to type of oven tended as DRAWPLATE OVEN MAN; PEEL OVEN MAN; ROTARY PEEL OVEN MAN.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

7512.0400

Sweet Meat Maker

Sweetmeat Maker; Halwai prepares one or more kinds of Indian sweets by mixing flour, sugar, milk, cream and other ingredients to form dough or paste according to direction or formula and frying them in pans in desired forms and shapes. Mixes ingredients such as flour, sugar, milk, ghee, nuts and water in required proportion according to instructions or formula; tastes and feels dough or paste for desired consistency; rolls, cuts and shapes dough to form sweet rolls and related products preparatory to frying; fills pan with required quantity of oil or ghee and places pan on heated oven; places dough in pan to fry controlling temperature of oven regulating fire; checks progress of frying

by observing colour of products and noting length of time in oven; removes fried products and keeps them aside for a cooling; prepares sugar syrup by boiling sugar and water in prescribed proportion to desired consistency; soaks products in sugar syrup where required; applies silver foils and other ingredient to make product more presentable. May specialize in making one or more types of products such as Peda; Gulab Jamoon; Rasgola. May develop new recipes for sweets.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

7512.0500

Candy Maker

Candy Maker mixes together and cooks candy ingredients by following, modifying or formulating recipes to produce product of specified flavour, texture, and colour. Cooks ingredients at specified temperatures in open fire or steam-jacketed kettles or in batch or continuous pressure cookers; caste candy by hand using moulds and funnel, or tends machine that caste candy in starch or rubber moulds; spreads candy into cooling and heating slabs; kneads in machine-pulls candy; spins or rolls candy into strips ready for cutting; examines, feels and tastes product to evaluate colour, texture, and flavour; adds ingredient or modifies cooking and forming operations as needed. May be designated according to type of candy produced as CAMEL CANDY MAKER, COCONUT CANDY MAKER, TOFFEE CANDY.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and
Confectionery Makers

7512.0600

Panman (Confectionery)

Panman; Revolving Pan Operator; Coating Machine Operator; Pan Operator (Confectionery) operates steam heated revolving pan to coat items such as candy, nuts and chewing gum tablets, with syrup, wax colouring matter, or polish. Dumps products into pan and starts pan revolving; pours slowly specified quantity of syrup over whirling candy or other product and passes hands through batch to spread syrup uniformly; turns steam valve to heat pan and heat almonds, nuts or other centres in pan; examines and feels product to determine adequacy of coating, and applies successive charges of syrup until specified coating thickness is attained; adds flavouring and colouring ingredients in final coating as specified; may mix together and apply emulsified or dry ingredients, such as gum solution, corn starch, and powdered sugar to product. May transfer contents to polishing pans and specified ingredients to polishing coating. May set temperature controls and start blower to dry syrup. May be designated according to product coated or polished as ALMOND-PAN-FINISHER; CHOCOLATE PEANUT PANMAN.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and
Confectionery Makers

7512.0700

Plate Worker, Confectionery

Plate Worker, Confectionery prepares syrup made by Cooker Operator by mixing colour, flavour etc. on iron plate kept cool

by water for cutting and forming it into candies of desired size and shape. Spreads candy on iron plate table fitted with cold water container at bottom; adds specified amount of colouring and flavouring agents; mixes ingredients until colouring and flavouring are uniformly distributed; examines, feels and tastes product to evaluate colour, texture, and flavour; drains out hot water from container and replaces it with cold water to make cooling effective; hands over product to Machine man for further processing.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and
Confectionery Makers

7512.0800

Chocolate Maker

Chocolate Maker makes chocolate slabs or bars grinding cocoa beans, heating ingredients and forming slabs. Grinds cracked cocoa beans in mill to reduce them to thick liquid or paste; presses cocoa-butter from ground beans, using hydraulic press, to obtain blocks of cocoa; grinds pressed flocks of cocoa to thick liquid; mixes liquid chocolate, sugar, and other ingredients in required proportions to a dough like consistency in machine, feeds coarse mixed chocolate into machine to convert it to flakes, heats mixed flaked chocolate and cocoa-butter in steam heated pans to desired texture and flavour to obtain chocolate bars or slabs.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and
Confectionery Makers

7512.0900

Conche Operator (Sugar and Confectionery)

Conche Operator (sugar and conf.) operates conche machine to heat and agitate refined chocolate mass with cocoa butter to enrich colour, flavour, and texture: Pumps specified amount of chocolate mixture into steam-heated stationary tank or rotary drum. Meters out specified amount of such ingredients as cocoa butter or flavourings. Turns steam valves and adjusts thermostat to heat contents of tank or drum to specified temperature. Pushes lever to start agitators and rotate drum. Pushes levers to change rate of agitation, drum rotation, and temperature, following specified time cycles. Observes and tastes mixture to evaluate conformity to standard and sends sample to laboratory for analysis. Adjusts temperature, agitation speed and timing cycle, and adds ingredients, such as cocoa butter and lecithin, according to laboratory findings. Pumps mixture to storage tank.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

7512.1000

Yeast Maker (Beverage)

Yeast Maker controls equipment to prepare mixture of mash and yeast for use in manufacture of distilled liquors: Weighs specified quantities of rye and malt meal, depending upon amount of yeast required, and dumps them into yeast tub (cooker) filled with specified amount of water. Opens valves to admit steam that circulates through coil pipes in tub and cooks the mixture. Starts revolving blades in tub to agitate mixture as it cooks.

Observes temperature gauges and increases or decreases steam pressure to maintain constant temperature as mash cooks. Pours yeast culture into cooked mash and mixes mash with revolving blades. Stops revolving blades when mash and yeast are thoroughly mixed. Tests mash to determine temperature and specific gravity (proof), using thermometer and hydrometer, and records results. Observes gauges and increases or decreases steam to ensure that mash ferments at constant temperature. Notifies Fermentation Operator (beverage) when mash is ready to be pumped into fermentation tank. Removes sample of mash for laboratory analysis.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

7512.9900

Bakers, Pastry Cooks and Confectionery Makers, Other

Bakers, Pastry-cooks and Confectionery Makers, Other include all other workers who perform variety of routine and low skilled tasks in baking and confectionery and may be designated according to nature of work performed such as: Helper (Confectionery) assists in weighing, mixing of ingredients, heating them in steam or vacuum pans, adding flavour and colour to dough or paste, moulding, shaping, cutting and wrapping of soft or hard stuff for finished products. Bread Slicer slices bread using hand operated or power driven slicing machine Baker Helper helps baker by performing duties as kneading dough, cutting dough into desired sizes removing baked products from oven. Mill Room Hand (Chocolate) performs one or

more operations in chocolate making e.g., grinding, refining, sieving as required.

ISCO 08 Unit Group Details:

Code 7512

Title Bakers, Pastry-Cooks and Confectionery Makers

Family 7513

Dairy Products Makers

Dairy products makers process butter and various types of cheese, cream or other dairy products.

7513.0100

Dairy Worker, General

Dairy Worker, General performs all or several tasks in preparation of various dairy products. Pasteurises raw milk or other dairy product to remove harmful bacteria. Develops bacterial culture for use in making butter, buttermilk, cheese and other products. Separates cream from milk and churns it into butter. Curdles milk and converts curds into cheese. May make ice-cream.

ISCO 08 Unit Group Details:

Code 7513

Title Dairy Products Makers

7513.0200

Separator Man

Separator Man; Cream Separator; Cream man (Dairy) operates milk separator to separate cream from milk. Assembles and adjusts separator as necessary, according to type of product for which separated cream or milk is to be used; places empty containers below cream and skimmed

outlets; pours milk into separator; switches on centrifugal machine which automatically carries milk into bowl and separates milk into fat and skimmed milk; regulates separator to obtain required percentage of cream for making butter or ghee; cleans plant using hot water, soda and other detergent solutions. May also attend to pasteurizing plant.

ISCO 08 Unit Group Details:

Code 7513

Title Dairy Products Makers

7513.0300

Butter Maker

Butter Maker performs all or several tasks for making butter. Pasteurizes milk to eliminate harmful bacteria. Separates cream from milk in centrifuge. Adds lactic ferment to ripen cream. Pours or pumps cream into mechanical churn. Starts churn to make butter, controlling butter moisture, temperature and time of churning. May add salt to butter in churn. May take samples of butter for testing. May boil and strain butter to make 'ghee' and be designated as GHEE MAKER

ISCO 08 Unit Group Details:

Code 7513

Title Dairy Products Makers

7513.0400

Cheese Maker

Cheese Maker cooks milk and specified ingredients to make cheese according to formula. Pasteurizes and separates milk to obtain prescribed butter fat content; turns valves to fill vat with milk and heat milk to specified temperature; starts agitator to mix ingredients; tests samples of milk for acidity and allows agitator to mix ingredients until specified level of acidity is reached; dumps and mixes measured

amount of rennet into milk; stops agitator to allow milk to coagulate into curd; cuts curd or separates curd with hand scoop to release whey (watery part); observes thermometer, adjusts steam valve, and starts agitator to stir and cook curd at prescribed temperature for specified time; squeezes and stretches sample of curd with fingers and extends cooking time to achieve desired firmness or texture; scoops curd into burlap containers to drain off excess moisture; places cheese in moulds and presses it into shape. May salt cheese by immersing them in brine or roll cheese in dry salt, pierce or smear cheese with cultured wash to develop mould growth, and place or turn cheese blocks on shelves to cure cheese. May supervise ripening of cheese. May specialize in making particular type of cheese. May Pasteurise milk and operate centrifugal machine to separate cream out of pure milk.

ISCO 08 Unit Group Details:

Code 7513
Title Dairy Products Makers

7513.0500

Ice Cream Maker

Ice-Cream Maker makes ice-cream by mixing milk, sugar and other ingredients and by freezing mixture in freezing machine. Measures and mixes ingredients according to recipe; pasteurises mixture to eliminate harmful bacteria; pumps ingredients through a homogeniser to break-down butter-fat globules; pours mixture into freezing machine; starts machine to stir and cool mixture; unloads machine when ice-cream of required consistency is obtained; cleans and sterilizes machines, and other equipment with hot water. May form ice-cream into

special shapes. May operate ice-block washing machine.

ISCO 08 Unit Group Details:

Code 7513
Title Dairy Products Makers

7513.9900

Dairy Products Makers, Others

Dairy Workers (non-farm), Other include all other dairy workers not elsewhere classified, for example, those salting cheese by immersing them in brine or by rubbing them with dry salt, sterilising milk; operating machines which homogenise milk, moulding butter or cheese into shape, packing and wrapping butter with paper, making condensed or powdered milk, etc. and may be designated according to nature of work performed.

ISCO 08 Unit Group Details:

Code 7513
Title Dairy Products Makers

Family 7514

Fruits, Vegetables and Related Preservers

Fruit, vegetable and related preservers process or preserve fruit, nuts and related foods in various ways including cooking, drying, salting, or juice or oil extraction.

7514.0100

Oil Expeller Man

Oil Expeller Man; Oil Expeller Operator tends machine that presses oil seeds, such

as cotton seed, copra, castor seed to extract oil. Feeds moistened oil seeds into hopper of machine; turns hand wheels to adjust rollers to flatten oil seed; turns control of heat drier to specified temperature and opens chute to admit flattened oil seed to drier; turns steam valve of heat cooker to cook dried oils seed; turns hand wheels to adjust roller pressure of oil expeller; feels samples of expelled oil seed to determine that sufficient quantity of oil has been removed; ensures that pressed seed cakes are released at discharge end and that oil flows into oil tank from peripheral surface of expeller; stops machine when jammed and makes necessary adjustments to maintain continuous, production keeps work place clean and tidy. May filter oil in cloth-filter press.

ISCO 08 Unit Group Details:

Code 7514
Title Fruits, Vegetables and Related Preservers

7514.0200

Oil Crusher Operator, Animal Driven

Oil Crusher Operator, Animal Driven operates animal driven crusher to extract oil from oil seeds, such as cotton seed, castor seed, groundnut, and copra. Places empty container below crusher to collect oil; harnesses bullocks, buffalo, camel to crusher; feeds seeds into hopper of crusher in required quantity and drives animal to start crusher; sprinkles prescribed quantity of water over oil seeds for moistening them; adjusts pressure between mortar (vessel or hopper) and pestle and ensures that oil is properly extracted. Examines oil cakes visually or by feel of hand to determine that sufficient quantity of oil has been

removed; removes container when filled with oil at delivery-end; replaces filled container with empty one; takes out oil cakes from hopper and fills it with another batch of oil seeds to maintain continuous production. May operate mechanical crusher for extracting oil from seeds.

ISCO 08 Unit Group Details:

Code 7514
Title Fruits, Vegetables and Related Preservers

7514.0300

Grinder, Hand (Food Grain)

Grinder Hand (Food grain) grinds wheat, pulses, spices or other food grains into smaller pieces or powder, on hand operated grinding mill. Sets mill by adjusting roller according to fineness of grinding desired; revolves roller of mill by hand, feeding grains into hopper of mill at regular intervals; examines crushed product periodically by feel of fingers and adjusts roller as necessary. May shift grain using mesh. May clean mill stones. May take assistance of other grinder or helper in feeding mill.

ISCO 08 Unit Group Details:

Code 7514
Title Fruits, Vegetables and Related Preservers

7514.0400

Pounder, Hand (Food Grain)

Pounder, Hand (Food grain) pounds grain or spices in iron, wooden or stone mortar with pestle to remove bran from grain or to crush into smaller pieces or powder. Selects mortar and pestle according to type of food-grain or spices to be pounded. Puts requisite quantity of grain or spices in mortar and pounds it with

pestle. Examines product periodically by sight and touch and continues pounding till product is crushed to desired fineness; sifts product using sieve and re-crushes coarse residue to required fineness; cleans equipment by hand. May weigh or measure specified quantities of various ground spices and mix them according to formula for use. May pound grain to remove bran from grain using long wooden pestle.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.0500

Parcher (Food Grain)

Parcher (Food grain) roasts wheat, gram, maize, peanuts and other food grains. Puts requisite quantity of sand in pan and places pan on hot oven; allows sand to heat up in pan; puts product in pan and mixes it with hot sand for roasting using long metal ladle; removes pan from oven when product is properly roasted; sifts roasted product from sand using sieve and allowing sand to fall in pan; collects product and repeats process till all food grain is parched; maintains proper temperature of oven by regulating fuel. May prepare grain for roasting by soaking in water and then drying it.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.0600

Washing Machine Attendant, Cleaner (Food Grain)

Washing Machine Attendant; Cleaner (Food Grain) tends washing machine for washing and cleaning food grains preparatory to milling or further processing. Starts machine; feeds machine with grain by hand or adjusts flow of grain from chute; regulates flow of water into grain by manipulating lever; observes automatic washing of grain visually to ensure proper washing; may wash grains in tank filled with required quantity of water and soaking it for a prescribed period. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.0700

Cook, General (Food Canning and Preserving)

Cook, General (Food Canning and Preserving), cook meat, fruits, vegetables or other food according to recipes in large quantities preparatory to canning or preserving. Weighs or otherwise measures ingredients, according to recipe; loads ingredients into kettle or pressure cooker pans and frying machines, manually or by means of chute or conveyor; observes thermometer and gauges, and turns valve to admit steam to pressure cookers or lights gas burner to heat and cook contents of kettles; cooks ingredients adding syrup, spices, sugar, colouring matter or other substances as required; stirs mixture in kettle to blend and prevent scorching of contents; drains off cooked ingredients by opening valve at bottom of vessel or by blowing material through drain with steam. May stir contents with mechanical agitator. May test mixture with hydrometer or other instrument to determine consistency. May

be designated according to type of food product made, such as JAM MAKER; MARMALADE MAKER, etc.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.0800

Condiment Maker (Food Canning and Preserving)

Condiment maker (Food Canning and Preserving) makes various kinds of chutneys, pickles and ketchup from vegetables, fruit, fish, meat and spices using preservatives such as vinegar, salt, sugar, oil and other ingredients. Sorts and selects mature vegetables, fruits etc., cleans product with water and discards decayed ones; cuts or chops product into small pieces; mixes ingredients such as salt, vinegar or sugar in required proportion in barrels, vats or jars according to formula to make pickling or flavouring brine; dumps product such as vegetables, fruit, fish or meat into solution to soak or cook for specified time; examines, feels, and tastes product to evaluate colour and flavour; adds ingredients or modifies cooking and forming operations, as required. May cook ingredients separately before mixing. May pack product into containers in layers, covering each layer with preservative compound. May specialize in making particular type of condiment and be designated accordingly as PICKLE MAKER; CHUTNEY MAKER OR SAUCE MAKER.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.0900

Cannery Worker (Can and Preservation)

Cannery Worker (Can and Preservation) performs any combination of following tasks to can, freeze, preserve, or pack food products. Dumps or places food products in hopper, on sorting table, or on conveyor. Sorts or grades products according to size, colour, or quality. Feeds products into processing equipment, such as washing, refrigerating, peeling, coring, pitting, trimming, grinding, dicing, cooking, or slicing machines. Trims, peels, and slices products with knife or paring tool. Feeds empty containers onto conveyor or forming machines. Fills containers, using scoop or filling form, or packs by hand. Counts, weighs, or tallies processed items according to specifications. Inspects and weighs filled containers to ensure product conforms to quality and weight standards. Places filled containers on trays, racks, or into boxes. Loads, moves, or stacks containers by hand or hand truck, and cleans glass jar containers, using air hose.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.1000

Pickler (Can and Preservation)

Pickler (Can and Preservation) pickles prepared food products in preservative or flavouring solutions: Mixes ingredients, such as salt, vinegar, or sugar in barrels, vats, or tanks, according to formula, to make pickling or flavouring brine. Dumps product, such as vegetables, fruit, fish, fish eggs, or meat into solution to soak for specified time. May pack product into

barrels in layers, covering each layer with preservative compound. May remove contents from containers by hand or with dip net.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.1100

Preservative Filler, Machine (Can and Preservation)

Preservative Filler, Machine (Can. and Preservation) tends machine that automatically dispenses brine, oil, salt, or syrup into containers of food products prior to lidding or capping: Starts machine and turns valves to allow flow of solution. Feeds or guides containers onto conveyor that carries containers under dispensing nozzles. Observes filling operation and adjusts flow of solution or material to optimum volume. Removes broken jars from conveyor and deposits jars in waste receptacles. May fill machine reservoirs with dry salt, oil, brine, or sugar solution as required.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

7514.9900

Fruits, Vegetables and Related Preservers, Others

Fruit and Vegetable Preservers, other perform variety of routine tasks in canning and preserving food, fruits and vegetables not elsewhere classified, and may be designated according to nature of work performed such as: Peeler Hand peels skin of fruits and vegetables using hand knife.

Grader examines, classifies and separates fruits, vegetables and fish according to size, quality, colour, condition or species. Washer tends machine that washes raw fruits or vegetables preparatory to canning, freezing or packing. Feeder Charger feeds machine with fruits or vegetables by hand for washing, shelling, shredding, cooking and pulping.

ISCO 08 Unit Group Details:

Code 7514

Title Fruits, Vegetables and Related Preservers

Family 7515

Food and Beverage Tasters and Graders

Food and beverage tasters and graders inspect, taste and grade various types of agricultural products, food and beverages.

7515.0100

Tea Taster

Tea Taster tastes sample of brewed tea to determined quality and grade and suggests proportions of different grade to be, blended according to market requirement. Cooks or brews small quantities of cured tea leaves in required quantity of water heated to specified temperature, checks moisture contents or samples, using Moisture Meter; infuses different samples of tea in cups in tea tasting room; examines and tastes different infusion for colour, density, aroma and flavour to determined grade, approximate market value, or acceptability to consumer taste; writes blending formulas for guidance of workers who prepare products in commercial quantities. Keeps record of different grades of tea; visits factory to ensure

correct processing. Is designated as COFFEE TASTER if engaged in tasting coffee. May meet buyers of tea.

ISCO 08 Unit Group Details:

Code 7515

Title Food and Beverage Tasters and Graders

7515.0200

Liquor Taster

Liquor Taster tastes sample of liquor to classify it according to standards. Tastes samples of liquor and ascertains and judges such qualities as flavour, aroma and colour of liquor by use of his senses. Classifies samples according to system of standard and recommends specific blends of lots that will be accepted commercially. May be required to ascertain place of origin and age of wine or liquor.

ISCO 08 Unit Group Details:

Code 7515

Title Food and Beverage Tasters and Graders

7515.0300

Taster (Food)

Taster (Food) tastes samples of food or beverages to determine palatability of product or to prepare blending formulas: Cooks or brews small lots of beverages or other food products and tastes product to determine grade, approximate market value, or acceptability to consumer tastes. Writes blending formulas for guidance of workers who prepare food products in commercial quantities. May purchase food products.

ISCO 08 Unit Group Details:

Code 7515

Title Food and Beverage Tasters and Graders

7515.0400

Grader, Meat

Grader, Meat examines animal carcasses to determine grade in terms of sales value: Examines carcasses suspended from stationary hooks or hooks attached to overhead conveyor to determine grade based on age, sex, shape, thickness of meat, quantity and distribution of fat, colour, texture, and marbling of lean meat. Attaches grade identification tag to carcass. May estimate weight of carcass or observe dial of automatic weighing scale to determine weight of carcass.

ISCO 08 Unit Group Details:

Code 7515

Title Food and Beverage Tasters and Graders

7515.9900

Food and Beverage Tasters and Graders, Other

Food and Beverages Tasters and Graders, Other include workers who inspect, taste and grade various types of agricultural products, food and beverages not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7515

Title Food and Beverage Tasters and Graders

Family 7516

Tobacco Preparers and Tobacco Products Makers

Tobacco preparers and tobacco products makers prepare tobacco leaves and make various tobacco products.

7516.0100

Tobacco Curer

Tobacco Curer drives green tobacco leaves in heated tobacco barns. Suspends bunches of green tobacco leaves on strings in barn; heats barn by lighting fire inside furnace, to required temperature; regulates temperature and draught controls, depending on type of tobacco and weather conditions, until leaves are yellowed; opens barns door periodically to examine colour and moisture content of leaves to determine when to increase heat and regulate draught controls to dry leaves and stems to desired quality and colour; removes dried and cured tobacco from barn and piles them separately for storing. May cure and dry green tobacco leaves in open sun.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0200

Tobacco Grader

Tobacco Grader; Tobacco Sorter grades cured tobacco leaves according to colour, texture, size etc. of leaf preparatory to marketing or processing into tobacco products. Spreads cured and dried leaves on table; picks up leaves one by one and examines, feels and smells and determines grade according to size, colour, extent of damage, texture and aroma; strips defective portions from leaves; stacks the leaves into piles according to grade and keeps record of graded tobacco. May recommend

conditioning prior to further processing. May remove stems.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0300

Blender, Tobacco

Blender, Tobacco mixes various grades and kinds of tobacco leaves in accordance with formula to form blend of distinctive flavour. Removes leaves of tobacco from each of several bundles of tobacco leaves; spreads leaves on trays and picks out those unsuitable for desired blend; weighs out quantities of each kind of leave according to formula and mixes them together. May spray tobacco with oils, cloves, and other spices and kneads tobacco to blend in flavouring.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0400

Conditioner, Tobacco

Conditioner, Tobacco treats tobacco leaves by moistening them with water or steam to make them pliable for further processing. Moistens leaves by dipping them in or spraying them with water, stacks leaves on drain board, covers them with hessian or other cloth and allows them to absorb moisture for a specified time; or feeds leaves into steam heated conditioning machine, observes gauges, maintains appropriate steam pressure and allows leaves to absorb steam for specified time. May mix or blend several grades and types of tobacco and condition

it for processing. May specialize in conditioning a particular kind of tobacco leaf and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0500

Cigar or Cheroot Roller

Cigar or Cheroot Roller; Cigar or Cheroot Maker makes cigars and cheroots from tobacco leaves by hand. Dries in sun tobacco leaves soaked in jaggery solution. Removes rib and stalk from dried tobacco leave. Sorts out suitable leaves for binding. Cuts filler tobacco leaves according to size and shape of cigar or cheroot to be made. Binds by hand filler leaves with binding leaf giving required shape of cigar or cheroot and pastes end of binding leaf. Rolls cigar or cheroot on slab or stone or hand surface giving necessary pressure with hands to obtain smooth roundness. Selects suitable tobacco leaf for wrapping (superior quality imported thin tobacco leaf). Cuts wrapping leaf according to size and shape of cigar or cheroot by scissors and wraps it on cigar or cheroot giving it final shape and smooth finish. Cuts cigar or cheroot ends to obtain uniformity in size, using scissors or knife.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0600

Cigar or Cheroot Roller Helper

Cigar or Cheroot Roller Helper assists Cigar or Cheroot Roller in making cigars or

cheroots by performing various simple operations such as removing mid-rib, stalks from tobacco leaves, cutting ends of cigars or cheroots to make them into uniform size, and labelling them with trade bands. Collects tobacco leaves, soaks them in water to soften; takes out moistened leaf, cuts and strips midrib and stalk avoiding damage to leaf; stacks stripped leaves in piles keeping right and left halves separate; its broad leaves into rolls for use as roller leaf; cuts short leaves by hand scissors into small pieces for use as fillers for cigar or cheroot; cuts cigar or cheroot ends with hand scissors to make them uniform of size; pastes manufacturer's label at one end of cigar or cheroot. May stack tobacco for curing and drying. May roll or make cigar or cheroot. May pack finished cigars or cheroots in boxes.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0700

Bidi Maker

Bidi Maker; Bidi Roller makes bidis by hand by rolling shredded tobacco in bidi leaves. Collects required quantity of shredded tobacco and bidi leaves; soaks bidi leaves in water to moisten to make them pliable; cuts them into pieces according to size of bidi to be made using tin stencil or plate and hand scissors; puts measured quantity of tobacco filling on cut leaf and rolls it with fingers to make bidi of desired size and shape (conical) closing broader open end and pressing conical end flat; ties piece of thread round rolled bidi to hold tight leaf and tobacco filling; checks visually whether bidis are of uniform size; ties finished bidis into

bundles of twenty-five, fifty etc. as required; places bidi bundles in trays or baskets and delivers finished bidis to Bidi Checker.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0800

Furnace Man, Bidi

Furnace Man, Bidi bakes bidis in heated furnace to remove moisture and dampness. Heats furnace by lighting firewood in fire chamber; removes hot cinders and ash from fire chamber when furnace attains desired temperature; paces steel tray containing bidis on long handle wooden ladle; pushes wooden ladle with trays inside furnace and stacks trays on furnace bed; closes furnace door and allows bidis to bake for specified period; removes baked bidis from furnace and examines them to ensure proper baking.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.0900

Bidi Checker

Bidi Checker; Bidi Counter checks quality and number of bidis packed in bundles to maintain manufacturing standard. Examines bidi bundles to ensure proper filling and rolling of bidis and appropriate number of bidis in bundle. Sorts out improperly filled or rolled, broken or otherwise defective bidis from good ones; checks samples to ensure quality and quantity of tobacco filling. Places checked bundles on trays or in baskets to be

removed for further processing. May roll bidis and wrap and pack small specified quantities of ready bidis in different types and sizes of paper packages, and then pack small bundles into bigger ones; and be designated as BIDI PACKER. May also heat raw bidis in furnace to required standard of heat.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.1000

Snuff Maker

Snuff Maker makes snuff tobacco by grinding and blending various types of tobacco. Places tobacco leaves, stalks and chopped tobacco in a bin, adds salt solution and allows mixture to ferment for specified period of time; watches fermentation, turning mixture occasionally; roasts fermented tobacco on heated mud pan and pulverises it to flour-like consistency in a grinding machine or mortar using pestle; sifts snuff flour through fine mesh-wire or cloth screens; blends various types of snuff according to formula, and adds aromatic oils or essences to obtain desired flavour. May specialize in a particular snuff making process such as fermenting, grinding, sifting or blending and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.1100

Chewing Tobacco Maker

Chewing Tobacco Maker; 'Zarda' Maker makes chewing tobacco from tobacco leaves. Collects required type of tobacco leaves and dries them in sun for a specified period for proper conditioning; pounds dried leaves in a mortar using wooden pestle to reduce them into small pieces of required size; dyes broken leaves with edible chemicals and dries them in sun; treats pounded tobacco with spices and similar ingredients in accordance with formula and adds scented solution or essence to form blend of distinctive flavour. May specialize in making particular kind of chewing tobacco such as Banarasi, Moradabadi, Zafrani or Mohini.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

7516.9900

Tobacco Preparers and Tobacco Products Makers, Other

Tobacco Preparers and Tobacco Products Makers, Other include workers who prepare tobacco leaves and make various tobacco products not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7516

Title Tobacco Preparers and Tobacco Products Makers

Group 752

Wood Treaters, Cabinet-makers and Related Trades Workers

Wood treaters, cabinet-makers and related trades workers preserve and treat wood; produce wafer boards, particleboards, hardboards, insulation

boards, plywood, veneers and similar wood products; and make, decorate and repair wooden furniture, vehicles and other wooden products. They use specialized hand tools and set-up, operate and tend wood processing and woodworking equipment, machines and machine tools.

Occupations in this Group are classified into the following Families:

7521	Wood Treaters
7522	Cabinet Makers and Related Workers
7523	Wood Working Machine Tool Setters and Operators

Family 7521 Wood Treaters

Wood treaters operate and tend wood treatment processing equipment and machines to remove bark from logs, produce wood chips, season, preserve and treat wood, and produce wafer boards, particleboards, hardboards, insulation boards, plywood, veneers and similar wood products.

7521.0100

Kiln Operator, Wood

Kiln Operator, Wood operates steam kiln for seasoning or drying wood to specified moisture content. Feeds water into boiler and lights fire in boiler fire-box. Directs workers to load and place lumber in kiln and ascertains moisture content of wood at various locations in kiln by moisture metre or by sawing and weighing samples of wood before and after drying. Waits till boiler acquires sufficient heat, plans drying cycle according to moisture content, dimensions and species of wood

and adjusts valve to release and regulate flow of steam into kiln. Starts water pump to feed additional water into boiler and sets automatic controls to regulate kiln temperature and humidity for specified time. Switches on fans inside kiln and gets kiln doors closed to make it air-tight. Records humidity and kiln temperature and controls valves to regulate steam supply while maintaining balance between temperatures and moisture content to avoid damage to wood. Keeps lumber in kiln for specified period. Opens kiln on completion of drying cycle, verifies moisture content of wood and directs workers to remove lumber from kiln when dried. May work simultaneously as Boiler Attendant. May attend to other work when kiln is not working.

ISCO 08 Unit Group Details:

Code	7521
Title	Wood Treaters

7521.0200

Impregnator, Wood

Impregnator, Wood treats wood with chemical to protect it against decay or parasites. Mixes chemicals in prescribed ratio in open tanks or vats, heats it to required temperature and checks its strength. Assesses moisture content of wood and gets it dried, if necessary, to prescribed standard. Dips wood products in tank manually or using crane, rods etc. as necessary. Controls temperature of solution, determines amount of impregnation and keeps them (wood products) immersed in preservative solution for prescribed period. May brush, paint or inject preservative on wood or treat it with gas.

ISCO 08 Unit Group Details:

Code	7521
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Title	Wood Treaters
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7521.0300

Wood Bender

Wood Bender bends wooden parts to required shape by steaming, heating, softening and drying. Steams wooden parts or heats them in boiling water to make them soft and pliable. Bends steamed or heated parts gradually by hand into shape or places them in manually operated press to obtain desired curvature. Fastens parts into place or keeps them in sun to dry and set in permanent shape. May maintain continuous application of steam to ensure pliability while pressing to shape.

ISCO 08 Unit Group Details:

Code	7521
Title	Wood Treaters

7521.0400

Wood Treater

Wood Treater treat underground portion of transmission poles with chemical preservative after installation: Digs around base of pole to expose area susceptible to decay, using pick and shovel. Scrapes dirt and other residue from pole surface and chips away decayed wood, using hand tools. Paints dressed area with preservative solution, using brush. Wraps treated portion of pole with waterproof paper, fastening paper with hand stapler. Refills hole and packs earth firmly around base of pole, using shovel.

ISCO 08 Unit Group Details:

Code	7521
Title	Wood Treaters

7521.0500

Grader (Wood Working)

Grader (woodworking) inspects and grades milled, rough-sawed, or dimensional stock lumber according to standards: Examines lumber on table, moving belt, chain conveyor, or in racks for defects, such as knots, stains, decay, splits, faulty edges, pitch pockets, wormholes, and defective milling. Grades lumber, using calliper rule, to ensure specified dimensions. Marks lumber to indicate grade and processing instructions, using marker. Tallies pieces of lumber according to grade and board footage. May determine cuts to be made to obtain highest marketable value from material. May remove unsatisfactory pieces from conveyor or table and place pieces on stacks, in bins, or on carts. May scale board footage, using calibrated scale on lumber ruler, and record results.

ISCO 08 Unit Group Details:

Code	7521
Title	Wood Treaters

7521.9900

Wood Treaters, Other

Wood Treaters, other include all other wood treaters engaged in forming and preserving wood by application of heat, seasoning and chemical treatment, not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7521
Title	Wood Treaters

Family 7522

Cabinet Makers and Related Workers

Cabinet-makers and related workers make, decorate and repair wooden

furniture, carts and other vehicles, wheels, parts, fittings, patterns, models and other wooden products using woodworking machines, machine tools and specialized hand tools.

7522.0100

Furniture Maker, Wood

Furniture Maker, Wood makes and repairs chairs, tables, benches, desks, shelves etc., by common carpentry processes using hand and or power tools or both. Studies drawing or sample, calculates sizes and quantity of timber required. Prepares patterns of different parts of article to be made on card board. Marks off pieces using patterns, square, pencil, rule or scribe and saws and shapes them according to specifications by sawing, planning, drilling etc. Marks and makes, necessary joints such as dove-tail, Tenon-mortise, lap etc. Checks dimensions and fitting of joints frequently. Fixes hinges, hooks etc., at required places. Assembles different parts and fits them permanently by gluing, drilling, dowelling, nailing screwing etc., as necessary. Fills up superfluous holes etc., with putty; smoothens surface using sand paper, earth (yellow) and files. Checks completed articles and ensures correct fitting, rigidity and finish. Sharpens his own tools. May polish or paint articles made.

ISCO 08 Unit Group Details:

Code	7522
Title	Cabinet Makers and Related Workers

7522.0200

Cabinet Maker

Cabinet Maker makes high class wooden furniture such as ward-robos, dressing tables, sofa sets, radio cabinets etc.,

according to design or specification using power or hand tools or both. Studies drawing or samples. Selects timber and calculates quantity required. Marks cuts and shapes oversize pieces to required dimensions by sawing, planing, etc. Makes necessary joints such as dove-tail, tenon-mortise, half lap etc. Checks joints frequently and finishes them ensuring firmness and correct fitting. Assembles parts for trial, rectifies defects if any and then dismantles them for further work. Finishes inside portions, which cannot be worked after assembling and smoothens outer portions using plane, shaver (tools) etc. Applies glue in joints and re-assembles parts step by step, securing joints with dowels (wooden or bamboo pins), screws or nails as required. Fixes hinges, brackets etc. where necessary. Finishes outer surface by filling holes and cracks with putty and using different grades of sand papers to ensure better polish. Sharpens his own tools. May fix metal or other fittings on furniture body. May also polish and varnish furniture.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.0600

Body Builder, Automobile

Body Builder, Automobile constructs rigid body on auto-chassis with or without super-structure using wood and metal frames for passenger buses, goods trucks, lorries, vans, etc. Studies sketches or blue print regarding type of body to be built. Selects required sizes of timber pieces and collects finished metal parts. Cuts and shapes wood for body using hand or power tools. Builds frame work, lining, floors, ceiling and other wooden parts

according to drawing and other specifications. Fits longitudinal runners, cross barriers, vertical posts etc. and tightens frame rigidly to chassis. Fits assembled or welded metal frame over wooden longitudinal runners and cross-members and assembles metal panel, roof covers, doors, etc., to wooden frame using nuts and bolts, etc., to wooden attachments such as fasteners, handles, hooks, lockers, etc., to frame or body as required. May fix interior fittings and repair or replace parts. May specialize in building any particular type of coach such as ambulance vans, passenger buses, army vehicles, goods lorries etc.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.0700

Coach Builder, Railway

Coach Builder, Railway constructs and repairs wooden bodies of railway coaches, using hand and power tools. Studies sketches or diagram for design of body to be constructed. Estimates and collects timber pieces of required quantity and sizes. Cuts and shapes wood to required shape and sizes, using chisel, planer, saw and other hand tools or gets them cut over power driven machines according to drawing and other specifications. Fits and assembles various parts on chassis or frame of coach. Lays or fixes floor, sides, roof, wooden panels, board, etc. and secures them tightly to frame with screws, pop rivets, bolts and nuts. Replaces broken, damaged or worn out wooden parts for panels of railway coach with new ones and fixes fasteners, fittings, latches, glass on doors and windows etc. as required. May apply wax, French polish or

shellac to wooden surface as protective coat of paint. May engrave or carve decorative or ornamental designs on wooden panels.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.0800

Body Builder, Other Vehicles

Body Builder, Other Vehicles assembles and repairs wooden parts of vehicle body on metal frame with specified seating and other arrangements and screws Masonite, wooden planks, hard boards, plywood etc., according to specifications for constructing bodies of vehicles not elsewhere classified such as cycle rickshaw, auto-rickshaw etc. (excluded are CART BUILDERS AND WHEEL WRIGHTS). Takes exact measurements of metal body for cutting required sizes of wooden parts. Cuts wooden plank, Masonite or hard board to required sizes using hand saw and drills holes with hand drill. Fits cut pieces of plank, or board over metal frame and secures them tightly with bolts and nuts, or screws as required. May fit cushions, seats, arms rests and hoods to rickshaws.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.0900

Wood Marker

Wood Marker marks wood with pencil, scribe, chalk, etc. according to sample or drawing for further operations. Studies drawings and specifications or collects cutting list for marking. Selects required

type and quality of wood and position sit on table or floor according to convenience. Measures wood and marks guide lines and reference points according to prescribed specifications using foot rule, scribe, callipers etc. Avoids wastage and ensures convenience of sawing, cutting etc. while marking. May saw lumber to facilitate marking.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.1000

Pattern Marker, Wood

Pattern Maker, Wood makes and repairs wooden patterns from drawings or samples for making moulds to cast metals using hand or power tools or both. Studies drawings or sample, calculates sizes and quantity of timber required. Selects right type of timber for making pattern. Saws, adzes and planes oversize pieces to required size and marks them with shrinkage allowance, using construction scale callipers, divider, pencil, scribe etc. Drills holes and fixes dowels for assembling detachable parts and screws or nails other pieces permanently as necessary. Builds up undersized portions by nailing or screwing card board, plywood, thin pieces of wood or by applying putty as required. Assembles completed pattern, checks measurements and rectifies defects if any. Fills superfluous holes with molten sealing wax or with any other filling. Smoothens surface by filling or with sand paper for better finish. Sharpens his own tools. May apply preservative coating of solution of shellac and spirit or any other water proof paint.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related
Workers**7522.1100****Cooper**

Cooper; Tank or Barrel Maker makes or repairs wooden tanks, barrels etc., using hand or power tools or both for storing and transporting liquids such as spirits, beer, etc. Studies drawing or sample and selects required type of planks. Saws and planes staves (wooden strips) according to size and capacity of cask to be made. Makes suitable water tight joints along sides and at both ends of staves by power or hand tools. Assembles staves into tabular form along joints made. Prepares two rings of iron strip of required size by heating iron strip in furnace, bending it to circular shape by hammering and riveting both ends. Heats carefully one end of assembled staves by fire to make wood pliable. Hammers one hoop on to heated end till staves bend to shape. Repeats process at other end to fix other hoop. Prepares top and bottom lids by sawing, planing and shaping wooden planks into form of circular disc. Seals one end of cask permanently by fixing lid in grooves. Applies lacquer to joints to prevent leakage and polishes casks with wood polish. Repairs defective casks by replacing broken staves and hoops and seaming leaking joints. Sharpens his own tools.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related
Workers**7522.1200****Wood Carver, Hand**

Wood Carver, Hand carves floral and artistic designs on wooden surfaces for decorative purposes using fine chisels and hand tools. Studies sketches and dimensions of ornamental designs to be carved. Finishes and smoothens required portion of wood surface, visualises finished product and transfers design on wood surface by tracing over drawing and carbon paper with pencil or stylers. Clamps furniture part or wood piece in vice and roughs out design by cutting along marked lines on wood using chisels and mallet. Selects carving chisels, gravers, gauges, files etc. and determines sequence of their use according to intricacy of design. Cuts, trims or touches up roughed out design to desired finish using hand tools. Taps stippling tool with mallet to stipple design (dotted work). Verifies dimensions of carving with foot rule and dividers and makes modifications if necessary. Makes holes to provide for inlay work, if necessary, and smoothens carved designs by rubbing with sand papers of different grades. May polish finished article. May draw full size design from sample or imagination for tracing on wood. May design and sharpen carving tools.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related
Workers**7522.1300****Inlayer, Wood**

Inlayer, Wood inlays metal, hardwood, ivory, precious stone and like material in furniture, board, door etc. for decorative purposes. Studies sample or design for inlaying. Draws or traces designs on articles to be decorated. Cuts depressions

in markings and scoops wood from places where inlaying is to be done, using specially designed chisels. Selects material to be inlaid, marks it out to design, if any and cuts, shapes smoothens and sizes pieces as necessary with feet saw, planer, chisel sand paper, etc. Applies glue or specific adhesive and inserts inlaying pieces in respective depressions, ensuring to fill up gaps if any in scooped portions with saw dust, colour etc. to ensure permanent adherence of inlaid pieces in position. Files, planes and scrapes whole surface to smooth finish. May keep inlaid plank under hand operated nipping press for about twelve hours to secure inlaid pieces in position. May polish inlaid article to high finish. May sharpen inlaying tools.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.1400

Toy Maker, Wood

Toy Maker, Wood makes wooden toys of various shapes and sizes according to drawings or specifications using hand and power tools, fret saw machine etc. Studies drawing or sample and traces design on material or marks wooden block according to type of toy to be made. Cuts, shapes, turns and performs other operations according to tracing or marking using fret saw, hand saw, adz, chisels etc. as necessary. Frequently measuring it with callipers and rule to ensure conformity with required specifications. Drills holes where necessary and assembles different parts with nails, wires etc. or glues them together as specified. Smoothens finished toy or its components before assembling with different grades of sand paper and

polishes it on completion. May paint or lacquer finished toy.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.1500

Pith Worker, Wood

Pith Worker, Wood prepares models, figures and toys from pith (soft wood) using small hand tools. Soaks pith in water for required period to soften it. Washes, removes dirt and saline content from soaked pith, squeezes out excess water and dries it on platform. Powders dried pith in flour mill or otherwise and strains or sieves powder with hand strainer. Mixes pith powder with other ingredients like saw dust, powder of special type of bark, gum etc. in required proportions and mixes them thoroughly by tramping or kneading into dough. Spreads dough on table to form sheets of clay in required thickness. Cuts and puts sheets of clay required moulds, presses it to give shape to different forms and ties all parts of mould according to shape with string. Fills in hollow spaces with waste paper for strength, removes mould after some time and dries figure in shade. Removes waste paper, gives final touch to form with fine chisel and smoothens it with sand paper. Applies colour, paint, wax and plastic coating etc. as necessary to make it waterproof and effect natural look. May make toys directly from soaked pith by pressing it in mould and shaping with small hand tools. May make different components or limbs of toys separately and then join them with twine or fine wire.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.1600

Picture Frame Maker

Picture Frame Maker makes picture or photo frames from soft wood by sawing, planing, shaping etc. using power and hand tools. Cuts wooden planks or slides into long thin strips with power or hand saw and planes, shapes and sizes them to required thickness, form etc. using power and hand tools according to frame design. Marks frame strip to suit length and width of picture or photo to be framed, places it in mitre box (sawing jig) and cuts it according to markings at 45 degrees angle. Planes rebate (groove) on back side of cut strips with side planer and determines location, size and angle of nail holes to be drilled. Drills partial holes in one end of each piece, applies glue at mitered ends and assembles frame together by holding sized pieces in vice and driving nails through drilled holes. Smoothens frame to required finish by rubbing with sand paper. May polish frame. May set leather, velvet or other material in frame. May set glass, hard board etc. and mount picture in frame.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.1800

Sports Goods Maker, Wood

Sports Goods Maker, Wood makes sports goods such as tennis rackets, cricket bats, hockey sticks, wickets and such other sports accessories from special type of wood using power and hand tools. Selects wood according to requirements such as

ash wood, willow wood, mulberry wood etc. and marks it. Shapes stock to specified size and dimensions by sawing, planing, carving, turning, etc. as necessary and bends it to required shape by steaming, softening and pressing. Cuts plies to size, files and fixes them and puts them in frame by screwing for treating and pressing, if engaged in making tennis or badminton rackets. Assembles component parts of article by wedging, bonding, clamping, nailing or screwing them together. Aligns and balances it, smoothens and covers surface of product and attaches fixtures such as strings, ferrules, grips etc. May varnish or paint finished articles and repair damaged equipment.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.1900

Wood Lacquerer

Wood Lacquerer lacquers and polishes small wooden articles such as toys, artistic material, etc. on wood working lathe by applying and spreading lacquer (coating) on them and then polishing them to required finish. Fixes toy concentrically between centres or otherwise in lathe and rotates it either by power or manually with one hand using bow according to type of lathe used. Marks portions of article to suit colour design. Presses lacquer sticks of respective colours as per colour design on rotating surface of article and spreads it evenly on its body with palm or date leaves according to markings. Rubs lacquered article while in motion with polishing cloth, felt etc. and polishes it to high finish. May prepare coloured lac by mixing and boiling pure lac

and coloured powder with water. May do wood turning.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.2000

Wood Polisher

Wood Polisher cleans, smoothens and polishes furniture and other manufactured wooden articles to required shade and finish using sand paper, filler, polishing compound, etc. Cleans furniture piece or article to be polished with chemical or sand paper. Fills joints, knots holes etc. with putty or plaster and finishes surface by filing, scraping and rubbing with sand paper. Prepares ground (base) by applying filler or staining (coating with special coloured material) as required and refinishes surface with sand paper. Applies polish on finished surface using soft cloth or cotton and rubs it with fine sand paper, soft cloth or polishing leather to secure desired gloss and finish. Ensures uniform finish everywhere of furniture or article polished. May repeat process number of times to ensure desired finish. May use wood pillar or chalk powder along with French polish for polishing costly articles. May paint cane articles with hand brush. May prepare his own polishing material.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.2100

Paper Board Maker

Paper Board Makers, Other perform various tasks connected with paper board making such as coating paper board with wax, making water proof paper board, card board, for use as parts of vehicle, fittings and fixtures etc.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

7522.9900

Cabinet Makers and Related Workers, Other

Cabinet Makers and Related Workers, Other includes all other workers in carpentry joinery, knot plugging, cabinet making etc. not elsewhere classified such as those engaged in making walking sticks, pencils, pen holders etc.

ISCO 08 Unit Group Details:

Code 7522

Title Cabinet Makers and Related Workers

Family 7523

Wood Working Machine Tool Setters and Operators

Woodworking Machine Tool Setters and Operators set-up or operate and monitor automatic or semi-automatic woodworking machines, such as precision sawing, shaping, planning, boring, turning and woodcarving machines to fabricate or repair wooden parts for furniture, fixtures and other wooden products.

7523.0100

Wood Machinist, General

Wood Machinist, General sets and operates different types of wood working machines for turning, planing, shaping, grooving, jointing etc. of wood according to drawings or required specifications. Studies drawings or sample or product desired. Selects appropriate cutting tools or cutters and fits them to cutter head. Fixes cutter head in machine and adjusts guides and machine table to suit operations. Starts machine, switches on levers and feeds trial piece of wood into machine. Checks specimen with drawing or sample, Re-adjusts position of tools or machine set up if required and operates machine to plane, mould, shape and process wood stock to requirements. Cleans and oils machine. May sharpen tools in grinding machine. Is designated as UNIVERSAL WOOD WORKING MACHINE OPERATOR if engaged in setting and operating universal wood working machine.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0200

Wood Turner, Machine

Wood Turner, Machine sets and operates power driven wood turning lathe to make circular and round wooden objects according to specifications. Studies appropriate tools and mounts them on cutter head. Fixes cutter head in machine and adjusts guides. Mounts required size of wooden stock on machine and aligns it concentrically in position. Starts machine and sets speed. Sets and holds tip of tool against desired portion of rotating wood to be processed. Fashions wood according to specifications or sample using different cutting tools, checking its size and shape

periodically with measuring instruments. Finishes processed object by smoothing surface with sand paper. Cleans and oils machine. May sharpen tools. May operate other wood working machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0300

Wood, Turner Hand

Wood Turner, Hand turns wood into desired shape by manually operating improvised lathes for making rolling pins, legs of beds, chairs, tables etc. Studies drawings and specifications. Selects suitable piece of wood of appropriate quality and fits it into rotating spindle of improvised lathe. Directs helper to ply attached hand wheel to rotate spindle. Selects required type of hand tool, holes it in position against rotating wood and fashions wood to required specifications, smoothens object with sand paper to finish product. May cut and saw timber using hand saw.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0400

Shaper Wood

Shaper, Wood sets and operates shaping machine for cutting grooves, angles, designs or irregular shape, etc. on wooden surface. Studies drawing or samples. Selects appropriate cutting blades and fits them securely to rotating spindle of machine. Adjusts machine table to produce required shaping operations and

to hold wooden stock in position during processing. Starts machine, feeds suitable pieces of wood and ensures that they are properly guided during cutting operation to obtain required shape. Removes completed pieces from machine and checks them for accuracy with templates and scales. Cleans and oils machine. May grind cutters.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0500

Router, Wood

Router, Wood; Routing Machine Operator, Wood sets and operates routing machine for making various designs on wood surface by rotary cutter. Clamps and tightens selected tool bit in machine chuck, inserts guide pin and sets table stops. Fastens wood stock securely to table mounted on roller bearings, moves it under routing tool to cut designs according to drawings or sketches and regulates depth of cut by pedal operation as required. Checks accuracy of cutting using measuring instruments and resets machine if necessary to ensure accuracy. Releases pedal to withdraw wood stock from cutting tools and removes stock. May draw and trace outline of design on wood. May operate machine equipped with automatic device for varying depth of cut. May grind cutters and clean and oil machine.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0600

Planer, Wood

Planer, Wood sets and operates single or multiple cutting head machine to plane surface or reduce thickness of wooden stock to required specifications. Selects appropriate cutting blades and fits them into cutter head using hand tools. Turns hand wheel to adjust table for depth of cut and suit thickness of implanted stock. Adjusts pressure bar to hold stock firmly against cutting blades. Starts machine and inserts one end of stock between feeding rolls and guides it through machine. Measures planed stock and resets machine. Turns stock over and re-runs it through machine to surface other side and reduce it to desired thickness. Replaces dull or broken blades and cleans and oils machine. May sharpen and grind cutting tools. May operate other wood planing and cutting machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0700

Four Cutter

Four Cutter, Wood sets and operates machines for cutting grooves and moulding wood stock for making casing and capping for electrical fittings and such other articles. Sets and fits cutters to vertical and horizontal spindles of machines, adjusting their positions as required. Adjusts machine table to hold wood stock securely in position at required height. Starts machine to rotate cutters at high speed. Feeds trial piece along table guides into machine cutters to cut grooves and shape edges and sides. Checks finished product with drawings or sketches and makes adjustments to

cutters if necessary. Feeds wood stock and continues operation. Changes cutters when necessary. Cleans and oils machines. May sharpen tools on grinding machine. May operate other wood cutting machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0800

Wood Sawyer, Hand

Woods Sawyer, Hand operates hand saw to cut logs in to planks or wooden boards of required sizes. Marks lines on the log or timber for cutting it to required sizes Fixes wooden props or supports at convenient height to place log of timber for sawing and places it securely over supports at inclined position. Selects saw of appropriate size and with assistance of helper cuts or saws log or timber along marked line from one end. Inserts wooden or metal wedges between cut slit along marked line where required to prevent jamming of saw. Sharpens saw teeth with file when necessary. May work, singly to size planks to required dimensions using rip saw.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.0900

Moulder, Wood

Moulder, Wood; Moulding Machine Operator, Wood sets and operates moulding machine for cutting sides of wooden boards, frames etc. to required shape and making specific grooves and profiles with form cutters. Studies

drawing or sample to determine shape to be cut. Selects suitable cutting blades and fixes them to rotating spindles of machine. Sets blades in required position or angle and fastens them securely using spanners. Fits different types of cutters to different spindles of machine depending on type of cutting required, such as for grooves, profiles, etc. Adjusts machine table to desired position or height for size of cut to be made and sets guides to hold stock in position. Starts machine and cuts triple pairs. Checks trial piece and re-adjusts machine if required. Shoves wood stock between feed rolls which automatically carry pieces through machine for machining and continues operation. Cleans and oils machine. May grind knives to correct profile. May operate other wood cutting machines. May design jigs and fixtures for repetitive or specific machining operation.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1000

Mortiser Operator

Mortiser Operator sets and operates mortising machine for cutting slots of prescribed dimension in wooden frames for making joints. Selects and fits appropriate cutting tools to machine spindle. Sets machine table and guides setters to hold stock in position. Collects wood stock and checks marking for dimension of slot to be cut on it. Places wood stock below cutting tool on machine table. Lowers cutting tool over marked area on wooden stock and sets its position for slotting. Starts machine and presses down tool to cut slots of required dimensions. Checks dimensions and

removes processed wood on completion. May clean and oil machine. May grind and sharpen cutting tools. May operate other wood cutting machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1100

Tenoning Machine Operator

Tenoning Machine Operator sets and operates tenoning machine to make tenons in wooden frames according to specifications for making joints. Selects and fits appropriate cutting blades securely on rotating spindle of machine. Adjusts cutters and machine table to suit required size of tenons to be cut. Feeds wood stock between guide plates on table to hold it firmly during operation. Starts machine, pushes wood stock against cutters to obtain single or double tenoning (cutting one or both sides of wood stock) according to type of machine operated and adjusts cutters to obtain tenons of prescribed dimensions. Cleans and oils machine. May grind and sharpen cutting blades. May operate tenoning machine with scribing head, and other wood working machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1200

Jointer Machine Operator

Jointer Machine Operator sets and operates specially designed machine for making plough and tang and other water tight joints. Studies drawings. Fits cutter

knives in cutter head of machine and tightens set screws with wrench to secure them in position. Collects wood stock and marks cutting line with pencil. Places fence to guide stock at specified angle to cutting knives and places stock on edge against fence on machine table. Starts machine and slides stock over rotating cutting knives, using fence as guide. Checks cuts on stock against blue prints or sketches using mitre gauges, squares etc. and makes necessary adjustments. Feeds stock across cutting knives and continues operation. Turns stock and machines other edge frequently checking its width with callipers or gauges to ensure accuracy of fitting. May smoothen and reduce wood stock to required thickness. May replace broken or dull cutting tools. May grind and sharpen cutting blades. May clean and oil machine. May operate other wood cutting machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1300

Driller Wood

Driller Wood; Boring Machine Operator, Wood sets and operates wood boring machine for boring holes of required dimensions in wooden frames and articles. Selects drill bit of appropriate size for boring hole and fits it to spindle of machine using chuck, collet or sleeve as necessary. Measures and marks stock for boring or follows markings already made. Clamps stock to machine table and centres drill bit over or in front of marks indicating location of hole. Adjusts spindle stop to regulate depth of hole and starts machine. Moves table upward or forward and bores required hole in stock.

Withdraws bit from stock and repeats process. Changes drill bits to bore holes of different dimensions. Cleans and oils machine. May be designated as HORIZONTAL or VERTICAL BORER WOOD according to type of boring machine operated.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1400

Dowell Machine Operator

Dowel Machine Operator, Wood; Rounding Machine Operator, Wood sets and operates dowel machine for making round wooden pins of various dimensions for securing joints. Selects and fits cutter blades of required size in cutter head of machine. Sets gap between blades equal to diameter of dowel, using callipers and gauges and adjusts stock guides and feed and take off rollers to size and finish stock to required specifications. Starts machine, places stock on guides and pushes on end of sample between feed rollers. Checks size of rounded stock with measuring instruments. Makes adjustments to machine if necessary, feeds stock and continues operation. May install cutter heads to cut spirals or longitudinal grooves or both in addition to rounding stock.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1500

Wood Wool Machine Operator

Wood Wool Machine Operator sets and operates wood wool machine for reducing soft wooden stock into long thin fibres commonly used as packing material. Selects appropriate cutting tools and mounts them on cutter head. Fixes cutter head in machine and adjusts wood stock to tool post. Starts machine to move wood piece to and fro against cutters and moves cam by hand to control speed of tool post to cut fibres of desired thinness from wood stock. Checks fineness of fibres and adjusts operation as required. May clean and oil machine. May sharpen or replace dull blades. May operate other wood working machines.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters
and Setter Operators

7523.1600

Wood Carver, Machine

Wood Carver, Machine sets and operates automatic spindle carving machine to carve ornamental and artistic designs on wood. Studies full-size designs and specifications, determines nature of carving to be done and marks reference points on wood block, if necessary. Selects appropriate cutter and fits it to machine spindle. Fixes and adjusts wood on machine bed and starts machine. Lowers spindle, makes different cuts and manipulates wood piece against cutter to produce desired design. Changes cutter as necessary, regulates depth of cut by pedals, checks accuracy of cutting with measuring instruments, makes necessary adjustments if necessary and completes design. Ensures that work proceeds correctly and removes final product from machine. May carve design on separate piece of wood and glue or nail it on main

article. May make jigs for repetitive work. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters and Setter Operators

7523.1700

Fret Saw Machine Operator

Fret Saw Machine Operator; Jig Saw Machine Operator sets and operates fret saw machine with their reciprocating blade to cut wooden pieces, plywood etc. along marked line. Selects or receives material, determines pattern of cut and draws or traces design on it. Drills holes in material at appropriate places to pass saw blade particularly for internal cutting; fixes saw blade in machine with teeth downwards and operates foot pedal to start reciprocating movement of saw. Manipulates movement of material and cuts it along marked lines. Removes saw from machine, passes it through drilled hole, resets saw and continues operation for internal cutting. Smoothens edges after cutting with file or sand paper. May set saw number of times depending on design and cuts required.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters and Setter Operators

7523.1800

Sander Operator

Sander Operator sets and operates sanding machine for smoothing and finishing wooden surfaces with sand paper. Selects grade of sand paper according to degree or smoothness and finish required and fits it on sanding drum.

Adjusts gap between feed belt and roller by observing index needle and starts machine. Feeds ply-wood or article to be polished by feed belt against revolving sand paper to get rubbed and smoothened. Switches on exhaust fan of machine to collect dust during operation and uses goggles and rubber gloves for personal safety. Changes grade of sand paper till required smoothness is achieved. May smoothen wooden articles on simpler machine by fixing them on machine platform not provided with automatic feed arrangement.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters and Setter Operators

7523.9900

Wood Working Machine Setters and Setter Operators, Others

Wood Product Machine Operators, Other include those who operate and monitor automatic and semiautomatic woodworking machines which perform repetitive work and are always set up by woodworking machine setters not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7523

Title Wood Working Machine Setters and Setter Operators

Group 753

Garment and Related Trades Workers

Garment and related trades workers fit, alter and repair tailored clothing; design, and make textile and fur garments,

leather or fur products; repair, renovate and decorate garments, gloves and other products of textile; create patterns for garments; install, repair and replace upholstery of furniture, fixtures, orthopaedic appliances and furnishings of automobiles; trim, scrape, tan, buff and dye animal hides, pelts or skins; modify and repair footwear and leather articles.

Occupations in this Group are classified into the following Families:

7531	Tailors, Dress Makers, Furriers and Hatters
7532	Garment and Related Pattern Makers and Cutters
7533	Sewing, Embroiderers and Related Workers
7534	Upholsterers and Related Workers
7535	Pelt Dressers, Tanners and Fellmongers
7536	Shoemakers and Related Workers

Family **7531** **Tailors, Dress Makers, Furriers and Hatters**

Tailors, dressmakers, furriers and hatters fabricate, fit, alter and repair tailored or hand-made clothing; They produce made-to-measure clothing such as suits, overcoats, and dresses from textile fabrics, light leather, fur and other material, or make hats or wigs according to customer's and clothing manufacturer's specifications.

7531.0100 **Tailor, General**

Tailor, General makes ladies and gents' garments and children's clothes by stitching various components together according to pattern, by hand or sewing

machine. Measures customers for size with inch-tape and record measurements for making garments. Cuts material according to pattern and size and assembles garment parts by sewing. Fits stitched garment on customer, marks alterations to be made and finishes garments. May prepare new designs and Masden Lays and supervise sewing, stitching, button holing, etc. delegated to other workers. May also repair and renovate garments.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0101 **Sampling Tailor**

Sampling tailor is responsible for developing garment sample as per buyer's specifications in the apparel industry. A sampling tailor should be able to perform basic fabric cutting operations and stitch garments of various designs with different necklines, sleeves, collar etc. as per the quality standards. This job requires the individual to have thorough knowledge of measurements, garment styles, sampling and apparel production processes and should be able to sew garments with different materials and trims.

Qualification Pack Details:

QP NOS Reference AMH/A0701

QP NOS Name Sampling Tailor

NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0200**Dress Maker/Ladies Dress Maker**

Dress Maker stitches together parts of women's garments such as dresses, blouses, jumpers, brassieres, etc., according to instructions of Master Cutter. Stitches together parts by hand and machine. Inserts inner material, makes embroidery work, button-holes, etc., and attaches lining, lace, button, etc. Carries out alteration as directed. May press garments and supervise work of Sewer, Hand.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0300**Coat Maker**

Coat Maker stitches together, by hand and machine, parts of coat, shervani and other body garments according to instructions of Master Cutter. Joins parts together by basting ensuring that they are properly aligned. Stitches them together by hand and machine. Inserts inner material and attaches lining as required. Carries out alteration according to markings. Makes button-holes, stitches buttons and performs other finishing tasks. May press garment and supervise basting, filling, button holding, button stitching, etc., by Sewer, Hand.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0400**Trouser Maker**

Trouser Maker: Pant Maker stitches together by hand and machine parts of trousers, breeches and other leg wear according to instructions of Master Cutter. Joins parts together by basting, ensuring that they are properly aligned. Stitches them together by hand and machine. Inserts inner material and attaches lining as required. Carries out alterations according to markings. Makes buttonholes, stitches button and performs other finishing tasks, or supervises performance of these tasks by Sewer, Hand.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0500**Shirt Maker**

Shirt Maker stitches together parts of shirts, under vests, pyjamas etc., according to instructions of Master Cutter. Stitches collars and cuffs. Makes button holes and stitches buttons and performs other finishing tasks. May press garments and supervise work of Sewer, Hand.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0700**Hat Maker, General**

Hat Maker, General makes various kinds of hats by marking, cutting, sewing and joining components and finishing them by trimming and decorating. Prepares own design or copies and adapts existing designs. Marks and cuts material according to pattern or own judgement.

Smooths, wires and shapes hat parts and sews them together. Adds trimmings and decorates hat as required. May make and alter hats to individual requirements.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.0900

Cap Maker

Cap Maker makes various kinds of caps from cloth, felt, fur, velvet and other fabric by marking, cutting, joining and sewing and finishing them by trimming and decorating.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.1000

Wig Maker

Wig Maker makes wigs according to specifications, fastening strands of hair to cloth base. Studies requirements; cuts paper pattern to shape and size according to customer's measurements; fits and pleats pattern on to head block and fixes pleats with silk tapes; cuts silk and silk gauze to shape, fits over paper pattern and sews to silk tapes; trims and binds edges; selects hair to suit requirement and knots them to wig mount on head block by inserting hook-pointed needle in gauze to catch, twist and pull hair through; makes partings, combs and oils wig, curls hair by water-waving or with paper spills; places wig (on head block) in open for drying and setting. For theatrical wigs, makes stock size mounts which can

be adjusted as required to suit wearer. May prepare and dress wigs for dolls.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.1200

Tailor, Fur

Tailor, Fur performs all or several of more difficult tasks in manufacture, alteration, renovation and repair of garments and other articles of fur. Prepares patterns for cutting out and finishing fur articles. Grades, matches, sorts and prepares furs to be used. Cuts fur according to pattern. Sews pieces together, usually by machine. Stretches and trims sewn parts to conform to pattern. Finishes article by machine and hand sewing. Presses, repairs, alters and renovates fur articles. Estimates cost of new articles and of alteration, renovation and repair of used articles and charges customer accordingly. May work as paid employee or on own account.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.1300

Pattern Maker, Fur

Pattern Maker, Fur prepares patterns and full-size canvas models of garments and other articles of fur to guide Cutters and Finishers. Draws pattern on paper in accordance with garment design or customer's measurements. Makes canvas model of garment according to pattern. Checks patterns and model for accuracy and makes necessary alterations. Passes them to garment Cutters or Finishers.

Examines completed garment for defects. Cuts patterns for fur trimmings, accessories and other fur articles and for alteration of fur articles. May cut patterns for fancy leather goods.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.1400

Grader and Matcher, Fur

Grader and Matcher, Fur examines furs and sorts them prior to cutting and making up into garments or other articles. Compares furs visually and sorts them according to quality. Selects furs that match in colour, thickness and length of hair and makes them into bundles ready for Cutter. May specialize in one or more types of fur.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.1500

Cutter, Fur

Cutter, Fur cuts fur according to pattern for making or repairing garments or other articles. Selects required number of furs. Arranges fur on pattern outlines, ensuring that parts to be joined together match in quality and colour. Cuts furs to required size and shape with hand knife. May also perform some or all duties of Grader and Matcher, Fur.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.1600

Nailor, Fur

Nailor, Fur stretches and trims dressed furs to conform to pattern outline of garment or other articles. Draws outline of pattern on work table. Dampens skin side of fur with water. Places fur, skin side up, on table, stretches it to cover outline and nails it in position. Allows fur to dry in stretched position and removes nails. Draws outline of paper pattern on skin side of fur and trims fur along outline with knife.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

7531.9900

Tailors, Dress Makers, Furriers and Hatters, Other

Fur Tailors and Related Workers, Other include all other fur tailors and related workers such as those engaged in beating, dyeing and trimming hair or fur; assisting in cutting furs for garment manufacture, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7531

Title Tailors, Dress Makers, Furriers and Hatters

Family 7532

Garment and Related Pattern Makers and Cutters

Textile, leather and related patternmakers and cutters create precision master patterns for production of garments,

other textile, and leather or fur products. They mark, cut, shape and trim textile, light leather and other materials according to blueprints or specifications in the manufacture of garments, hats and caps, gloves and miscellaneous products.

7532.0100

Designer (Garment)

Designer; Pattern Maker (Garments) develops, designs and makes pattern for new styles of men's, women's and children's garments. Studies existing styles, develops new ideas and draws out full scale drawing of garments on paper. Marks and cuts out paper patterns of different parts of garments. Gets cloth cut according to paper patterns and gets sample garment stitched as required. Tries garment on model and makes changes in pattern, if necessary. May make specifications and supervise production.

ISCO 08 Unit Group Details:

Code 7532

Title Garment and Related Pattern
Makers and Cutters

7532.0200

Designer, Leather Articles

Designer, Leather Articles develops designs and cuts patterns for small leather articles. Studies designs of leather products from catalogues. Considers purpose, market trend, preferences of potential users, technical specifications and develops improvements or new designs keeping economical aspects and method of production in view. Prepares sketches showing style, shape, size and similar characteristics of product, and submits them to management or customer for approval. Alters designs if

necessary. May make technical drawings, models, and prototype patterns. May specialize in designing particular type of article such as gloves, hand bags, etc.

ISCO 08 Unit Group Details:

Code 7532

Title Garment and Related Pattern
Makers and Cutters

7532.0300

Case Finisher (Leather Product)

Case Finisher (Leather Prod.) assembles and finishes suitcases and radio, jewellery, and instrument cases, and lines or covers them with material, such as leather, velvet, or satin, performing any combination of following tasks: Inserts hinge wings into slots in top and bottom sections of case and secures them in grooves, using pinch pliers, or rivets, nails, or screws hinges in position. Opens case and verifies lid angle, using table gauge. Cuts specified material to size, using pattern and shears, or obtains pre-cut fabric. Brushes glue on area to be covered. Positions material on inner or outer surfaces of case and smoothens out wrinkles, using fingers. Trims excess fabric from joints, seams, and edges, using knife. Glues or nails bracing blocks to case and covers blocks with material. Presses cushion or pad into upper and lower sections of case. Examines case for misalignment of edges, and opens and closes lid to test action of hinges and spring. Holds case over air nozzle and presses pedal to remove dust and lint. Packs cases in shipping cartons. May crimp lids to case or crimp bottoms to case frame, using pneumatic-powered crimper. May repair or replace hinges, linings, and springs.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern
 Makers and Cutters

7532.0500

Frame Maker, Cap

Frame Maker, Cap prepares cap frames for cap using metal pattern, hand scissors and jute canvas. Marks paper to required size and cuts it using hand scissors. Pastes paper on metal pattern with thick paste. Cuts jute canvas as per specifications using measuring tape and hand scissors. Applies thick paste to jute canvas. Fixes pasted canvas to metal pattern. Allows canvas to dry. Cuts round edges of canvas and separates canvas from metal pattern using sharp knife. May give finishing touches by putting plastic inner cover, fixing eyelets, etc.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern
 Makers and Cutters

7532.0600

Master Cutter (Garment)

Master Cutter (Garments) measures customers and cuts parts of garment from cloth for making garment of required size and style. Measures customers for size with inch-tape and records measurements. Cuts out paper patterns with given measurements. Places patterns on cloth and marks around with pencil. Cuts various parts along marked lines and gives them for stitching. Supervises stitching and making of garments. Tries garment, when prepared, on customer and marks with chalk any alterations to be made. Supervises making and finishing work and finally fits garment on customer.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern
 Makers and Cutters

7532.0700

Cutter, Hand (Textile Product)

Cutter, Hand (Textile Products) cuts garment parts and other articles to be sewed together from cloth, canvas, etc., using scissors. Spreads single or multiple layers of cloth, fabric or other material to be cut on table or board. Places pattern on material in such position as to have least wastage. Marks outline on material with chalk. Cuts along outline marked in chalk or around edge of pattern using scissors.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern
 Makers and Cutters

7532.0900

Cutter, Machine (Textile Product)

Cutter, Machine (Textile Products) cuts parts of garments, bags and other articles from single or multiple layers of cloth, knitted or other fabric, hessian, canvas, etc., using electrically driven cutting machine. Places pattern in such a position over material as to have least wastage. Cuts around edge of pattern or along outlines marked in chalk on material.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern
 Makers and Cutters

7532.0901

Garment Cutter (CAM)

Garment cutter should be able to take the fabric from stock, load the fabric and program the CAM to run a particular design. A garment cutter also removes the cut pieces off the conveyer belt and ensures cutting is done as per product requirements.

Qualification Pack Details:

QP NOS Reference	AMH/Q1501
QP NOS Name	Garment Cutter
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7532
Title	Garment and Related Pattern Makers and Cutters

7532.0902

Advance Pattern Maker, Garment (CAD/CAM)

Advance Pattern Maker (CAD/CAM) uses the CAD system to recreate the pattern design techniques by transferring ideas to the computer, digitizing and modifying patterns and also the use of CAM to get the patterns and lays cut out in the actual sizes.

Qualification Pack Details:

QP NOS Reference	AMH/Q1101
QP NOS Name	Advance Pattern Maker (CAD/CAM)
NSQF Level	6

ISCO 08 Unit Group Details:

Code	7532
Title	Garment and Related Pattern Makers and Cutters

7532.0903

Layer Man

Layer Man is pre-production job role. The key responsibility of a Layer Man is to inspect the fabric to identify the presence of any basic fabric faults, laying and cutting the fabric as per specified length before the fabric is passed on to the parts cutting stage.

Qualification Pack Details:

QP NOS Reference	AMH/Q0201
QP NOS Name	Layer Man
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7532
Title	Garment and Related Pattern Makers and Cutters

7532.1000

Cutter, Garment (Leather)

Cutter, Garment (Leather) cuts leather for manufacture of garments. Examines leather to ensure that it is cut in most suitable and economical way. Cuts leather according to pattern of garment parts by shears, scissors, hand knife, hand operated guillotine, power driven oscillating knives or by machine which presses shaped knives through leather. May specialize in one or more types of cutting and be designated accordingly.

ISCO 08 Unit Group Details:

Code	7532
Title	Garment and Related Pattern Makers and Cutters

7532.1001

Cutter, Goods and Garments (Leather)

Cutter (Goods and Garments) lays out, marks, and cuts leather or non-leather material into parts for articles using cutting dies. The critical component of the role is to position leather/non-leather for

cutting tonsure good number and quality of cut pieces.

Qualification Pack Details:

QP NOS Reference LSS/Q6103
 QP NOS Name Cutter (Goods and Garments)
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern Makers and Cutters

7532.1100

Cutter, Gloves (Leather)

Cutter, Gloves (Leather) cuts leather for manufacture of gloves. Dampens and stretches leather to ascertain flexibility, location of flaws and most suitable and economical way of cutting. Cuts leather according to pattern of glove parts by shears, scissors, hand knife, hand operated guillotine, power-driven oscillating knives or by machine which presses shaped knives through leather. Trims edges of finished gloves. May specialize in one or more types of cutting and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern Makers and Cutters

7532.1200

Button Hole Maker

Button-Hole Marker; Button-hole Marking Boy marks positions for button-holes on garments. Places required pattern on garment in correct position. Marks positions for button-holes with pencil or chalk on garments through holes in

pattern. May also mark positions for stitching buttons.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern Makers and Cutters

7532.1300

Cutter Tent

Cutter, Tent marks and cuts tent cloth according to specification. Studies design or specification and plans cut out of parts to avoid wastes. Marks outline of pattern with crayon or chalk and cuts material with scissors. May sew tent by machine or hand.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern Makers and Cutters

7532.9900

Garment and Related Pattern Makers and Cutters, Other

Textile, Leather and Related Pattern Makers and Cutters, Other include workers who make patterns and mark and cut textile, leather and other materials in the manufacture of garments, gloves and miscellaneous products not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7532
 Title Garment and Related Pattern Makers and Cutters

Family 7533

Sewing, Embroiderers and Related Workers

Sewing, embroidery and related workers sew together, repair, renovate and decorate garments, gloves and other products of textile, fur, light leather and other materials and fabricate tents sails, awnings and tarpaulins. They work mainly by hand using a needle and thread but may perform some tasks using a sewing machine.

7533.0100 Sewer, Hand

Sewer, Hand; Stitcher Hand; Hemming Boy sews together by hands parts of textile, fur and leather garments, furnishing and other textile and fur products using needle and thread. May repair garments, stitch buttons and do decorative stitching. May be designated according to type of article or material stitched such as SEWER, HAND (Fur); SEWER, HAND(Leather); SEWER, HAND(Garments); etc.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.0201 Hand Embroiderer, General

Hand Embroiderer, General sews ornamental designs by hand over printed or stencilled patterns on cloth using needle and coloured thread. Fastens embroidery hoop or frame over area of cloth to be worked to keep cloth taut while being embroidered. Threads needle with proper kind and colour of thread, embroiders along or over lines of printed or stencilled design on cloth using knowledge of various types of stitches required.

Qualification Pack Details:

QP NOS Reference AMH/Q1001
QP NOS Name Hand Embroiderer
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.0300 Hand Embroiderer, Zari/Hand Embroider, Traditional Crafts

Hand Embroiderer, Zari; Zari Worker; Zardozi Worker sews ornamental designs by hand over stamped or stencilled patterns on fabric, using special embroidery material (zari) such as kora, kangani, sadi, nakshi, beads, tikli, sitare, etc. Stitches 'baithan' (cloth which forms base) to string loops of 'Karchob' or 'adda' (embroidery frame), adjusts 'Karchob' so that 'baithan' is evenly taut on all sides. Stitches, cotton, wool or silk fabric to work on 'baithan' in frame. Stencil design to be embroidered on fabric. Cuts zari material into pieces of required size with scissors. Threads needle with yarn and stitches neatly 'zari' pieces and beads etc., of proper size, colour and kind over stencilled design on fabric to make required pattern. Removes embroidered fabric from frame. May trace designs on fabric.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.0600 Darner

Darner; Cloth Mender repairs defective or damaged portion of cloth or garment by hand using matching thread and needle. Spreads cloth or garment and checks it

thoroughly to locate defects and damages. Selects or dyes thread to match colour and shade of cloth to be darned. Removes miswoven threads or knots by nipper. Re-weaves or darns missing threads by needle, using thread of required shade and colour. Trims ends with scissors to make mended portion look uniform with pattern of cloth. May press darned cloth or garment with electric or ordinary iron.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.0700

Sewer, Tent (Hand)

Sewer, Tent (Hand); Tent Sewer (Hand) sews together by hand pieces of cloth or canvas to make tents. Lays pieces to be stitched back to back, places tape (niwar) between edges and temporarily stitches parts together leaving gaps for eyelets, loops and rope. Reshapes any portion not fitting properly and sews parts with final stitching. Stitches rope loops to bottom of tent. May stitch floral designs on tent, if desired.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.0800

Umbrella Maker

Umbrella Maker assembles complete umbrella by fixing various component parts such as collapsible metal frame, springs, and umbrella cloth, to stick. Uses jig to mark points on cane stick for cutting and fixing different fixtures. Uses saw to cut grooves of desired length. Affixes box cup to hold in closed position. Inserts

metal runner into stick for holding ends of ribs together and top spring grooves cut in stick. Fixes 'U' shaped nail in stick near top to stop metal runner going beyond limit. Assembles metal notch into stick and running metal wire through eyelets of ribs to keep ribs in secured position in notch. Fastens ribs to runner by wiring eyelets to runner. Fits other components such as leather washer, top cap and ferrule. Attaches handles by glueing to stick. Checks frame by opening and closing it to ensure its correct assembly. Is designated as TAKE WALLA if engaged in cutting umbrella cloth according to pattern and stitching or fixing to frame. May repair defective umbrella by replacing worn cloth or other component parts.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.0900

Umbrella Examiner

Umbrella Examiner examines finished umbrellas for proper assembly. Examines fitting to secure fastening and opens and closes umbrella to see that ribs and runners function smoothly. Gets defective parts replaces with new ones. May assemble and fit covers to umbrellas.

Qualification Pack Details:

QP NOS Reference

QP NOS Name

NSQF Level

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.1000

Sail and Awning Maker

Sail and Awning Maker lays out thick cloth, canvas and like materials, fabricates and assembles them into sails, awning (shamiana) and tarpaulins. Lays out full scale drawing on floor according to blue prints or sketches, using chalk. Cuts pattern from paper according to full scale drawing. Marks outline on material with crayon. Cuts material with shears or power cutter. Sews section of material together on power sewing machine. Installs grommets, metal fittings, and fasteners by machine or measures and marks off grommet holes, punches them and sews galvanized iron rings to edge of holes by hand. Splices, inserts and hems manila, wire rope or any other type of strong rope in edges to relieve strain. Secures rope or cable to finished article. Wraps and sews parts of rope or wire which are subject to chafing. Installs and adjusts completed product according to requirements. Stuffs padding material where necessary for protection. May be designated according to type of product made.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.1100

Tailor, Tent (Machine)

Tailor, Tent (Machine) sews or joins cloth pieces on machine to make tent. Assembles pre-cut pieces of tent cloth. Studies pattern of tent by examining each part and connecting them temporarily. Inserts proper size needle and cotton thread in machine. Overlaps adjacent segments and sews them together. Sews cord and tape and attaches rope at

required places to strengthen tent. Makes holes in tent at appropriate places and stitches around them to support bamboos. May cut tent cloth. May sew leather around stitched holes for strength.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.1200

Doll Maker

Doll Maker performs one or more hand or machine tasks in making of moulded or stuffed dolls or stuffed toys. Moulds doll parts from composition material by operating a press or stuffs previously sewn parts with cotton, excelsion or other material to give them shape; fastens legs and arms on to torso; affixes artificial eyes in head; secures head to shoulders by means of a shank collar so that head may be turned at will; dresses dolls by hand with under and outer garments, fastens them with hooks, buttons or ribbons. May be designated according to type of work performed.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

7533.9900

Sewers, Embroiderers and Related Workers, Other

Sewers, Embroiderers and Related Workers, Other include all other sewers, embroiderers and related workers engaged in other types of sewing and embroidery work, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7533

Title Sewers, Embroiderers and Related Workers

Family 7534**Upholsterers and Related Workers**

Upholsterers and related workers install, repair and replace upholstery of furniture, fixtures, orthopaedic appliances; seats, panels, convertible and vinyl tops and other furnishings of automobiles, railway coaches, aircraft, ships and similar items with fabric, leather, rexine or other upholstery material. They also make and repair cushions, quilts and mattresses.

7534.0100**Upholsterer, Furniture**

Upholsterer; Furniture installs, repairs or replaces upholstery of furniture. Removes old upholstery. Stretches and tacks new webbing to frame. Fastens springs by nailing them to frame and tying them to each other with cord. Covers springs with binding material, places cotton, rubber composition or other soft material over springs for padding, then tacks another layer of binding material to secure padding. Cuts covering fabric to size and tacks it in place. Tacks braid over end of covering material to conceal rough edges. May replace damaged springs, may do minor repairs to broken wooden parts of furniture and may sew covering material.

ISCO 08 Unit Group Details:

Code 7534

Title Upholsterers and Related Workers

7534.0200**Upholsterer, Orthopaedic Appliances**

Upholsterer, Orthopaedic Appliances installs, repairs and replaces upholstery of wheeled chairs, and makes and repairs other appliances for persons who are differently-abled (physical). Receives directions regarding type of upholstery or repair work to be done. Cuts and fits cotton, rubber foam moss, other padding materials, rexine, leather, etc. as required. Cuts and tacks hessian cloth, sets padding and fastens it in position. Measures and cuts covering material and tacks it in position. Trims excess materials and conceals edges by tacking leather or rexine tape. Replaces or repairs raw hide covering of artificial limbs. May renew upholstery of wheeled chairs and orthopaedic appliances. May repair shoes for deformed feet.

ISCO 08 Unit Group Details:

Code 7534

Title Upholsterers and Related Workers

7534.0300**Upholsterer, Vehicle**

Upholsterer, Vehicle installs covering and cushioning for seats and for other furnishings on motor cars, carts, railway coaches, aircrafts and other types of vehicles. Takes measurements for furnishings or works from drawings. Cuts out materials. Makes and fits springs, padding and covering to seats. Fits lining to roof, doors and other parts. Cuts out and fixes materials for excluding sounds and draughts. May lay floor covering and make and fit vehicle blinds and fabric roofs.

ISCO 08 Unit Group Details:

Code 7534

Title Upholsterers and Related Workers

7534.0400

Cushion Maker

Cushion Maker; Cushion Stuffer; Cushion Mat Maker makes cushion covers and stuffs them with moss, hair, feather, coir jute or cotton. Cuts upholstery cloth according to size of cushion and sews pieces together, leaving opening at one end. Stuffs material into cushion and beats cushion with hand or stick to make packing even. Sews open end of cover and stitches piping along edges to preserved shape of cushion. May repair and rebuild cushions. May be designated as MATTRESS MAKER if engaged in making mattresses.

ISCO 08 Unit Group Details:

Code 7534

Title Upholsterers and Related Workers

7534.0500

Mattress Maker (Spring)

Mattress Maker (Spring) pads and covers innerspring assemblies to form mattress. Cuts cover material, using cutting knife and scissors, and spreads and staples burlap, leno, or sisal cloth to both sides of innerspring assemblies. Spreads padding over sides of innerspring and tends tape-edge machine that sews cover over padding. Tufts mattresses by hand or by tending machine to hold padding in place. Sews roll edges on mattress by hand or by machine.

ISCO 08 Unit Group Details:

Code 7534

Title Upholsterers and Related Workers

7534.9900

Upholsterers and Related Workers, Other

Upholsterer and Related Workers, Other include all other upholsterers and related workers such as those engaged in cutting out or completely making curtains, pelmets, wall and furniture covers, quilts and other soft furnishings, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7534

Title Upholsterers and Related Workers

Family 7535

Pelt Dressers, Tanners and Fellmongers

Pelt dressers, tanners and fellmongers trim, scrape, clean, tan, buff and dye animal hides, pelts or skins to produce leather stock and finished furs for making garments and other products.

7535.0100

Sorter, Hides and Skin

Sorter, Hides and Skins sorts and grades hides and skins before or after processing. Examines hides for weight, thickness and colour and checks quality by touch; inspects hides for defects, such as bran into groups; selects hides suitable for processing; examines and grades processed hides rejecting and returning hides for reprocessing where necessary. May be designated according to material sorted as CALF SKIN SORTER, PATENT LEATHER SORTER.

ISCO 08 Unit Group Details:

Code 7535
 Title Pelt Dressers, Tanners and
 Fellmongers

7535.0200

Flayer

Flayer removes skin or hide of slaughtered or dead animal using different types of knives by cutting skin from tail end to neck on abdomen side and releasing skin from body by pulling by hand. Positions carcass of slaughtered or dead animal by suspending hind legs to a beam with rope or iron hooks at convenient height or laying it with legs turned upward on ground or work bench necessary to assist flaying; selects suitable knife and cuts skin from tail end to neck on abdomen; cuts tissues and separates skin from body; releases skin from body by cutting tissues and pulling skin gently with hand avoiding damage to skin; sprinkles water frequently to soften flesh to release skin from body by cutting tissues and pulling skin gently with hand avoiding damage to skin and to avoid damage while cutting and pulling. May remove head and forelegs of animals before flaying. May dress meat for consumption. May tan skins. May work as one of a team and be designated according to particular operation performed.

ISCO 08 Unit Group Details:

Code 7535
 Title Pelt Dressers, Tanners and
 Fellmongers

7535.0300

Lime Pitman, Leather

Line Pitman, Leather; Lime Yard Jobber; Paddle Man Leather prepares lime solution in pits, tanks or vats and treats hides and skins by thoroughly soaking

them in lime solution to soften hair for de-hairing. Fills pit or tank with required quantity of water; prepares lime solution by mixing specified quantity of lime powder with water; pours lime solution in pit or tank containing water and stirs with stick for proper mixing of solution with water; collects salted skins and cleans them with water to remove salt and other foreign matter; dumps cleaned skins in lime tank to soak thoroughly (completely immersed in lime solution for a specified time); changes positions of skins or hides periodically in tank to ensure that all skins and hides are properly soaked in all parts; transfers periodically lime soaked skins from tank to tank containing different strengths of lime liquor to complete cycle of proper treatment of skin for further processing, removes lime treated stock from tank and stalks them separately, empties and cleans tank. May de-hair skin or hide. May tan leather.

ISCO 08 Unit Group Details:

Code 7535
 Title Pelt Dressers, Tanners and
 Fellmongers

7535.0400

De-hairer, Hand

De-hairer, Hand removes hair from skin or hide soaked in lime water by hand, using blunt knife to prepare for further process of tanning. stretches wet hide over iron piece fixed in inclined position with hair side upward; scraps hair off hide using circular or two handled knife ensuring that skin is not damaged and all hairs are removed completely from skin; piles scraped hides. May remove superfluous flesh from skin.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.0500

Flesher, Hand

Flesher, Hand removes superfluous flesh and fat from de-haired skin or hide using sharp curved hand knife for further processing. Collects de-haired skin or hide from central point for fleshing. Places de-haired skin, stretching it by hand on beam (a curved piece of wood) with flesh side turned upward; holds knife with both hands and moves it downwards at inclined angle on fleshing surface to remove flesh and fat from skin taking care not to damage skin; changes position of skin on beam frequently for fleshing skin completely; places fleshed skins at central point. May be designated as BEAMER, LEATHER if engaged in removing flesh from hide or skin soaked in bark or myrobalan liquor. May sharpen knife on stone or machine.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.0600

Delimer

De-limer processes hides or skins treated with lime in fat-and-de-liming solution for required period to remove lime, reduce their swelling and make them flexible. Prepares de-liming solution in vat by mixing chemicals, acids and other de-liming materials in prescribed quantities in water; fills pit or tank with required amount of water and pours de-liming solution in tank; stirs solution and changes position of skin or hide in de-liming tank using wooden paddle; removes de-limed

leather after prescribed period; rinses de-limed skin or hide in water thoroughly; hangs skins to ooze out excess water; drains out used de-limed solution from tank; cleans tank with water and repeats process. May operate revolving drum for de liming skins and hides by filling drum with de-liming solution and dumping limed hide in drum.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.0700

Scudder, Hand

Scudder, Hand removes epidermis hair roots, pigment cells and lime salts from grain side of hide or skin, before tanning by hand, using double handled curved knife. Collects de-haired and fleshed skins or hides from central point for scudding. Places de-haired skin with grain side up on beam (a rounded board on which wet hides or skins are stretched to remove flesh and hair prior to tanning) stretching it by hand. Scrapes surface to remove hair roots, pigment cells and lime salts with double handled blunt knife. (scudding knife). Ensures that skin is not damaged or cut during process. Soaks scudded skin in water for a prescribed period; repeats process of scraping of left over hair and soaking in water till skin or hide is cleaned off hair roots, lime salts, etc.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.0900

Fluffer, Hand

Fluffer, Hand removes fluff from flesh side of skin by rubbing whole surface of skin with burnt stone or brick. Spreads skin stretched over table with flesh side upwards; rubs entire surface applying pressure by hand with burnt stone or brick to remove fluff from skin till surface of leather becomes smooth and soft.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1000

Staker, Hand

Staker, Hand softens leather end by placing it on blunt metal plate and by pulling it backwards and forwards over edge of stake. Conditions hides on previous day by keeping them in moist sawdust; inserts blunt metal plate (staking plate) over fixed rod; holds ends of skin or leather with both hands and rubs surface of leather vigorously back and forth over blunt blade to make it soft and pliable. May apply chemical solution to leather surface to make it soft preparatory to further process. May operate staking or glazing machine.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1100

Bark Pitman (Tanning)

Bark Pitman (Tanning) prepares bark and myrobalan liquor and treats hides or skins in them for tanning. Mixes prescribed quantity of tanning bark or myrobalan powder with water to make liquor or solution; pours prepared solution into pit

or vat containing water and agitates mixture vigorously with paddle; tests mixture for specific gravity and adds materials to mixture to obtain solution of specified gravity; immerses hides or skins in bark pit or vat placing one above other for a specified period to allow hides or skins to soak in solution; changes positions of hides or skins periodically in pit to ensure that all are properly saturated with tanning solution; removes hides or skins from bark pit after a specified period; extracts sample piece of leather and boils it in water to test completeness of tanning and continues tanning if necessary. Stacks or hangs them in shade for drying. May retain hides to restore colour lost in bleaching, splitting or other processes. May be designated according to type of tanning solution used as BARK TANNER; CHESTNUT TANNER; CHROME-TANNING WHEETMAN; OAK TANNER.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1200

Drum Man (Tanning)

Drum Man; Drum Operator (Tanning) operates rotary drum containing tanning solution to convert hides and skins into leather, according to specifications. Weighs tanning agents, such as bark powder or chemicals, following tanning formula; loads agents and hides or skins into drum; turns valve to fill drum with water, and turns steam valve to heat water to specified temperature observing meters and gauzes; locks drum door and moves lever to rotate drum for specified period of time; removes drum door, replaces it with grating, and rotates drum

to drain tanning solution through grating. May boil sample of tanned hide or skin in water to determine thoroughness of tannings. May specialize in particular type of tanning and be designated accordingly.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1300

Leather, Currier

Leather Currier treats tanned leather with fats and oils, softens it by flexing, rolls it under pressure for converting into finished form. Scrapes hide with tool to expel moisture and scum left from tanning; applies grease, oil, soap or other compounds to hide by hand or machine; softens hide by stroking it with knife blade, flexing it over rigid blade or by rolling it under pressure in machine; rubs hair side of hide against itself to bring out grain; removes rough spots and blemishes from hides by hand scraping or by machine; polishes hide by hand or machine. May also dye and stain leather. May operate staking, buffing and glazing machine.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1400

Dyer, Leather

Dyer, Leather; Colourer, Hides and Skins prepares colour solutions, dyes and stains to match specified colour samples or according to formulae and applies or supervises their application to dressed leather. Weighs and mixes specified

ingredients with water to prepare colouring solutions; pours colouring solution into tray or drum and adds oil (softening agent); pulls hide through tray until specified colour is obtained or places hides in drum and starts machine to tumble hides in solution for specified time; examines test piece of hide and bleach or further colouring if necessary to obtain desired effect; removes dyed leather; drains colour solution and washes drum and equipment. May be specifically designated as GLOVE DYER, VAT DYER, CHROME DYER, DRUM DYER.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1500

Embosser, Leather

Embosser, Leather; Embosser-Press Man; Embossing-Press Operator operates machine to imprint designs on leather or leather articles, such as wallets, cushion and key cases. Selects specified embossing plate, bolts plate into chase, positions and secures chase into ram of machine; turns switch or steam valve to heat plate to specified temperature according to type of leather; pulls level that lowers ram to impress designs on leather or article. May make bed for embossing plate, using card board and paper.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1600

Seasoner, Leather

Seasoner, Leather seasons leather by applying chemical solution or oil evenly on surface by hand brush and allowing it to dry in open air. Mixes different seasoning chemical compounds such as nitro cellulose, lacquer, resin, oil etc. in prescribed proportions; spreads leather on table; coats seasoning solution over surface of leather evenly using hand brush; hangs leather (seasoned) in open air for drying. Is designated as SPRAYER LEATHER if uses spray gun to spray chemical solution on leather to give desired pigment or dye finish.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1700

Pelt Dresser, General

Pelt Dresser, General prepares finished furs from raw pelts by de-fleshing with knife, removing superfluous hair; treating and pickling pelts with chemicals and solutions; simulating hairs with dyes, stretching and softening finished pelts etc. treats flesh side of skin with salt or other chemicals for preserving or tanning; scrapes particles from raw pelt with knife or stretches skin over fixed steel blade and works it back and forth, taking great care not to damage hair roots embedded in skin; tacks skin, fur side up, over beam, removes loose hair, and blattens fur by stroking it with double handled, blunt edged knife, occasionally dusting fur with powder to make hair more visible; evens length of fur over entire skin with thin, keen-edged knife, scissors or shears; treats skin with necessary chemicals and solution for preservation of hair on pelt; applies dyes to pelt with feather or brush to improve appearance of fur or to

simulate hair of another fur-bearing animal; smoothens and stretches dressed pelts and dries them in shade. May be designated as PELT GRADER; PELT DYER; PELT FINISHER, if engaged in grading and dyeing or finishing pelts only.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1800

Pelt Grader

Pelt Grader sorts fur or wool-bearing pelts before or immediately after they have been dressed. Compares untreated pelts visually and sorts them according to type, quality, size, colour and markings. Sorts pelts after they have been dressed, dyed or otherwise treated. May be designated according to nature of work, such as GRADER FUR; MATCHER FUR; etc.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.1900

Pelt Flesher

Pelt Flesher removes particles of flesh and fat from fur or wool-bearing pelts prior to curing or other processing. Scrapes particles from pelt with knife or stretches skin over fixed steel blade and works it back and forth, taking great care not to damage hair roots embedded in skin. May remove particles by use of power-operated revolving knife. May reduce thickness of hides by paring with machine or hand knife.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.2000

Pelt Plucker and Trimmer

Pelt Plucker and Trimmer removes long coarse hair from fur pelts and trims underlying hair to even length. Tacks skin, fur side up, over beam. Removes hair and flattens fur by stroking it with double-handled blunt-edged knife, occasionally dusting fur with powder to make hair more visible. Evens length of fur over entire skin with thin, keen edged knife scissors or shears.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.2100

Pelt Dyer, Hand

Pelt Dyer, Hand applies dye to fur-bearing pelts by hand. Applies dyes to felt with feather or brush to improve appearance of fur or to simulate hair of another fur-bearing animal. May spray dyes on fur, mix own dyes and be designated according to type of dyeing performed.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.2200

Pelt, Strecher

Pelt Stretcher stretches, or smoothens and stretches, skins of dressed pelts. Pulls softened and greased pelts over fixed blade by hand to enlarge area and smooth texture of skin. Stretches pelt by feeding it

through power-operated machine or by holding pelt flat on table with one hand and pulling it taut with other. May also finish pelt by fluffing, beating, brushing and combing fur.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

7535.9900

Pelt Dressers, Tanners and Fellmongers, Other

Pelt Dressers, Tanners and Fellmongers, Other include all other workers engaged in grading, fleshing, stretching, dressing, tanning, seasoning etc. not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7535

Title Pelt Dressers, Tanners and
Fellmongers

Family 7536 Shoemakers and Related Workers

Shoemakers and related workers make, modify and repair standard, custom or orthopaedic footwear and natural or synthetic leather articles, such as luggage, handbags and belts, (except for leather garments, hats and gloves), or participate in the manufacture of shoes and related goods. They decorate, reinforce or finish shoes, luggage, handbags and belts.

7536.0100

Shoemaker, Hand

Shoe Maker, Hand; Shoe Maker, General makes complete shoe or other footwear mainly of leather for each individual customer. Takes measurement of customer's feet and studies design of shoe or footwear to be made. Selects and estimates material required for making different components such as upper, lining, sole, etc. Marks leather components with patterns and cuts them with knife (rapi) ensuring accuracy and minimum wastage. Skives leather edges with skiving knife to reduce thickness of different sections to be joined together. Prepares and carefully applies cementing solution by brush at skived portion for joining, taking care not to splash solution on leather surface while joining. Glues lining to leather parts and sews sole, upper and other components by hand or sewing machine. Punches eyelet holes and inserts eyelets in position, for lacing, by hand or machine. Rolls and pulls upper on last, nails it, keeps perfect alignment of toe and heel and shapes it according to pattern by light hammering and stretching. Sorts out twists and applies wax on thread to make it stronger. Stitches sole and other portions using awl and waxes thread. Cuts and prepares heel and attaches it to sole by nailing. Trims and finishes edges of shoe using knife (rapi) and glass piece. Cuts and fixes thin inner-sole with glue. Applies colour or polish and gives finishing touches to shoes. Checks each pair of completed shoe for uniformity rectifies defects if any and puts them on lasts for retention of shape and form. May repair footwear.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.0200

Shoemaker, Orthopaedic

Shoe Maker, Orthopaedic makes complete footwear, mainly of leather, for customers with foot or leg deformities. Studies drawings and other specifications or takes necessary measurements to make footwear according to customer's need. Selects leather and gets special last made to suit necessity if required. Prepares patterns, chooses materials and cuts out parts by hand as per patterns made. Thins edges of parts of upper by cutting or shaving. Presses and bends parts into shape, glues lining to leather parts and sews them together. Punches eyelet holes and inserts eyelets. Tacks insole to last, pulls upper on to last to give it required shape and checks alignment of toe and heel of upper. Builds up sole where required, folds bottom of upper over edge of insole or built-up middle sole, fixes them together and fixes outer sole to upper. Builds up and fixes heel. Trims and smooths where necessary, applies inked wax stain or paint where required, inserts thin inner sole and gives final finish. May do ornamental nicking. May take plaster casts of deformed leg or foot and prepare drawings. May use prepared uppers with necessary modifications.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.0300

Shoe Repairer, Cobbler/Shoemaker Cobbler

Shoe Repairer; Cobbler; Mochi repairs and reconditions old, worn out and defective shoes, sandals, slippers, etc. using hand tools to make them serviceable. Carries own tools and materials goes round different localities, and collects worn out footwear from customers for repairs.

Examines defects, determines repairs to be done and settles repair charges with customer. Removes or cuts off worn out portion of footwear and repairs them by re-soleing (either full or half) attaching heels, stitching ripped seams, skiving and patching with new pieces of leather after softening in water, etc. as necessary, using. Knife (rapi) awl, hammer, last, nails, waxed thread, glass, etc. Fixes nails where necessary by placing shoe on iron last and ensures that sharp ends of nails are well bedded inside leather. Polishes shoes after repairs if desired by customer. May repair other leather articles. May work as paid employee at big repairing shops.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.0400

Pattern Maker (Foot Wear)

Pattern Maker (Footwear) prepares patterns for cutting or trimming parts of footwear. Makes temporary paper pattern of various parts of shoes, such as ramp, tongue, or toe-box by sketching part (using drawing or written directions as guide) and cutting around outline, or by fitting paper over shoe last to obtain contour. Stencils papers pattern into sheet metal, thin wood, or millboard, and saws out finished pattern. May bind edges of pattern with thin metal strip. May cut patterns for article other than shoes.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.0500

Cutter, Hand

Cutter, Hand; Clicker Hand (Foot-wear) cuts components of shoes from tanned hides. Selects and spreads on wooden clicking board leather of thickness and quality appropriate to component to be cut (heel, tongue, sole, toe-cap, etc.). Notes direction of stretch and any defective spots. Plans cutting to obtain maximum number of useable pieces from leather. Stretches leather, places tin pattern on it and cuts out pieces with knife, continuing cutting until leather is used up. Counts pieces cut, stamps them with his identification number and bundles them. Sharpens his cutting knives. May prepare his time sheets.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.0600

Skiver, Hand (Foot Wear)

Skiver; Hand (Footwear) tapers leather components of footwear with knife to reduce thickness of parts to be joined. Determines amount of tapering required on parts to be joined. Softens edges of leather in water and tapers (skives) thickness of edges by cutting off leather at angle with skiving knife. Matches parts skived by putting one over other to assure that they fit properly and that no ridge will be formed. May join components by adhesive and stitching.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.0800

Laster, Hand

Laster, Hand joins upper of shoe to sole by pulling upper over last and nailing to sole. Applies French chalk or wax to proper size and shape last to prevent stitching of lining. Tacks insole lightly to last; inserts shoe counter and toe-puff in upper; pulls upper on last and tacks to sole, checking frequently to avoid folds and wrinkles. May nail metal or bamboo shank to insole. May tack rand pieces and heel lift to seat. May mount sandals on last.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.1200

Counter Moulder

Counter Moulder; Stiffener Moulder (Footwear) operates counter moulding machine to mould counters or stiffeners (shoe component) to shape of heel. Sets mould of required shape and size in machine. Places counter or stiffener in (mould). Depresses foot pedal to start machine which bends and presses counter into required shape. Releases foot pedal and takes out mould at counter. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.1500

Sole Stitcher, Hand

Sole Stitcher; Hand; Sole Sewer, Hand (Footwear) sews out-soles to shoes by hand using sole-stitching awl (tool) and waxed cords. Collects out-soles and shoes to be stitched together. Sorts out thread, twists it into cord and draws it through wax ball to strengthen it. Positions outsole to shoe and marks guide line for stitching

around welt of shoe. Cuts groove manually with knife along guide line in sole if channelled stitch is required. Softens sole and welt with water to facilitate stitching. Pierces awl through welt and sole, draws one end of cord through hole, punches another hole and draws cord through hole from opposite direction to form lock-stitch. Levels sole when sewed to welt by beating it with hammer. Feels by touch and sight and ensures correct stitching of sole. Trims off edges of sole if necessary. May nail iron tips in sole. May operate welt grooving machine.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.1600

Heel Attacher, Hand (Foot Wear)

Heel Attacher, Hand (Footwear) fixes leather and rubber heels to shoes by driving nails with hammer. Collects heels to be attached according to size and shape of shoes. Selects well pointed nails of required size. Sets shoe on iron last (metal devices to hold shoes) with sole upward. Places heel on shoe and adjusts its position. Drives nails with hammer through heel and heel-seat to clinch them to insole. Checks frequently while nailing and ensures proper nailing and adjustment of heel to insole. Trims off edges of heels with knife to give desired shape. May attach iron-tips to heel.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.1700

Trimmer, Hand

Trimmer, Hand (Footwear) trims and smoothens edges of soles and heels of shoes using hand knives, glass pieces and sand paper. Examines shoe and determines extent of trimming required. Selects sharp edged glass pieces, knife and sand paper. Trims edges of soles and heel of shoe with knife. Scrapes trimmed portions of shoe with glass piece and rubs it with sand paper to make trimmed surface uniform and smooth. Checks trimming and scouring frequently while working to avoid damage to shoe and to ensure correct finish. May do trimming and scouring by machine. May colour edges of sole and heel with chemical dyes.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.1800

Harness Maker

Harness Maker makes and repairs harness by cutting, fitting and stitching parts together. Cuts various parts from leather stock according to design or pattern. Gives leather required colour and forms it by shaping; riveting, and trimming. Sews parts by hand or machine. Attaches buckles, rings and other metal devices to strap ends by looping over ends by stitching or riveting. Punches buckle holes in strap. Applies dressing to harness by hand. May repair items. May design patterns.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.1900

Saddler

Saddler; Saddle Marker makes new or repairs and adjusts old saddles. Cuts needed parts out of leather required size as per sample or pattern as guide quality and size. Stitches pieces into various saddle components by hand. Prepares saddle tree, web or woollen lining. Stuffs seat with sheep wool. Makes panels and fits different leather components to saddle by stitching, riveting or tacking as necessary. Trims excess thread, leather or wool. Colours edges and cleans saddle with soap. Repairs old and defective saddles by changing parts, trimming, stitching and making necessary adjustment. May design new patterns.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2000

Leather Cutter, Hand

Leather Cutter, Hand (Harness and Saddle Making) cuts leather pieces for use in making harness and saddles. Places pattern on hide and marks around with pencil. Cuts on marked lines, using saddlers knife (rapi). May cut leather pieces for other uses.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2100

Stitcher, Hand

Stitcher, Hand; Mochi (Harness and Saddle Making) makes and repairs leather belts and sews different leather parts of harness and saddlery. Selects leather and marks portion to be cut, using sample or pattern. Skives leather at seams and pricks marks on it to guide sewing. Applies wax

on thread and leather to facilitate stitching. Stitches pieces together with waxed thread to form required part for harness and saddle. Finishes side of leather using edging tool, creases line with hot creasing tool for decoration and hand punches holes where necessary. Affixes buckles and metal parts, scrapes or cuts away extraneous material and dresses and treats leather parts with leather soap, oil, etc. to effect finished appearance. Applies required colour and polishes to high finish.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2200

Assembler, Hand

Assembler, Hand (Harness and Saddle Making) joins leather parts to make harness and saddlery products. Skives (tapers) portions to be joined. Applies wax to facilitate stitching. Joins and assembles parts by hand stitching or nailing. Finishes sides of leather with edging tool. May put creasing lines on leather with hot creasing tool. May punch and bore fastening holes, and may give colour finish to assembled parts. May operate pricking machine.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2300

Suitcase Maker

Suit Case Maker makes suitcases, attache cases and similar articles from leather or synthetic material. Cuts two sets of component parts, one from leather or other basic material to be used and other from cardboard, using guides or patterns.

Glues together corresponding parts of cardboard and basic material. Assembles sections by gluing, machine sewing, riveting and otherwise fastening, affixes attachments such as rings, gussets, buckles, locks and handles. Applies dyes, and polishes and buffs. May design or copy patterns. May repair damaged articles. May finish edges of material and apply decorative marking by using heated edging and creasing tools.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2400

Purse Maker

Purse Maker; Wallet Maker; Document Case Maker makes purses, hand-bags, wallets, document cases, etc. from leather, rexine, plastic or other synthetic material. Marks measurements of different parts of article to be made on sheet of leather, plastic or other synthetic material and cuts them out with pair of scissors or rapi. Skives parts where necessary using skiving knife. Cuts grooves along edges and folds parts as required. Joins parts together with glue and stitches them along grooves on machine or by hand awl and cord making lock-stitches. Attaches handles, locks, straps, buttons, etc., and pastes lining cloth from inside. May perform decorative stitching where required. May attach steel frames.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2500

Whip Maker

Whip Maker makes leather whips by interlacing leather strips. Cuts leather strip of required length, width, and grelity into four strips leaving some portion uncut at end for handle. Trims, smoothens and interlaces strips and adds wax to hold them together. Shapes handle to complete whip. Colours and polishes entire whip.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2600

Belt Maker

Belt Maker makes and repairs leather belts, both for personal and industrial use. Follows sample or instructions and marks and cuts off needed leather pieces from roll. Skives (tapers) ends when pieces must be joined. Sews parts together, using waxed thread and awl to punch holes. Uses heated edging and creasing tools to aid in forming and decorating belt and hand tools to attach buckles, metal fixtures, and other parts. Trims belts with knife (rapi) and finishes it, by treating with oil, dyeing; and buffing. May make or repair canvas belts by stitching on leather parts, buckles and metal fixtures. May design new belts for personal use. May polish metal fixtures. May operate leather machines. May be designated as BELT MAN if engaged in repairing belts, installing them on motors and machinery, and fixing fasteners in factory or workshop.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.2700

Horn Comb Maker (Hand)

Horn Comb Maker (Hand) makes horn combs from buffalo horns by using hand tools. Selects horns to suit requirements. Marks and saws them to required sizes. Scraps out outer rough layer, heats pieces in oven to make these soft, applies oil on heated pieces, places them in wooden mould and rolls cylindrical wooden rod by hand to straighten them; shapes pieces to desired size and thickness by planing and cutting using adze and hand saw; marks edges to cut teeth and saws teeth at equal distances to required depth; sharpens teeth edges with file; smoothens surface with sand paper and applies wax to shine and finish. Sharpens his own tools. May make other fancy horn products.

ISCO 08 Unit Group Details:

Code 7536

Title Shoemakers and Related Workers

7536.9900

Shoe Maker and Related Workers, Other

Shoe Makers and Related Workers, Other include all other shoe makers and related workers who are engaged in making and repairing standard or special footwear and, except for leather garments, hats and gloves, make natural or synthetic leather articles, such as luggage, handbags, and belts, or participate in the manufacture of shoes and related goods not elsewhere classified. Plant and Machine Operators and Assemblers operate and monitor industrial and agricultural machinery and equipment on the spot or by remote control, drive and operate trains, motor vehicles and mobile machinery and equipment, or assemble products from component parts according to strict specifications and procedures.

ISCO 08 Unit Group Details:

Code 7536
Title Shoemakers and Related Workers

Group 754

Other Craft and Related Workers

Other craft and related workers work under the surface of water, using underwater breathing apparatus; position, assemble, and detonate explosives; inspect and test, raw materials, manufactured components and products; remove unwanted organisms to prevent damage to crops and buildings and other structures.

Occupations in this Group are classified into the following Families:

7541	Underwater Divers
7542	Shotfirers and Blasters
7543	Product Graders and Testers (Excluding Food and Beverages)
7544	Fumigators and Other Pest and Weed Controllers
7549	Craft and Related Workers, Not Elsewhere Classified

Family 7541 Underwater Divers

Underwater divers work under the surface of water, using underwater breathing apparatus to inspect, install, repair, and remove equipment and structures, conduct tests or experiments, rig explosives, photograph structures or marine life or find and recover missing items and persons.

7541.0100 Diver, Pearl

Diver, Pearl dives to sea bed to collect pearl oysters or chanks. Sets sail in boat and goes long distances on sea usually along with other divers, Rock Pilot and Man Duck. Removes sails of boat and anchors it in sea as directed by Rock Pilot. Dives to sea bed (50 to 60 feet in depth) by holding one end of rope, tied with heavy weight which is released into sea by Man Duck or someone else in boat. Releases hold on rope on reaching sea-bed, gathers by hand pearl oysters or chanks, and fills them in bag tied to his waist. Returns to surface of sea and hands over oysters or chanks to mate in boat. Repeats process to collect more oysters or chanks. May do chank diving during off seasons. May do deep sea fishing using different types of nets during off seasons. May operate power driven boats for fishing in deep sea waters.

ISCO 08 Unit Group Details:

Code 7541
Title Underwater Divers

7541.0200 Diver, Chank

Diver, Chank dives to sea bed to collect chanks used for making bangles and like articles. Sets sail on boat and goes out to sea along with other divers, Rock Pilot and Man Duck. Removes sail and anchors boat in Sea as directed by Rock Pilot. Holds one end of rope, fixed with heavy weight and released into sea and dives to sea bed. Releases hold on rope, collects chanks by hand and fills them in bag tied to waist. Returns to surface, hands over collection to mate in boat and repeats operation. May do pearl diving during pearl diving seasons. May operate power driven boats and do deep sea fishing.

ISCO 08 Unit Group Details:

Code 7541
Title Underwater Divers

7541.0300 Coral Breaker

Coral Breaker dives to sea-bed to break and collect corals using crow bar or sharp tool. Goes singly or with groups of Fishermen in boats to places where coral exists. Dives to sea bed (8 to 10 feet in depth) taking crow bar or sharp tool. Breaks blocks of coral found attached to rocks with crow bar or other sharp tool. Lifts released corals to surface, loads them in boat and brings them to shore. May also fish in deep waters and catch fish using different types of nets.

ISCO 08 Unit Group Details:

Code 7541
Title Underwater Divers

7541.0400 Shell Gatherer

Shell Gatherer dives to sea-bed and collects or gathers by hand molluscs, crustaceans and other fancy shells. Dives to sea-bed (20 feet in depth) and gathers by hand different types of shells such as clams, oysters, mussels, crabs etc. Comes to surface with catch and stores them. Repeats process as required. May gather sponges if desired. May operate power driven boats and fish in deep waters. May wash and clean shells. May go to sea shore at low tide and collect shell fish, crabs etc. from inshore area.

ISCO 08 Unit Group Details:

Code 7541
Title Underwater Divers

7541.0500 Seaweed Gatherer

Seaweed Gatherer collects by hand, from bottom of sea, different varieties of seaweed used for medicinal purposes. Dives to floor of sea (in shallow waters). Pulls out sea-weed attached to rocks and stores in boat. May collect sponges if required. May also fish in deep waters and catch fish using different kinds of nets or fishing tackles.

ISCO 08 Unit Group Details:

Code 7541
Title Underwater Divers

7541.0600 Dress Diver

Dress Diver dives and works below surface of water, using scuba gear (self-contained under water breathing apparatus) or in diving suit with airline extending to surface, to inspect, repair, remove and install equipment and structures. Puts on diving suit with airline extending to surface or equips with scuba gear and descends into water with aid of helper; inspects docks, and bottoms and propellers of ships; communicates with surface by signal line or telephone; repairs vessels below waterline, replacing missing or leaking rivets with bolts; caulk leaks in ships; cleans debris from intake and discharge strainers; assists in salvage of parts of wrecked ships and lost articles under-water. May cut and weld steel using oxyacetylene cutting torch and arc-welding equipment.

ISCO 08 Unit Group Details:

Code 7541
Title Underwater Divers

7541.0700 Skin Diver

Skin Diver dives into sea water for underwater examination of keel of ship, propellers, pipes, sandpipes and hopper doors of dredges etc., for suspected breakage or leakage and reports defects. Receives order from supervisors and goes to spot where diving is required, on launch. Ascertains depth of water by putting sounding lines and judges whether skin diving is feasible. Dives into water by holding on rope attached with heavy weight (sinker) and lowered into bottom of water and reports defects to supervisors. Rectifies minor defects and removes obstructions while under water, if possible.

ISCO 08 Unit Group Details:

Code	7541
Title	Underwater Divers

7541.9900

Underwater Divers, Other

Underwater Workers, other include workers who work under water, dressed in scuba gear or diving suit, to inspect, install, repair, and remove equipment and structures not elsewhere classified.

ISCO 08 Unit Group Details:

Code	7541
Title	Underwater Divers

Family 7542

Shotfirers and Blasters

Shotfirers and blasters, position, assemble, and detonate explosives at mining, quarrying and demolition sites.

7542.0100

Shot Firer

Shot Firer; Blaster; Dynamite Man conducts blasting operations in mines and quarries by charging drilled holes with requisite amount of explosives. Examines holes and areas to be blasted. Ensures that shot holes are properly drilled and cleaned before charging. Determines quantity and type of explosive to be used; loads shot hole with cartridges of explosive. Stems hole with clay, sand or other suitable stemming to prevent shot from blowing out. Signals Shot Firer Operative nearby to take safety measures. Couples fuse or cable to detonator lead. Splits end of fuses with knife or connects cable to electric exploder. Lights fuse or operates key of exploder to ignite explosive. Follows signal and restrains entry of workers at place of explosion before exploding and until atmosphere in area is free from dust, smoke or fumes. Directs Stone Duster to spread stone dust over roof floor and sides of roadways for suppressing coal dust explosives. Takes prescribed precautions in case of misfire. Maintains logbook for recording quantity of explosive used, number of shots fired and misfired, if any. May drill shot holes in quarries and mines using pneumatic or hand drills.

ISCO 08 Unit Group Details:

Code	7542
Title	ShotFirers and Blasters

7542.0101

Person Handling Explosives

Persons handling explosives, in open cast mines, is a part of the blasters sub-category. The individual performing this role facilitates mining operations by cautiously storing, transporting and handling explosives used for blasting in mines. Controlled blasting techniques are used to remove debris and over-burden in

order to make way for coal or other metals.

The nature of this job requires employees to follow extensive safety precautions therefore the individual has to be experienced and trained in safety procedures and guidelines for mining operations prescribed by DGMS.

Qualification Pack Details:

QP NOS Reference	MIN/Q 0405
QP NOS Name	Person Handling Explosives
NSQF Level	#N/A

ISCO 08 Unit Group Details:

Code
Title

7542.0200

Safety Lamp Checker

Safety Lamp Checker checks locks and air leakages of miners' safety lamps and searches persons against carrying any igniting material before going underground. Checks miners' safety lamps at pithead by blowing them with compressed air jet to ensure that they are properly locked and there is no leakage. Searches persons going underground against carrying any contrabands. May keep count of number of men underground by checking number of lamps issued and checked.

ISCO 08 Unit Group Details:

Code	7542
Title	Shot Firer and Blasters

7542.0300

Cobber, Mica

Cobber, Mica; Rifter, Mica; Shearer, Mica separates waste rock and inferior quality mica from crude mica pieces by hand or

with knife. Removes waste rock from crude mica pieces by manually splitting into layers with hand or knife. Examines mica blocks visually for damages, stains etc. and removes defects by chipping them out with knife. May dress mica blocks with sickle to remove impurities and inferior mica.

ISCO 08 Unit Group Details:

Code	7542
Title	Shot Firerers and Blasters

7542.0400

Sickle Dresser, Mica

Sickle Dresser, Mica; Cutter, Mica dresses cobbled mica blocks by chipping out broken and damaged portions with sickle for further processing. Examines mica blocks visually to detect defects, stains, etc. and determines damaged and broken portions to be dressed. Rifts defective layers, if necessary, and dresses it to different sizes by chipping out broken and damaged portions with sickle. May do knife dressing and grading of mica blocks.

ISCO 08 Unit Group Details:

Code	7542
Title	Shot Firerers and Blasters

7542.0500

Screener, Mica

Screener, Mica screens out loose split mica to desired sizes using rope-mesh-screen. Positions screen in inclined position. Drops loose split mica leaves at upper end of screen and shakes it with attached rope to allow small sized leaves to drop through screen holes and to get larger sized leaves collected at its foot. Removes large sized mica leaves from

screen frame for further processing or packing.

ISCO 08 Unit Group Details:

Code 7542
Title Shot Firerers and Blasters

7542.0600

Knife Dresser, Mica

Knife Dresser, Mica dresses sickle dressed mica blocks by slicing broken or damaged edges with knife. Weighs sickle dressed mica blocks. Examines them visually to detect stains, damages, etc. Dresses out blocks of desired sizes by slicing damaged edges with knife, ensuring minimum possible wastage. Weighs dressed mica blocks to determine amount of resulting wastage. May sort and grade dressed mica blocks.

ISCO 08 Unit Group Details:

Code 7542
Title Shot Firerers and Blasters

7542.0700

Film Splitter, Mica

Film Splitter, Mica; Condenser, Mica splits dressed and graded mica blocks into films of desired thickness by hand or using double edged knife. Examines blocks to determine uniformity of dressing and re-splits them, if necessary by hand or knife into films of desired uniform thickness. Measures thickness of films with micrometre and sorts them into pliers according to thickness. Cuts films to specified shape and measures area with gauges to ensure conformity with specification. May be designated as Loose Splitter if engaged in splitting up loose mica blocks into leaves by hand and as Book Form Splitter if engaged in splitting

graded mica blocks with double-edged knife.

ISCO 08 Unit Group Details:

Code 7542
Title Shot Firerers and Blasters

7542.0800

Deep Cell Attendant

Deep Cell Attendant; Flotation Man controls floatation process in concentration plant to recover copper from pulp (pulverized ore mixed with water). Measures density and alkalinity of pulp using meters and indicators to ensure proper floatation. Regulates airflow into concentration plant to agitate pulp and regulates water supply into cells as guided. Records data of pulp density, reagent feed, alkalinity, airflow etc. and submits them to appropriate authority.

ISCO 08 Unit Group Details:

Code 7542
Title Shot Firerers and Blasters

7542.9900

Shot Firers and Blasters, Other

Shot Firers and Blasters, other perform variety of routine and low skilled tasks such as carrying explosive, detonator and fuses holding light or torch for Shot Firer cleaning holes and danger areas, conveying messages of accident and misfire, picking shot holes with explosives, preparing clay balls, cleaning and dressing loose stuff etc. and may be designated as Explosive Carriers carries explosive in rocked containers. Short Fire Helper; Blaster Helper assists shot Fire in charging holes and guarding place of work etc. Stone Duster spreads stone dust over roof, floor and sides of roadways for suppressing coal dust explosions.

ISCO 08 Unit Group Details:

Code 7542
Title Shot Firerers and Blasters

Family 7543**Product Graders and Testers
(Excluding Food and Beverages)**

Product graders and testers (except foods and beverages) inspect, test, sort, sample, and weigh raw materials, manufactured components and non-comestible goods produced or sold, to ensure compliance with quality standards and to identify defects, wear, and deviations from specifications, and to grade and classify them according to their quality.

7543.0101**Cloth Examiner/Fabric Checker**

Cloth Examiner; Cut Looker; Table Folder; Piece Examiner (Cotton Textile) examines cloth received from Folder, Machine for defects and checks width and yard-age. Compares quality (sometimes using a magnifying glass) and yardage etc. of each piece of cloth with list supplied to him and notes discrepancies. Checks every fold for defects and puts aside defective cloth to be shown to Weaver Power loom. Marks yardage, quality and his own number on cloth with pencil.

Qualification Pack Details:

QP NOS Reference AMH/Q0101
QP NOS Name Fabric Checker
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0201**QC Executive-Sewing Line**

QC Executive-Sewing Line is responsible for ensuring that physical inspections are conducted at all stages of production to secure quality and check that all technical details are received; verified and signed off prior to starting production. QC executive also establishes quality plans, parameters and inspection systems, records deviations and sends feedback to the concerned department.

Qualification Pack Details:

QP NOS Reference AMH/Q1401
QP NOS Name QC Executive-
Sewing Line
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0202**Quality Assessor**

Quality Assessor should be able to carry out Quality control/Quality assurance processes, understanding product and processes required at various stages of production for meeting the expectations of final customers.

Qualification Pack Details:

QP NOS Reference AMH/Q1701
QP NOS Name Quality Assessor
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0300

Examiner, (Footwear)/Quality Controller

Examiner (Footwear) examines finished and unfinished shoes and shoe components for faults. Inspects items for defects such as irregularity of surface, misplaced or incompletely driven tacks, uneven or defective stitching, improperly proportioned toe-tip. Returns items with major defects for reprocessing. May correct minor defects with hand tools. May be designated according to part of shoe inspected or department in which employed such as HEEL EXAMINER (FOOTWEAR), LINING EXAMINER (FOOTWEAR), UPPER EXAMINER (FOOTWEAR), CLOSING EXAMINER (FOOTWEAR), FINAL EXAMINER (FOOTWEAR), etc.

ISCO 08 Unit Group Details:

Code 7543

Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0301

Measurement Checker

Measurement Checker inspects the accuracy of the dimensions of the stitched parts and the finished apparel. The primary responsibility of a Measurement checker is to measure all the dimension of the apparel and ensure they are free from defects.

Qualification Pack Details:

QP NOS Reference AMH/Q0103
QP NOS Name Measurement
Checker
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543

Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0302

Inline Checker

In-Line checker is an important job-role associated with Apparel sector. The primary responsibility of a checker is to identify the faults in the fabrics, cut components and garment parts through visual inspection.

Qualification Pack Details:

QP NOS Reference AMH/Q0102
QP NOS Name In-Line checker
NSQF Level 3

ISCO 08 Unit Group Details:

Code 7543

Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0400

Examiner, Dry Cleaning/Fabric Inspection Operator

Examiner, Dry-cleaning examines garments, textile furnishings or any other similar articles after dry-cleaning to detect and remove spots, stains or damage caused by process. Examines garments after dry cleaning for defects and damage. Passes on defective articles to Spot Remover or to Darner according to nature of defect for mending. May get garments washed or dry-cleaned afresh.

ISCO 08 Unit Group Details:

Code 7543

Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0500

Examiner, Wood Working

Examiner, Wood Working; Viewer Wood Working; Wood Grader examines wood and finished wooden articles on completion or at different stages of production and ensures adherence to prescribed tolerances and specifications. Studies drawings and specifications and notes types of articles to be made. Examines type and quality of wood for grains, knots etc. for grading and to ensure adherence to prescribed specifications. Checks marking, sawing, shaping, joining, setting etc. along with drawing or sample using foot rule, callipers and other instruments at various stages of production and ensures required finish of completed article. Records defects where noticed, rejects defective pieces or suggests rectifications, if possible. May check machine set up, blending of patches, inlaying, seasoning of wood and like factors for manufacture of particular items such as sports goods, cabinets, furniture, rifle butts etc. May estimate material and labour cost.

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0701

Incoming QC Technician

Incoming Quality Check Technician checks sub-assemblies and modules received from suppliers for physical and functional match of specifications to ensure that defect-free components are used in production. The individual at work is responsible for checking quality check on the components and modules procured from suppliers for production of hardware equipment. The individual performs physical and functional quality check processes on the components and

modules and ensure QC passed components is used for hardware assembling.

Qualification Pack Details:

QP NOS Reference ELE/Q4401
QP NOS Name Incoming QC
Technician
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0702

Final Product QC Technician

Final Product Quality Check Technician checks functional output of the assembled hardware equipment against pre-defined specifications. The individual at work is responsible for checking the various functions of the hardware equipment and ensure it meets the defined specifications. The individual performs physical and functional quality checks on the assembled product and ensure only QC passed equipment is sent for packing.

Qualification Pack Details:

QP NOS Reference ELE/Q4402
QP NOS Name Final Product QC
Technician
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.0801

Functional Tester

Functional Tester is responsible for checking functions of manufactured

industrial equipment such as UPS, inverter, energy meter, PLC, oscilloscope, control panel. The individual at work tests specified functions of every product being assembled on the production line.

Qualification Pack Details:

QP NOS Reference	ELE/Q7401
QP NOS Name	Functional Tester
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7543
Title	Product Graders and Testers (Excluding Food and Beverages)

7543.0802

Performance Tester

Performance Tester checks samples of the final assembled product for key performance parameters under simulated conditions. The individual at work tests performance parameters of UPS, energy meter, PLC and other industrial equipment for a randomly selected sample of products and ensures that they are within acceptable ranges.

Qualification Pack Details:

QP NOS Reference	ELE/Q7402
QP NOS Name	Performance Tester
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7543
Title	Product Graders and Testers (Excluding Food and Beverages)

7543.0803

Reliability Tester

Reliability Tester is responsible for ensuring the long term performance of a product. The individual at work, tests the modules such as power supply or PCB of

UPS, inverter, PLC, control panel, and other units under extreme specified conditions to check stress test pass or failure rate.

Qualification Pack Details:

QP NOS Reference	ELE/Q7404
QP NOS Name	Reliability Tester
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7543
Title	Product Graders and Testers (Excluding Food and Beverages)

7543.0804

Safety Testing Technician

Safety Testing Technician is also called, 'Safety Inspector', the Safety Tester is responsible for assuring that the appliance meets prescribed safety standards. The individual at work, tests safety parameters of the assembled UPS, inverter, energy meter, PLC, oscilloscope, control panel and automation units as per BIS or other standards.

Qualification Pack Details:

QP NOS Reference	ELE/Q7403
QP NOS Name	Safety Testing Technician
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7543
Title	Product Graders and Testers (Excluding Food and Beverages)

7543.0901

Functional Tester-Medical Devices

Functional Tester conducts tests on medical devices at different stages of the manufacturing process in order to check their conformance with the device's

defined performance parameters. The individual at work is responsible for testing the medical devices for pre-defined functional specifications, quality parameters and check them against the performance parameters of that device.

Qualification Pack Details:

QP NOS Reference ELE/Q7803
 QP NOS Name Functional Tester-
 Medical Devices
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.1001

Functional Tester-RAC

Functional Tester-RAC is also called, 'Product Inspector', the Functional Tester checks all the functions of the manufactured product before dispatch. The individual at work tests all the functions of the assembled product as per product specifications, either on sample or entire lot. Any defective product passed back on to the in-line repair team.

Qualification Pack Details:

QP NOS Reference ELE/Q3601
 QP NOS Name Functional Tester-
 RAC
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.1002

Functional Tester-TV

Functional Tester TV is also called, 'In-line Product Inspector' the Functional Tester is responsible for quality check during television set assembly. The individual at work tests all the specified functions of each television set assembled on the line. The individual returns any defective product or module to the in-line repair team.

Qualification Pack Details:

QP NOS Reference ELE/Q3602
 QP NOS Name Functional Tester-
 TV
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.1003

Safety Testing Technician-TV

Safety Testing Technician-TV is also called, 'Safety Inspector', is responsible for assuring that the TV set meets prescribed safety standards. The individual at work, tests safety parameters of the assembled refrigerator or air conditioner or washing machine or other home appliances as per BIS, ISI or other standards.

Qualification Pack Details:

QP NOS Reference ELE/Q3603
 QP NOS Name Safety Testing
 Technician-TV
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.1004

Safety Testing Technician-RACWO

Safety Testing Technician-RACWO is also called, 'Safety Inspector', the Safety Testing Technician is responsible for assuring that the appliance meets prescribed safety standards. The individual at work, tests safety parameters of the assembled refrigerator or air conditioner or washing machine or other home appliances as per BIS or other standards.

Qualification Pack Details:

QP NOS Reference	ELE/Q3605
QP NOS Name	Safety Testing Technician-RACWO
NSQF Level	3

ISCO 08 Unit Group Details:

Code	7543
Title	Product Graders and Testers (Excluding Food and Beverages)

7543.1005

Performance Tester-RACW

Performance Tester is responsible for checking energy consumption and functional durability aspects of cooling, heating or duty cycle of sample refrigerator, air-conditioner, washing machine and other home appliances as per test standards such as ISO and company's guarantee. The individual at work runs simulation tests on the appliance to check its performance and reliability in terms of parameters such as energy consumption, temperature, vacuum and pressure, and duty cycle.

Qualification Pack Details:

QP NOS Reference	ELE/Q3606
QP NOS Name	Performance Tester-RACW
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7543
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Title	Product Graders and Testers (Excluding Food and Beverages)
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7543.1006

Performance Tester-TV

Performance Tester-TV is also called, 'Performance Inspector', responsible for checking audio-visual performance aspects of TV with respect to picture and sound quality as per guaranteed specifications. The individual at work runs simulated tests to check performance parameters of the TV set as per company recommended or international standards.

Qualification Pack Details:

QP NOS Reference	ELE/Q3607
QP NOS Name	Performance Tester-TV
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7543
Title	Product Graders and Testers (Excluding Food and Beverages)

7543.1101

Testing Technician

Testing Technician is responsible for checking that the assembled and encapsulated component functions as per input and output specifications. The individual at work operates the automated test machine or checks manually on jigs, the components for functioning as per specifications.

Qualification Pack Details:

QP NOS Reference	ELE/Q1801
QP NOS Name	Testing Technician- Active components
NSQF Level	4

ISCO 08 Unit Group Details:

Code	7543
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Title Product Graders and Testers
(Excluding Food and Beverages)

7543.2001

Quality Inspector-forged, casted or machined components

Quality Inspector-forged, casted or machined components checks the forged, casted and machined components for both dimensional accuracy and for visual quality at various stages of manufacture, such as before production, intermediate and after production and recording the results of the inspection during and after the inspection activities.

Qualification Pack Details:

QP NOS Reference CSC/Q0601
QP NOS Name Quality Inspector-forged, casted or machined components
NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.3001

Quality Control Inspector-Calendering

Quality control Inspector-Calendering in this role is responsible for controlling the quality of the product during the calendering process.

Qualification Pack Details:

QP NOS Reference RSC/Q 0730
QP NOS Name Quality Control Inspector-Calendering
NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.3002

Quality Control Inspector-Dimension check

Quality Control Inspector-Dimension check carries out dimension checks to ensure conformance to dimensions of rubber product.

Qualification Pack Details:

QP NOS Reference RSC/Q 0418
QP NOS Name Quality Control Inspector-Dimension check
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.3003

Quality control Inspector-Extrusion

Quality Control Inspector-Extrusion in this role is responsible for controlling the quality of the product during the extrusion process.

Qualification Pack Details:

QP NOS Reference RSC/Q 0624
QP NOS Name Quality Control Inspector-Extrusion
NSQF Level 5

ISCO 08 Unit Group Details:

Code 7543
Title Product Graders and Testers
(Excluding Food and Beverages)

7543.3004**Quality Control Inspector-Statistical process control**

Quality Control Inspector-Statistical process control carries out Statistical process control by collecting different production related data and use appropriate technique to carry out statistical analysis.

Qualification Pack Details:

QP NOS Reference RSC/Q 0416
 QP NOS Name Quality Control Inspector-Statistical process control
 NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.3005**Quality Control Inspector-Visual Inspection**

Quality Control Inspector-Visual Inspection is responsible for inspecting the quality of rubber product visually and identify defects, if any.

Qualification Pack Details:

QP NOS Reference RSC/Q 0417
 QP NOS Name Quality Control Inspector-Visual Inspection
 NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.4001**Factory Compliance Auditor**

Factory Compliance Auditor is responsible for conducting regular audits in the apparel factory to check if the unit is functioning in accordance to the industry regulations, standards and policies. The Compliance Auditor prepares a detailed report of the audit findings with remarks on system adequacy, system conformance or deviation if any, and overall system performance.

Qualification Pack Details:

QP NOS Reference AMH/Q2201
 QP NOS Name Factory Compliance Auditor
 NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.5001**Sampling Co-ordinator**

Sampling Co-ordinator plans, handles and monitors new product development, regular follow up with all sampling like: proto sample, size sets, fit samples and photo shoot samples.

Qualification Pack Details:

QP NOS Reference AMH/Q 1801
 QP NOS Name Sampling Co-ordinator
 NSQF Level #N/A

ISCO 08 Unit Group Details:

Code 7543
 Title Product Graders and Testers
 (Excluding Food and Beverages)

7543.9900**Product Graders and Testers,
Others**

Product Graders and Testers, Others include graders and testers who inspect, test, sort, sample, and weigh raw materials, manufactured components and non-comestible goods produced or sold, to ensure compliance with quality standards not elsewhere classified.

ISCO 08 Unit Group Details:

Code 7543

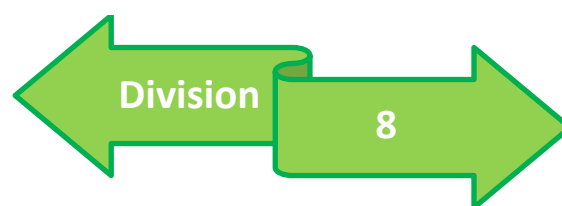
Title Product Graders and Testers
(Excluding Food and Beverage)

Family 7544**Fumigators and Other Pest and
Weed Controllers**

Fumigators and other pest and weed controllers use chemicals to remove harmful insects, small animals, wild plants and other unwanted organisms to prevent damage to crops and to buildings and other structures and their surroundings and to prevent health risks.

Family 7549**Craft and Related Workers, Not
Elsewhere Classified**

This family covers craft and trade occupations not classified elsewhere in Division 7, Craft and related trades workers. For instance, the family includes those who mould, slice, grind and polish optical lenses.

**Plant and Machine Operators, and
Assemblers**

Plant and Machine Operators, and Assemblers operate and monitor industrial and agricultural machinery and equipment on the spot or by remote control, drive and operate trains, motor vehicles and mobile machinery and equipment, or assemble products from component parts according to strict specifications and procedures. The work mainly calls for experience with and an understanding of industrial and agricultural machinery and equipment as well as an ability to cope with machine-paced operations and to adapt to technological innovations.

Tasks performed by Plant and Machine Operators and Assemblers usually include: operating and monitoring mining or other industrial machinery and equipment for processing metal, minerals, glass, ceramics, wood, paper, or chemicals;; operating and monitoring machinery and equipment used to produce articles made of metal, minerals, chemicals, rubber, plastics, wood, paper, textiles, fur, or leather, and which process foodstuffs and related products; driving and operating trains and motor vehicles; driving, operating and monitoring mobile industrial and agricultural machinery and equipment; assembling products from component parts according to strict specifications and procedures. Supervision of other workers may be included.

Occupations in this Division are classified into the following Sub Divisions:

81	Stationary Plant and Machine Operators
82	Assemblers
83	Drivers and Mobile Plant Operators

Sub Division **81** **Stationary Plant and Machine Operators**

Stationary Plant and Machine Operators operate and monitor, on the spot or by remote control, industrial plant and machinery and equipment that are stationary, or for which mobility is not an integral part of operation. The work mainly calls for experience with and an understanding of the industrial plant, machinery or equipment being operated and monitored. Ability to cope with machine-paced operations and to adapt to innovations in machinery and equipment is often required.

Tasks performed by workers in this sub-major group usually include: setting up, operating and monitoring a variety stationary plant and machinery; detecting malfunctions and taking corrective action; examining outputs for defects and conformity to specifications and adjusting machine settings accordingly; performing maintenance, repairs and cleaning; recording data and maintaining production records. Supervision of other workers may be included.

Occupations in this Sub Division are classified into the following Groups:

811	Mining and Mineral Processing Plant Operators
812	Metal Processing and Finishing Plant Operators
813	Chemical and Photographic Products Plant and Machine Operators
814	Rubber, Plastic and Paper Products Machine Operators
815	Textile, Fur and Leather Products Machine Operators
816	Food and Related Products Machine Operators
817	Wood Processing and Paper Making Plant Operators
818	Other Stationary Plant and Machine Operators

Group **811** **Mining and Mineral Processing Plant Operators**

Mining and Mineral Processing Plant Operators operate and monitor plant and machinery which extract rock and minerals from the earth, process minerals and stone, drill wells and bores, and manufacture and finish cement and stone products.

Occupations in this Group are classified into the following Families:

8111	Miners and Quarriers
8112	Mineral and Stone Processing Plant Operators
8113	Well Drillers and Borers and Related Workers
8114	Cement, Stone and Other Mineral Products Machine Operators

Family **8111** Miners and Quarriers

Miners and Quarriers operate plant, machinery and hand tools to extract rock, minerals and non-metallic deposits from underground and surface mines and quarries.

8111.0100

Miner, Coal Cutting Machine

Miner, Coal Cutting Machine, Coal Cutting Machine Driver; Coal Cutting Machine man sets and operates electric or pneumatic coal cutting machine for loosening coal working face for blasting by undercut below seam up to specified depth. Moves machine with accessories to working place with assistance of Mining Operatives. Sets it in position to make undercut below seam up to specified depth. Manipulates levers to start motion of endless cutting chain on cutter bar and effect forward movement of machine. Advances cutter bar into working face to cut coal and repeats operation to make other cuts across or down side of working face as desired. Lubricates, adjusts and makes minor repairs to machine as required.

ISCO 08 Unit Group Details:

Code 8111

Title Miners and Quarriers

8111.0200

Driller, Machine

Driller Machine; Machine Runner Driller, Jack Hammer drills shot holes of required depth and diameter according to marking in coal minerals, metallic and non-metallic rock faces by electric or petrol engine or compressed air drilling machine as

directed according to depth and diameter of hole to be drilled. Operates drill to bore holes of required depth by moving machine backward and forward, if necessary, moves machines to other points and repeats operations to make other holes. Replaces blunt or damaged cutting bits, if necessary. May operate jackhammer to drill holes. May sharpen drill-bits.

ISCO 08 Unit Group Details:

Code 8111

Title Miners and Quarriers

8111.0300

Waggon Driller

Waggon Driller; Churn Driller, Deep Hole Driller operates waggon or churn drill to make deep holes of large diameters in hard or soft rock faces for blasting. Installs and adjusts position of machine. Fits appropriate drill-bit in drilling machine. Operates drilling machine at regulated feed, speed and pressure to drill hole. Stops machine and raises drilling rod out of hole when one bar length is drilled. Adds rod lengths as required and continues operation to drill hole up to required depth. Replaces blunt or damaged drill bits as required. May do minor running repairs to machine. May also sharpen drill bit when required and if possible.

ISCO 08 Unit Group Details:

Code 8111

Title Miners and Quarriers

8111.0400

Diamond Driller

Diamond Driller drills earth strata at specified site up to prescribed depth to locate or prospect underground minerals

using diamond drill. Installs machine at specified site. Sets direction and angle of drilling rod against working face. Controls and regulates bit-pressure, rate of feed, speed of drill and flow of water into hole through bit. Adds rod lengths to drilling bits as and when required. Drives metal pipes and casing of pipes through hole at regular intervals to avoid caving. Submits core samples (extracted soil during drilling) for analysis. Keeps correct log (records) of holes drilled and drills used. May lubricate and make minor repairs to machine.

ISCO 08 Unit Group Details:

Code	8111
Title	Miners and Quarriers

8111.0401

Rig Mounted Drill Operator

Rig Mounted Drill Operator drives and operates a drill machine which is a self-propelled machine used to drill shallow as well as deep holes in the soil and rock for blasting or for quarry operations. The holes are caused by crushing under percussion and/or by drill bit rotation causing abrasion. The drill operates on pneumatic hydraulic system and uses compressed air as power source. Operating a drill is a specialized task that can be safely performed only with adequate training and experience. Drill Operators are also responsible for performing basic maintenance on the machine.

Qualification Pack Details:

QP NOS Reference	MIN/Q 0402
QP NOS Name	Rig Mounted Drill Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code

Title

8111.0500

Pick Miners

Pick Miner extracts coals diamond, metal ore etc. by cutting working face of mine with pick axe where machine mining is not economical or possible. Examines working face. Cuts into seam on sides and floor using pick to loosen rock. Dresses roof and sides of working face, when blasting is complete to remove loosened rock. Breaks bigger rock lumps into smaller size fills basket with broken ore and loads ore into mine cars for transportation to haulage point. May make undercut below coal seam, clear under cut for drilling and blasting and also push loaded cars to haulage point. May be designated as MINER PICK AXE HAND CUT MINER, HAND CUTTER, FLOOR COAL CUTTER in case of coal mining and MINE DIGGER if engaged in diamond mining.

ISCO 08 Unit Group Details:

Code	8111
Title	Miners and Quarriers

8111.0600

Miner, Metal

Miner, Metal extracts metal ores in underground or open cast mines by breaking blasted slabs, dressing roof sides and working face with crowbar, hammer, shovel and pick axe. Strikes working face with crowbar or pick-axe to loosen and drop metal ores. Cuts floor ores with pick-axe and dresses sides properly. Breaks large pieces into smaller ones with sledge hammer, shovels metal ores into baskets and empties them into Chats (large tubes) for onward transmission for processing. May drill hole in roof face using crowbar

and hammer to prepare working face for blasting. May separate ore from impurities. May be designated as MUCKER or MUCKING WORKER if engaged in copper mines.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.0700

Miner, Mica

Miner, Mica extracts crude mica from working face in mica mine with chisel and hammer after blasting. Strikes working face with chisel and hammer to extract mica after it has been loosened by blasting. Dresses roof and sides to extract loosened mica blocks. May fill bags with mica blocks for transportation to factory. May drill holes in working face for blasting. May blast mica bearing veins with explosives during hand cutting.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.0800

Miner, Coal

Miner. Coal; Coal Cutter; Coal Puller extracts coal from coal pillars inside mines using crowbar and pick-axe after coal pillars are blasted by Shot Firer. Strikes sides of pillar with pick-axe or crowbar to loosen and drop coal from pillars. Cuts working face with pick-axe and dresses hanging coal from roof and sides with crowbar. Breaks coal lumps to convenient sizes and shovels them into tubs. May set loaded tubs on tram lines. May be designated as C. P. MINER (Coal Pillar Mines) if does charging and blasting of

shot holes as well; and as MINER DE-PILLARING if gets it done by Shot Firer.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.0900

Quarryman, Stone/Quarryman, Non-metal

Quarryman, Stone; Miner Stone, extracts various kinds of stone from quarries or open pits. Removes loose soil and mud from surface and sides of blasted deposits using shovel. Removes slabs of stones from earth with crowbar, wedge or pick and breaks them into convenient size using sledge hammer Dresses rough surface of stone and granite blocks by chipping and cuts them as instructed to required shape and size. May drill shot holes in quarry face for blasting. May sort out ore and mineral according to quality.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1000

Quarryman, Other

Quarryman, other extracts china clay, lime stone, fire clay and other non-metal deposits from quarry by cutting breaking etc. using pick axe, crow bar, spade and other tools. Digs soil to reach deposits. Drills specified shot holes of required depth in rock faces for blasting by SHOT FIRER. Extracts lime stone, china clay, fire clay and other deposits from blasted quarry faces using shovel pick axe, crowbar etc. Breaks large pieces in to convenient size with hammer and gets them removed or specified place. May charge and ignite explosive. May

specialize in extracting china clay using pick axe, shove land spade. May carry basket filled with china clay to specified place. May dewater quarry with pump or bucket, remove mud and perform alike duties if required.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1100

Main Header Colliery

Main Header, Colliery construct narrow roads for opening new works, cuts air passages and blocks old roads in coal mine. Receives instructions on dimension and location of gallery (Tunnel or passage in coal mine) to open new work. Cuts tunnel passage according to specification using mechanical devices and hand tools, inserting pipe range for pumping operations, exploring strata to know behaviour of roof, etc. Cuts air passages and blocks old roads by drilling, blasting etc. Shovels coal, rock and refuse from corners and working areas into cars to prevent interference with mining operations and circulation of air. May also be engaged in shaft sinking.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1200

Stone Cutter, Mines

Stone Cutter, Mines makes holes or cuts stone or rock faces in mine with machine or hand tools such as power drill, crowbar, chisel etc. for putting up support or constructing brick foundation. Marks portion of roof and footwall to be cut for insertion of prop. Cuts face of hitches

underground and makes hole to desired depth according to diameter to prop, using power drill, crow bar, chisel hammer etc. Removes rubbish and erects roof supports. May drill shot holes for bringing down roof or blowing floor. May build roadways and pack walls of air ways.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1300

Roof Bolter, Mining

Roof Bolter, Mining operates machinery to install roof support bolts in underground mine. Drill bolt holes into roofs at specified distances from ribs or adjacent bolts. Forces bolts into holes, using hydraulic mechanisms of self-propelled bolting machines. Installs truss bolts traversing entire ceiling spans. Positions bolting machines, and insert drill bits into chucks. Positions safety jacks to support underground mine roofs until bolts can be installed. Removes drill bits from chucks after drilling holes, then inserts bolts into chucks. Rotates chucks to turn bolts and open expansion heads against rock formations. Tests bolts for specified tension, using torque wrenches. Tightens ends of anchored truss bolts, using turnbuckles.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1400

Mine Cutting and Channelling Machine Operator

Mine Cutting and Channelling Machine Operator operates machinery, such as longwall shears, plows, and cutting

machines to cut or channel along the face or seams of coal mines, stone quarries, or other mining surfaces to facilitate blasting, separating, or removing minerals or materials from mines or from the earth's surface. Cuts slots along working faces of coal, salt, or other non-metal deposits in order to facilitate blasting, by moving levers to start the machine and to control the vertical reciprocating drills. Determines locations, boundaries, and depths of holes or channels to be cut. Drives mobile, truck-mounted, or track-mounted drilling or cutting machine in mines and quarries or on construction sites. Moves controls to start and position drill cutters or torches, and to advance tools into mines or quarry faces in order to complete horizontal or vertical cuts. Moves planer levers to control and adjust the movement of equipment, the speed, height, and depth of cuts, and to rotate swivel cutting booms. Observes indicator lights and gauges, and listen to machine operation in order to detect binding or stoppage of tools or other equipment problems. Repositions machines and move controls in order to make additional holes or cuts. Signals that machine plow blades are properly positioned, using electronic buzzers or two-way radios. Charges and sets off explosives in blasting holes.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1500

Timberman, Mines

Timber man, Mines; Timber Worker, Propping Worker examines roof and side walls of haulage-ways, air passages, shafts, galleries, etc. inside mine and erects timber or steel props frames etc. to

support them. Collects material near work site and examines roof and sidewalls of haulage-ways, air passages, shafts, galleries etc. inside mine. Takes measurements off from floor to roof to decide height of prop required. Cuts props and logs to required length. Erects props on secure foundation and tightens them against roof using rectangular blocks. Installs ladders, chutes, cribs and other frame work to support roof and walls using saw, axes, hatchet, hammer, spikes and wedges as necessary. Ensures removal of woodcuttings from work place. May also drill holes in roof and walls for timbering purposes and drive roof bolts. May remove or replace defective props.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1600

Creeperman, Colliery

Creeperman Colliery; Creeper Khalasi operates creeper (endless link chain with catchers or conveyors) for raising coal tubs on surface to higher level. Sets up link chain with conveyor at surface or from working face in mine. Joins conveyor sections on frames and connects power unit or switches on. Regulates conveyor or link chain tension by operating controls. Tends chain to transport coal or metal ore. Cleans, lubricates and makes minor repairs to conveyor and power unit as required. May supervise Loaders who shovel material into conveyor. May operate mechanical scoop to lift material on to conveyor. May keep conveyor track free from obstruction to prevent jamming and damage.

ISCO 08 Unit Group Details:

Code 8111

Title Miners and Quarriers

8111.1700

Stowing Worker

Stowing Worker; Boxing Worker erects props and barricades of bamboo mattings and hessian cloth around coal depillaring areas for compactly filling them with sand, to prevent caving in and collapsing of roof. Examines area around coal pillar to erect roof support. Collects materials such as props, barricades to bamboo mattings, hessian cloth, etc. Cuts them to required sizes and erects them to support roof. Couples up sand stowing pipes and signals to sand mixing chamber on surface to release flushing of sand and water. Observes sand filling operation till vacuum is tightly packed to roof face and rendered safe from collapsing. Signals to surface sand chamber to stop release of slurry (mixture of sand and water) when filling is complete. May build stonewall packs to support roof. May recover supports.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1800

Packer, Rock

Packer, Rock packs waste rocks compactly against roof after extracting operations in mines to prevent it from collapsing. Sorts waste rock from broken ore manually and packs them tightly against roof in drives, iron-cuts or in stopes (working places) to prevent collapse and loosening of hanging and broken ores. May assist Mucker in copper mines.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.1900

Sampler, Mining/Sampler Metal/Non-metal

Sampler, Mining marks metal bearing rock faces for cutting grooves, measures sample section, chisels out mineral samples from grooves and marks them for analysis. Determines and marks sample section according to rock surface and grades of mineralisation for groove cutting. Examines grooves cut by groove cutter along mineral bearing rock faces and gets defective cutting re-cut by groove cutter along mineral bearing rock faces and gets defective cutting re-cut by groove cutter. Checks groove distances from fixed points using ladder and rope. Cuts samples from grooves and different section of mine to obtain representative samples. Bags and marks sample with details of location and sends them to laboratory for analysis. May estimate quantity and grades of deposit contained in marked position by taking necessary measurements. May plot location of samples taken from working faces on mine maps.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2000

Groove Cutter, Mining

Groove Cutter, Mining cuts groove of specified dimensions along marks made by sampler for extracting sample from metal bearing rock faces in mine. Marks grooves along mineralised portion of rock face and cuts grooves by chipping defective portion if necessary. Assists sampler in cutting samples. May scrub and wash grooves.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2100**Bratticeman**

Bratticeman; Brattice Worker installs partitions in mine for regulating circulation of air through passages to working places. Cuts timber props to required size erects them along gallery at required place and fixes brattices (made from bamboo matting, canvas or mild steel plate) on them. May also undertake other kind of timberwork underground. May also erect masonry structure to control proper circulation of air.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2200**Driller, Hand**

Driller, Hand makes shot holes of required depth in coal, metallic and non-metallic rock-faces using crowbar, drill rods and hammer. Examines marking for drilling on rock face. Sets crowbar against marking and gets it struck with heavy hammer by his co-worker, each taking his turn with hammer, uses water while drilling to cool drill rod and keep down dust, till hole of required depth is made. Cleans shot hole for charging with explosive. May drill shot hole using drilling machine. May drill hole singly using hand hammer and crowbar.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2300**Shaft Worker**

Shaft Worker maintains cages, pulleys, winding gears, etc. and ensures compliance of regulations for working of hoisting system. Examines shafts and shaft fittings, guide ropes, pulleys, cages, etc. for efficient performance. Checks safety-hooks, safety plate, governor, fencing, brakes, signal, banking lever, head gear, pulleys etc. to ensure smooth working of shaft. Locates faults and undertakes minor repairs and replacements of defective parts as necessary and maintains their records. May perform other fitting operations of general nature.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2400**Banksman**

Banksman; Ringer Bell; Ringer controls movement cage at shaft top and directs Winding Engine Driver and Onsetter for its raising and lowering with men or material by electrical or mechanical code signal system. Adjusts catch inside cage and closes cage fencing for securing safety of men or material. Signals to On setter and Winding Engine Driver by means of electrical buzzer or bell system for lowering and raising cage to transport men and materials at various levels. Observes movement of cage and sets keps (Bearing up stops for supporting cage or load at beginning or end of hoisting in shaft) by operating hand lever to rest or release cage from keps. Opens cage fencing and unloads contents. Checks fencing, keps, cage-doors, guide shoes, chains, signal and reports irregularities to superiors. May be designated as ONSETTER if engaged at shaft bottom and as BELLMAN or SIGNALMAN, MINES if

engaged, at winze (shaft sunk from one level to another in mine) or at landing.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2500

Jackman

Jack Man; Cage Man, Mine gives signals for movement of cages used to raise and lower men, car and supplies between various levels and surface of mines and load and unload materials Directs movement of cage by signalling to banks man or hoist Driver by means of electric bell or buzzer system. Runs loaded car to position near shaft and pushes them on to cage. Pulls empty cars from cage and runs them on to station siding for distribution in mines. May pull loaded cars of cage and replace them with empties.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2600

Scraper Driver, Mines

Scraper Driver, Mines; Scraper Operator, Mines; Scraper Loader Hoistman; Scraper Loader Operator operates electric or compressed air scraper machine or collect and deposit blasted rocks. Moves scraper into working place and sets it up securely on timber foundation. Sets snatch blocks (pulleys over which scraper cables run to change direction) and anchors them firmly to some post or side wall. Makes power connections and starts hoists. Manipulates levers according to signal to operate cables to hoist or lower scraper hoc and drag scraper along track to collect loose one or rock and dump them at

specified place or into chute or car beneath. Reverses hoists, drags scraper back for another load and repeats process. Moves machine from place to place in mine for operation as required. Repairs or replaces broken ropes, lubricates pulleys and performs minor running repairs to hoist and equipment. May work as Mining Sirdar, if experienced and qualified, when required.

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2601

Sprinkler and Other Vehicle Driver

Sprinkler and Other Vehicle Driver in mining industry is an ancillary job role. The individual assigned this role could be driving a sprinkler truck to control dust on a haul-road or could be driving mining personnel in an SUV or any other small truck used to haul material. Besides knowledge of driving fundamentals, the role requires the individual to know and understand the basic of mining operations, traffic rules to be followed in the mining area and safety guidelines for mining operations prescribed by DGMS. Vehicle drivers are also responsible for performing basic maintenance on the vehicle and to ensure that the safety systems in the vehicle are functional.

Qualification Pack Details:

QP NOS Reference MIN/Q 0409
QP NOS Name Sprinkler and Other Vehicle Driver
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8111
Title Miners and Quarriers

8111.2700**Shovel Operator, Mines**

Shovel Operator, Mines, Shovel Driver; Rock Shovel Driver; Mechanical Shovel Operator operates pneumatic or electric shovel to load mine cars or tubs with wastes or mineral rocks blasted inside mine. Checks performance and safety points of shovelling equipment. Moves it to working place and advances it into pile of coal, ore or rock to be loaded for removal. Switches on and starts machine. Manipulates sets of hand levers and foot pedals to force shovel into pile, lift it and dump contents into cars or tubs placed along side. Advances machine into pile as digging progresses and repeats operation to load material into car or tub. Moves machine from place to place in mine according to requirement of work. Lubricates, adjusts, and makes minor running repairs to machines as required. May mix rocks of different sizes or wet or dry ores to prevent jamming of crusher machine.

ISCO 08 Unit Group Details:

Code	8111
Title	Miners and Quarriers

8111.2800**Trammer, Mines**

Trammer (Mines) Tram Pusher, Trolley Man pushes loaded and empty mine cars on track to specified places in mine or quarry with or without haulage engines. Sets track points and controls movement of cars or tubes using sprags (timber props or short pieces of wood, used to prevent wheels of train from revolving while pushing onward. Adjusts stop block and runway switches in track for taking safety measures May load ore or rock into cars at working faces. Is designated as

SURFACE TRAMMER if working on surface and UNDERGROUND TRAMMER if engaged in underground work.

ISCO 08 Unit Group Details:

Code	8111
Title	Miners and Quarriers

8111.2901**Wire Saw Operator**

Wire Saw Operator operates a Wire saw machine which is used to cut large blocks of stone out from the marble quarry. Wire saws are large machines that use diamond-impregnated beads on a cable to cut through marble, granite and other similar rocks. Wire saw is also used for squaring of the cut slab into square shaped blocks before transporting to the production plant. Operating a Wire saw is a specialized task that can be safely performed only with adequate training and experience. Wire Saw Operators are also responsible to ensure basic upkeep of the machine and safety in operations.

ISCO 08 Unit Group Details:

Code	8111
Title	Miners and Quarriers

8111.9900**Mines, Quarrymen and Related Workers, Other**

Mines and Quarrymen and Related Workers, Other include all other workers engaged in mining, quarrying, well drilling and related activities, not elsewhere classified.

ISCO 08 Unit Group Details:

Code	8111
Title	Miners and Quarriers

Family **8112**

Mineral and Stone Processing Plant Operators

Mineral and Stone Processing Plant Operators operate and monitor machinery and equipment for processing rocks, minerals and stone to recover refined products for immediate use or further processing.

8112.0100

Crusher Operator, Mineral

Crusher Operator, Mineral; Crusher Attendant, Mineral operates power driven crushing machine to break coal ore or rock into smaller sizes for further processing. Starts crusher by manipulating levers. Adjusts gap between rollers or male and female cones of crushing jaws for desired size of lumps. Regulates flow of minerals from conveyor or chute and adjusts crusher as necessary. Prods larger lumps with bar to force them into crusher and breaks oversized lumps with sledge hammer. Maintains uniform flow of crushed mineral to screens or rolls for further sizing. May clean, lubricate and make minor repairs to crusher.

ISCO 08 Unit Group Details:

Code 8112
Title Mineral and Stone Processing
Plant Operators

8112.0200

Pulveriser Operator

Pulveriser Operator operates machines and equipment to crush and blend coal of various compositions to obtain specified mixture used in producing coke: Turns valve to admit oil to mixer. Starts hammer mill, mixer, and conveyor equipped with

harrow disks. Moves lever to adjust blade on feed tables to deliver coal to mixer. Observes operation of machines to detect malfunctioning, clogging, and unevenness of flow. Frees clogged coal by striking side of hopper with mallet. Adjusts or replaces screens and hammers in mill, using hand tools. Observes meters, gauges, and thermometer, and records temperature, oil consumption, tonnage mixed, and operating time. Cleans work areas, using broom. May open valves and start pumps to unload oil trucks. May test pulverised coal for conformance to specifications. May crush specific composition of coal (without blending).

ISCO 08 Unit Group Details:

Code 8112
Title Mineral and Stone Processing
Plant Operators

8112.0300

Stamp Mill Operator

Stamp Mill Operator; operates stamp mill to crush gold ore to obtain gold concentrate. Sets tappets and adjusts stroke of stamp with spanners to obtain optimum crushing of ore in mortar box. Starts and maintains correct feeding of gold ore and water into mortar box for proper crushing. Discharges crushed ore pulp through screens of mortar box onto blankets. Directs flow of water over blankets for washing powdered ore coming from stamp mill. Changes gunny blankets from blanket tables at prescribed intervals and removes collected gold concentrate. Washes blankets in concentrating tank and collects gold from James concentrating table. Lubricates mill and performs minor repairs. Is designated as STAMPMILL MAN-IN CHARGE, if engaged in issuing stores, supervising other workers maintaining supply and pay

roll records etc. May operate stamp mill for extraction of silver.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.0400

Cyanide Man

Cyanide Man separates gold flakes out of crushed gold ore by treating ore in bath of cyanide acid. Pumps finely ground gold ore slime from collecting tanks to agitators. Adds specified amount of lime and cyanide acid. Opens valve on compressed air line to agitate slime. Uses simple hydrometer to check specific gravity of solution. Maintains agitation of slime until required specific gravity is attained. Filters off cyanide solution allowing formation of cake residue. Repairs pumps, tanks and related machinery. May issue stores, maintain pay rolls, discipline and security of section. May supervise work of other subordinates. May work as Precipitator.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.0500

Precipitator

Precipitator exposes cyanide solution to zinc shavings in order to precipitate and recover gold still remaining in solution. Packs zinc box (extractor box) with zinc shaving. Pumps gold solution from filtration plant into clarifier tanks. Regulates flow of clarified gold solution from clarifier tanks into extractor boxes to precipitate gold by action of zinc. Adds

lead acetate to extractors in required quantities to facilitate precipitation. Cleans out extractor boxes to recover precipitated gold. Chemically treats, washes and dries precipitated gold by operating vacuum pumps, etc. Treats residue slime with sulphuric acid to recover remaining gold.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.0600

Washing Plant Operator

Washing Plant Operator, Coal operates different machines and equipment for sizing, cleaning, washing and preparing coal for sale or further processing. Checks operating condition of plant, machines and equipment, such as conveyor, crusher, agitator, elevator, wash box, blower, pump, feeder screen, core and refuse gate. Sets and adjusts them as necessary to have desired pulsation, correct performance, proper control of air, water and coal, etc. by observing readings on different meters and gauges and by regulating values on control panel. Adjusts flow of raw coal through them to separate slate rock and other impurities. Operates cone to mix sand and water in proper proportions to ensure correct specific gravity and observes operation. Tests sample of processed coal by weighing and simple physical and chemical tests to ensure correct percentage of ash content, and minimum rejection of usable coal. May conduct repairs of machinery. May perform only a portion of above duties and be designated as RAW COAL SECTION OPERATOR, FEED OPERATOR, CONE OPERATOR, REFUSE,

GATE OPERATOR, etc. according to operation performed or machine handled.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.0700

Stone Sawyer, Machine

Stone Sawyer Machine; Stone Sawing Machine Man saws blocks of stones into slabs of required size by sawing machine. Places or directs placing of blocks of stone on empty carriage or trolley with aid of helpers, hoist or cranes. Levels and fixes stone in cutting position with wedges, belts, metal plates, clamps and nuts etc. as required. Fixes required number of saw blades in sawing machine as needed, adjusts their distance according to size of slabs to be cut and tightens them with keys. Clutches machine or operates hand screw to lower down saw blades till they touch upper surface of block to be cut and pour or directs pouring of rough dry or wet sand on it. Starts machines and tends it to ensure proper sawing of block. Adjusts sawing by declutching or re clutching when it becomes heavy or light. Stops machine when stone is sawed, shuts off valve to stop flow of water and directs removal of slabs cut from saw carriage or trolley. Changes and adjusts saw blades as necessary.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.0800

Stone Cutter, Machine

Stone Cutter, Machine cuts stone to required size on stone cutting machine. Places stone slab on machine carriage and adjusts its position according to measurements. Tightens slab on carriage by operating pressure handle and switches on machine to revolve carborundum or diamond cutting wheel. Opens water valve to supply water on stone slab to serve as coolant and raises machine carriage by operating lever or hand wheel to bring cutting wheel in contact with slab to be cut. Applies cut carefully and continues cutting till stone slab is cut to required dimension. May work on stone polishing and stone sawing machine.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.0900

Stone Polisher, Machine

Stone Polisher Machine operates stone polishing machine to polish surface of blocks or slabs of stone to required finish. Sets rough stone-block or slab on mud or suitable structure below grinding wheel of machine and places stone slab to be polished on it. Sprinkles water and spreads rough and or other abrasive all over its surface. Starts machine, sets machine wheel to revolve and slowly brings it down in contact with stone to be polished. Attends to machine and sprinkles water and abrasive as and when required till stone is polished to required finish. Switches off and stops machine wheel. Removes stone slab and washes rubbed surface with water. May polish stone slabs by fixing iron or carborundum blocks in grinding wheel of machine. May polish stones to high finish using

chemicals and felt wheels. May work on stone saw and stone cutting machine.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.1000

Pipe Machine Man, Stoneware

Pipe Machine Man, Stone Ware; Pipe Mill Operator, Stone Ware operates pipe making machine to make stone ware pipes of required dimensions. Checks and sets appropriate die in machine according to size of pipe to be made. Directs helpers to feed plastic clay into machine hopper and starts machine. Sets machine feed and speed to force clay into bell mechanism and die set in machine and watches automatic formation of required length of pipe at regulated speed. Unlocks machine table by operating lever and stops machine to release and cut extruded pipe by pushing cutting wire of machine through it. Tilts socket to facilitate removal of finished pipe for further processing. Oils socket and outlet die to prevent sticking of clay to them. May test texture of clay visually and suggest changes for moistening. May do minor running repairs to machine.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.1100

Thread Cutting Machine Operator, Stoneware

Thread Cutting Machine Operator, Stoneware operates thread cutting machine to cut external or internal thread

screws on stone ware pipes. Fits appropriate thread cutting die in machines. Lifts and sets pipe in wet condition to spindle or roller of machine with aid of helper, hoist or crane. Starts machine and cuts grooves or threads at one end or both ends of pipe as required by pressing thread cutting die on it. Cuts pipe to required length by operating pipe cutting attachment fitted to machine. Ensures correct finish of threads cut and removes pipe from machine. Oils and lubricates machine. May cut threads on pipe manually using metal template. May operate pipe machine to make pipes.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.1200

Cone Operator (Mine and Quarry)

Cone Operator (Mine and Quarry) tends cone (gravity device) to separate slate and rock from coal: Presses buttons to start conveyor and regulate flow of material into top of cone. Turns valve to regulate flow of water into bottom of cone and maintain specified pressure to carry coal off with overflow while rock and slate fall to bottom. Pulls lever to open slate gate at bottom and draw off impurities.

ISCO 08 Unit Group Details:

Code 8112

Title Mineral and Stone Processing
Plant Operators

8112.9900

Mineral and Stone Processing Plant Operators, Other

Mineral Ore and Stone Processing Plant Operators, Other include all those who

operate and monitor machinery and equipment for processing mineral ore and stone not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8112
Title Mineral and Stone Processing
Plant Operators

Family 8113

Well Drillers and Borers and Related Workers

Well drillers and borers and related workers position, assemble and operate drilling machinery and related equipment to sink wells, extract ore, liquids and gases or for a variety of other purposes.

8113.0100

Well Drillers, Petroleum and Gas

Well Driller, Petroleum and Gas operates rotary type of drilling plant for sinking petroleum and gas wells. Manipulates levers and throttles to control speed of tools set in rotary table and to regulate pressure of tools at bottom of borehole as indicated by gauge. Connects and disconnects sections of drill pipe as they run into or out of well. Selects drill bits according to nature of strata encountered and changes them when blunt or when strata change. Uses special tools to retrieve broken or lost equipment from borehole. Inspects cores or cuttings while drilling to determine nature of strata being encountered. Manipulates levers, pedals and brakes to control machinery which supplies power for lowering or raising drill pipe and casing. Checks operation of slush pumps to ensure that fluid which cools bit, removes cuttings and seals wall of hole with clay is circulating

properly and is of proper consistency. Controls flow from well by capping it or by regulating valves. Supervises work of assistants and maintains prescribed records. May set up plant.

ISCO 08 Unit Group Details:

Code 8113
Title Well Drillers and Borers and
Related Workers

8113.0200

Derrickman

Derrickman; Rigman Petroleum and Gas erects drilling rigs, fits the cables through pulleys and blocks and assists Well driller in lifting and laying down tubing and removing drilling pipes. Sets crown blocks (pulley support connecting derrick posts at top) in position with hoisting beams. Strings up cables through to lift or lower drill pipes. Cleans splashed oil from derrick floor. Assists drilling crew in installing oil gas separator and gas line and in dismantling equipment on completion of work or as required. Cleans oil and maintains pulleys block etc. May operate tongs, slips and spinning rope at drilling stage. May be designated as Top man if works on monkey board on rig at height of about 100 ft. from ground level.

ISCO 08 Unit Group Details:

Code 8113
Title Well Drillers and Borers and
Related Workers

8113.0300

Mudman

Mudman prepares drilling mud fluid to plastic mixture of compounded clay, chemicals and water of required consistency by mixing clay and chemicals in required proportions and controls mud

circulation pumps for flushing out drill cutting and cooling drill bites. Mixes clay, chemicals and water in required proportions as instructed by MUD SUPERVISOR to soften earth formation during drilling operations. Checks weight and viscosity of mud at short intervals and controls mud circulation pumps for flushing out drill cuttings and cooling drill bits. Maintains record of mud transactions and stock of chemicals used. Collects flush and operates vibrating screen to remove silts and well cuttings. May clean channels and tanks. May work on wells other than petroleum and gas.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

8113.0400

Cementer

Cementer conducts mixing of cement in proper consistency and cementing annular spaces between casings and sidewalls of well. Rigs up high pressure lines, makes arrangements for cementing and connects hopper section tank and other pipelines. Obtains information regarding condition of strata to be cemented from Well Driller to determine quality and quantity of cement to be used. Mixes cement, limestone, clay, water and other chemicals to form slurry. Pumps slurry under pressure to seal space between steel casing and side wall and decides time required for setting of cement. Keeps record of cement used. Studies graphical reports and informs well conditions to proper authorities.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

8113.0500

Well Puller

Well Puller removes, repairs and replaces rods, casings and tubings of producing wells, cleans and services them with special tools and controls flow of oil or gas according to pressure charts. Carries required tools, travelling block and block line, etc. to work site. Attaches cable to top of pump rod or casing and operates winch mounted on tractor to pull them out for cleaning, repairs or replacements as required. Disconnects each section of pump rod and casing for cleaning, straightening and repairing according to nature of defects noticed. Runs packer (plug device) into well to control flow of oil, water or gas during well pulling operations. Lowers swabber into well to clear mud from screens at bottom of well and to establish flow of oil. Records well pressure by lowering pressure-recording devices into it and interprets pressure charts. Keeps Well Puller Supervisor informed of defects and repairs done in pump and casing. May measure and record tubing length. May recover tubing and rods from abandoned well and plug it with cement.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

8113.0600

Scaperman

Scaperman scrapes off and pulls out wax from inside tubing by operating power driven scraper. Fixes scraping tools to scraper with assistance of Rigman and

places tractor or winch by side of well. Operates scraper by tractor or winch to scrap off wax from inside tubing. Pulls out scrapped wax from inside of drill pipes to keep well open for production. May attend to normal maintenance of equipment.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

8113.0700

Gauger

Gauger controls flow lines in oil head tanks, dries off accumulated moisture by operating steam heating valves and delivers oil to oil pumps. Takes dip readings of various tanks before and after bleeding of water and records them. Operates steam heating valves of tanks to dry off accumulated moisture and intimates dip readings to Gas Supervisor either on phone or through messengers. Opens delivery valve of well head tank to deliver oil to pump house, maintains record of oil dispatched from each well on dispatch tickets and sends them to Production Clerk. Ensures that tank does not overflow. Reports tank and pipe condition to proper authorities.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

8113.0800

Well Driller, Machine (Other than Petroleum and Gas)

Well Driller, Machine (Other than Petroleum and Gas) sinks, bores and develops well at selected site by operating

power driven drilling machine. Collects sample of soil from selected site of boring for analysis. Selects suitable drilling bit (diamond for hard stone and steel for soft rock and hard earth) according to strata of earth to be bored. Hoists tabular casing over selected site. Starts machine and drills earth strata to drive casing into it. Sinks additional casing when required into well. Sends soil and rock samples for analysis while boring. Removes unnecessary pipes from bored well. May insert water jet alongside of drill head to soften earth and make drilling easier. Removes sludge or debris from bore hole by operating pump or other equipment.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

8113.9900

Well Drillers and Borers and Related Workers, Other

Well Drillers and Borers and Related Workers, Other include workers who erect and operate drilling machinery and equipment and perform related tasks in the sinking and operation of well not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8113

Title Well Drillers and Borers and
Related Workers

Family 8114

Cement, Stone and Other Mineral Products Machine Operators

Cement, Stone and Other Mineral Products Machine Operators operate and

monitor machines for manufacturing and finishing precast concrete, bitumen, and stone products, and making cast stone for building purposes.

8114.0100

Polishing Machine Operator (Mosaic)

Polishing Machine Operator (Mosaic Tiles) operates polishing machine fitted with revolving grinding discs to polish mosaic tiles to high finish. Fits appropriate grinding (carborundum) bricks to rotating discs of machine. Spreads layer of cement solution of required shade over floor surface and sprinkles floor area with water. Connects machine to power supply and switches on machine to rotate revolving discs. Runs machine slowly over entire surface of tile floor to grind and polish it. Changes grinding stones of machine as required. Repeats sprinkling of cement liquid over surface for settling between tile joints and polishes floor surface again using finer type of grinding stone. Washes polished surface with water and ensures required finish. Removes grinding stones and fits felt or cloth pad to machine. Sprinkles oxalic acid powder with water over polished surface and continues polishing to secure glossy finish on polished surface. Cleans and polishes corners, edges of room with grinding stones. Oils and cleans machine periodically. May attend to minor repairs to machine.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral
Products Machine Operators

8114.0200

Batching and Mixing Plant Operator (Construction)

Batching and Mixing Plant Operator, Construction; Batcherman, Construction; Concrete Mixer Plant Operator operates power-driven central mixer plant that prepares batch and mixes concrete. Starts power unit and rotation of mixing drum; opens hopper doors of gravel, sand and cement storage bins to allow these materials to flow into scale hoppers for automatic weighing; opens scale hopper doors to allow weighed materials to pass into mixing drum in required proportion; opens valve allowing correct amount of water to flow from measuring tank into mixing drum; allows drum to rotate for specified time for proper mixing of materials into concrete; opens discharge chute to empty concrete from mixing drum into bucket, conveyor or other carrier; controls batch timer and records number of batches; cleans mixer. May repair and maintain mixer and power unit. May supervise helpers.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral
Products Machine Operators

8114.0300

Concrete Mixer Operator

Concrete Mixer Operator operates small portable power-driven concrete mixing machine to mix dry cement, sand, gravel and water for making concrete or cement mortar. Starts motor and rotation of mixing drum; feeds materials (sand, gravel and cement) in proper proportion into mixing drum, using shovel or by manipulating lever that controls feeding; admits measured amount of water into drum; allows drum to rotate for specified time for proper mixing of materials into concrete; discharges concrete from drum by tilting drum or by opening discharge

chute; cleans interior with water and removes adhering concrete. May undertake running repairs.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral Products Machine Operators

8114.0500

Cast Stone Maker

Cast-Stone Maker; Artificial-Stone Maker performs one or more hand or machine tasks in making of artificial stone which simulates natural stone. Mixes materials, such as water, cement, gravel, granite chippings, slag, coke, breeze or stone dust in required proportions by hand or machine. Fills moulds with mixture, allows mixture to harden and removes it from mould. Finishes cast stone by smoothing surface with sand-stone, polishing with emery and buffing wheel and levelling corners and edges. May be designated according to work performed.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral Products Machine Operators

8114.0600

Lead Brush Maker (Abrasive Wheel)

Lead Brush Maker (Abrasive Wheel) makes lead bushes for abrasive wheel by running molten lead around metal core inserted into centre hole. Places abrasive wheel over chuck-like platform of machine; presses foot pedal of machine to lift spindle disc device to fit into hole of emery wheel; positions emery wheel correctly and fastens it to chuck by tightening bolts and nuts. Sets metal

upper plate with opening over hole to emery wheel; pours molten lead from furnace through hole of upper plate into emery wheel hole to form bush round it; allows lead to cool down and then releases foot pedal to drop central spindle; removes cooled upper plate from emery wheel; loosens chuck nuts and bolts and removes bushed abrasive wheel. Maintains power heated lead furnace or kettle at prescribed temperature to keep lead in molten condition.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral Products Machine Operators

8114.0700

Fettler (Brick and Tile)

Fettler (Brick and Tile) grinds and sands ceramic products, such as clay slabs, refractory tiles, ceramic tiles, and bisque tiles to remove defects, press marks, or rough spots: Grinds, brushes, or scrapes surface of ceramic product to remove rough spots, press marks, and defects, using power grinder and wire or stiff brush. Smoothens (fettles) edges and surface of product, using sandpaper or handstone. Discards broken or poorly pressed tile. Stacks ceramic tile or clay slates in specified pattern on boards, plates, trays, or in saggars. May measure dimensions of tile for conformance to specifications, using gauge. May tend machine that automatically fettles tile.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral Products Machine Operators

8114.9900

Cement and Other Mineral Products Machine Operators, Other

Cement and Other Mineral Products Machine Operators, Other include workers who operate and monitor extrusion, moulding, mixing, grinding and cutting machines which manufacture and finish various pre-cast concrete and stone products, or which make cast stone for building purposes not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8114

Title Cement, Stone and Other Mineral Products Machine Operators

Group 812 Metal Processing and Finishing Plant Operators

Metal Processing and Finishing Plant Operators, operate and monitor single function process control machinery and equipment to control the conversion, processing and finishing of mineral ores and metals.

Occupations in this Group are classified into the following Families:

8121	Metal Processing Plant Operators
8122	Metal Finishing, Plating and Coating Machine Operators

Family 8121 Metal Processing Plant Operators

Metal Processing Plant Operators, operate, monitor, adjust and maintain, single process machinery and equipment to process and convert mineral ores and refine, harden, roll and extrude metals.

8121.0300 Larry Car Driver, Furnace

Larry Car Driver, Furnace; Scale Car Driver, Furnace operates and loads larry car (electric car run on track) with raw material (limestone, iron-ore, etc.) as per instructions of Stock House Foreman or Control Man Blast Furnace from respective bunkers and unloads the Minto skip for charging into blast furnace. Receives instructions from Stock House Foreman regarding sequence, proportion and rate of charging of different raw material into blast furnace. Drives car to respective bunkers and mechanically loads container (fitted to car) with proper quantities of raw material keeping watch on weighing scale mounted on car. Drives car to unloading platform and unloads contents into skip either by tilting or drop bottom system. Keeps Stock House Foreman and Control Man informed of charging rate. May also maintain bunker and charging rate account.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.2300 Shearing and Upcoiler Operator (Non-Ferrous Metal)/Coil Operator

Shearing and Upcoiler Operator (Non-Ferrous Metal) sizes and coils plates and sheets to required specifications by up-coiling machine. Sets shearing distance and rolls of up coiling machine. Presses paddle to shear one end of plate or sheet. Starts rolls of coiling machine and feed, plate or sheet into collar of rolls by metal rods, tongs etc. Shears tail end of plate or sheet and operates lever to eject coil out. May set shearing blade and do running repairs of up-coiling machine. May also

maintain machine log and lot (material) tickets.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.2400

Flattening Machine and Flying Shear Operator (Non-Ferrous Metal)

Flattening Machine and Flying Shear Operator (Non-ferrous Metal) flattens and shears coiled strips to required dimensions by flattening machine and flying shear. Sets shearing distance, adjusts roll gaps (mechanically), feeds coil strips into roller, checks thickness of flattened strip by micrometre or gauge before flying shear finally cuts strip to required size, maintains record of strips cut. May undertake minor repairs.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.2500

Slitting Machine Operator (Non-Ferrous Metal)

Slitting Machine Operator (Non-ferrous Metal) operates slitting machines to cut edges lengthwise by disk cutters to get correct width. Measures with steel tape or scale and sets distance of cutters fitted on two electrically operated shafts to required width. Starts machine, feeds coiled sheet through guides on to cutters (collected at other end by Labourers). May operate drum-coiling machine by switch for coiling sized sheets. May also maintain machine log and lot (material) tickets.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.2700

Roller, Second Hand, Strip Mill (Non-Ferrous Metal)

Roller, Second Hand, Strip Mill (Non-Ferrous Metal) feeds coil strips in to roller by hand, pneumatic or other device, and finally coils finished strips in drum coiler (drum type machine). Feeds coil-strip through guides in to do coiler (Mechanical device on rolled system for decoiling), lowers bridle (Mechanical attachment) by lever for applying tension on coil strip (by means of compressed air operated rollers) and feeds strip for roughing. Guides strip in between roller during re-rolling operations and on return of re-rolled strip operates drum coiler for final coiling.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.3000

Charger, Reverberatory, Pulverised Coal Fired/Reverberatory Furnace Operator

Charger, Reverberatory Furnace, Pulverized Coal Fired cleans and sets furnace for charging and charges raw material (Scrap iron, pig iron and steel scrap) in to furnace for melting. Removes sticking slag, junk, etc. from furnace by hand tools. Seals holes and doors of furnace (tapping hole, slag door, etc. with clay). Repairs molten metal runner for tapping. Keeps material ready for charging on trolley in front of charging door. Opens charging door and pushes the raw materials into furnace on receipt of

instructions from Furnace man, Reverberatory. Closes charging door, seals it and hands over fully charged furnace to furnace man Reverberatory. May do minor repairs of furnace and chimney under guidance of furnace man Reverberatory.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.3100

Melter Reverberatory-Furnace, Pulverised Coal Fired/Reverberatory Furnace Operator

Melter Reverberatory Furnace, Pulverized Coal Fired; Fireman, Reverberatory Furnace, Pulverized Coal Fired prepares furnace, lights fire and controls blast and feeding of pulverized coal in to furnace for maintaining required temperature. Sets log in side furnace and ignite them with flaming torch. Starts machine for feeding furnace with pulverized coal. Starts secondary blower after furnace acquires necessary temperature. Adjusts draft of chimney as per instructions of furnace man Reverberatory. Takes out slags through slag door, stirs metal and opens tap hole by metal bar for taping molten metal. Places slag trap before slag starts flowing into molten metal. Controls blast and feeding of pulverised coal under instructions from Furnace man, Reverberatory. May draw out samples at intervals as required by Furnace man Reverberatory.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.3300

Slag Flusher

Slug Flusher; Furnace Assistant, Cupola removes slag, solidified metal and junk coke from furnace by poking through slag holes. Cautions other workers and opens slag hole by metal poker. Pokes and rakes furnace by metal poking bars, adjusts blast and blows off slag, and watches slag condition. Plugs slag hole with clay after blowing off. May extinguish cupola fire. May also charge mechanized furnace.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.3301

Casting or Foundry Assistant/Helper

Casting Helper will be involved in cleaning the slag, supporting in pre casting and post casting operations and storing the output at designated place.

Qualification Pack Details:

QP NOS Reference ASC/Q3201

QP NOS Name Casting or Foundry Assistant/Helper

NSQF Level 2

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.3701

Heat Treating Furnace Operator

Heat Treating Furnace Operator heats metals in closed furnace for heat treatment such as tempering, hardening, normalizing, annealing, etc. Places metal charges in furnace trays, box or arranges

them in line by crane or other suitable device. Pushes charges inside furnace by hand, winch or other device. Closes furnace door. Switches on current for generating heat inside furnace. Ignites burner and sets blower for flow of fuel and air in case of oil or gas fired furnace. Sets and watches temperature controlling instruments. Heats charges to requisite temperature. Opens furnace gate and extracts charges electrically, mechanically or manually with tongs, hooked bars etc. May do preheating in closed non-conducting cases by stoves, gas or electric furnace and be designated as PRE-HEATING FURNACE OPERATOR.

Qualification Pack Details:

QP NOS Reference	ASC/Q3901
QP NOS Name	Heat Treatment Technician/Furnace Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8121
Title	Metal Processing Plant Operators

8121.3801

Assistant Casting Technician

Casting Technician manages the specifications of the molten metal, setting up and operating the casting machinery and forming and finishing the metal cast

Qualification Pack Details:

QP NOS Reference	ASC/Q3202
QP NOS Name	Casting Technician L3
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8121
Title	Metal Processing Plant Operators

8121.4200

Die Casting Machine Operator

Die Casting Machine Operator operates die-casting machine to make zinc, aluminium and alloy castings for gears, carburettor bodies, machinery parts, equipment, etc. Charges furnace with slabs of metal and adds specified quantity of alloy. Transfers molten alloy to heated reservoir of machine with crane or hand ladle. Removes metal fragments from die surfaces and brushes cavities with compound to prevent casting from adhering to die. Regulates valves to heat furnace, circulate water through die and to force hot metal in to die. Move levers to open and close to halves of water-cooled die. Hooks completed casting from die with steel wire and cools it in water.

ISCO 08 Unit Group Details:

Code	8121
Title	Metal Processing Plant Operators

8121.4201

Pressure Die Casting Operator (PDC)

PDC Casting Operator manages the specifications of the molten metal, setting up and operating the casting machinery and forming and finishing the metal cast

Qualification Pack Details:

QP NOS Reference	ASC/Q3204
QP NOS Name	Pressure Die Casting Operator (PDC)
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8121
Title	Metal Processing Plant Operators

8121.4300

Casting Machine Operator (Non-Ferrous Metal)

Casting Machine Operator (Non-Ferrous Metals) sets up and operates continuous casting machine to produce tubes and rods. Threads graphite die into bottom of crucible, which holds molten metal during casting process. Places water jacket around die and connects water lines. Inserts metal bar (starting tip) through die into crucible where it provides weld with molten metal. Inserts metal extension rod through driving roller and threads it to starting tip. Regulates speed of rollers to draw extension rods, starting tip, and molten metal through die in continuous casting process.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.4400

Casting-Operator Helper (Nonferrous Metal)

Casting-Operator Helper (Nonferrous Metal) assists CASTING MACHINE OPERATOR (Nonferrous Metal) in casting aluminium alloys into ingots: Places distributing trough between furnace tap hole and mould. Positions baffle plates, screens, and control pins in trough, using hand tools. Takes sample of molten metal for subsequent analysis. Skims dross off molten aluminium in holding furnace, using drag rake. Inserts thermocouple into mould and records temperature of ingot. Examines ingot for cracks, using reflectoscope. Stencils identification numbers on ingots. Hooks cable to ingot for removal by OVERHEAD CRANE OPERATOR.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.4500

Spun Pipe Machine Operator

Spun Pipe Machine Operator operates spinning machine to make spun metal pipes. Moves pipe spinning machine under spout of ladle containing molten metal and allows metal to flow into vertical pipe mould; moves machine back to normal position and starts mould spinning rapidly to evenly distribute metal and eliminate gas bubbles. Allows metal to set and removes pipe from mould, using pipe putter. Gets mould filled with required quantity of molten metal.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.4600

Core Maker, Machine

Core Maker, Machine makes cores, using machine, for placing in mould to have designed holes in metal castings. Selects die and spiral conveyor screw and fastens them to machine. Mixes sand and binding material and packs mixture into feed box of machine. Starts motor or turns crank by hand to rotate screw and to take mixture from box and press it through die to form core. Cuts off core as required, repairs damaged surfaces and passes it on for baking or drying in oven or heated chambers. May perform some tasks involved in making cores by hand.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.4700

Annealer, Metal

Annealer, Metal anneals (softens) metals by heating and cooling, for easy-machining, rolling, bending, etc., and for relieving internal stresses caused by working or by unequal contraction in casting. Starts furnace and heats material in it up to required temperature for specified time depending upon type and size of material. Stops furnace and allows material to cool down inside it. Anneals copper by heating and immediately quenching in water. May do pack annealing by putting material in sealed box and by heating and cooling it in furnace. May cool material in sand, lime or ash if working on open furnace. May be designated as NORMALISER, if engaged in normalizing (removing stresses) fatigued metal parts by process of repeated heating and cooling in air.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.4800

Hardener, Metal

Hardener Metal hardens metal articles such as tools, machine parts etc. for tempering and other purposes. Puts them in pre-heating furnace for heating. Controls furnace temperature and heats charges to prescribed temperature depending upon type of steel. Allows charges to remain in furnace for required period according to size, composition and type of steel. Transfers charges to hardening furnace and controls its temperate to prescribed degree according to size, composition and type of steel. Allows charges to remain there for specific time. Switches off furnace, takes out charges by tongs or other suitable device,

quenches them in water or oil or cools them by air blast according to type of steel. May harden material by salt both (molten cyanide, lead, nitrates, etc.) or by single heating and quenching or cooling process.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.4900

Temperer, Metal

Temperer, Metal removes brittleness caused by hardening of material (Tools, machine parts, etc.) by re-heating and quenching or cooling process. Puts hardened material inside furnace and controls its temperature depending on type of steel. Allows material to be heated for specific time according to purpose of tool. Switches off furnace, withdraws materials and quenches or cools them according to type of steel.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

8121.5200

Looper, Metal Drawing

Looper, Metal Drawing passes rod through series of rolls to reduce it in to wire of required specifications. Watches approach of rod, holds it with pair of tongs and directs it through guide into roll. May remove scraps if necessary and also assist in setting height and different passes (steel dies of various sizes) of rolls. May be designated as REPEATER, ROUGHING LOOPER or HEAD ROUGHER, according to stage of work.

ISCO 08 Unit Group Details:

Code 8121
Title Metal Processing Plant Operators

8121.5500 **Seamless Pipe and Tube Drawers**

Seamless Pipe and Tube Drawer draws ferrous and non-ferrous tubing of specified internal and external diameter by machine. Places rough tube in position on draw bench. Sets die (tapered plug) in centre of hole in die block. Pushes or pulls end of rough tubes through die block and secures it with tongs to or carriage in motion, pulling tube over plug to travelling chain or moveable carriage. Sets chain or carriage in motion, pulling tube over plug, to determine internal and external diameter. Stops chain or carriage when length is drawn and removes tongs from tube. Repeats operation until specified diameter is obtained. May be designated according to type of tube drawn or metal used.

ISCO 08 Unit Group Details:

Code 8121
Title Metal Processing Plant Operators

8121.5600 **Extrusion Press Operator**

Extrusion Press Operator; Extruder Operator (Metal) sets up and operates hydraulic extrusion press to shape seamless tubings and rods of round, flat or irregular cross sections from hot billets. Receives necessary work schedule and examines drawings and other specifications. Selects dies, billet container and mandrel, fixes them in press and sets alignment, temperature etc. as required. Checks and adjusts pressure of hydraulic, water and other pumps for necessary operation. Directs removal of hot billet from heating furnace

and its dropping in to billet container. Orders positioning of upsetting device above billet container, and lower ram of press to upsetting device for spreading billet until it fits snugly in to container. Moves hand and foot levers to cause ram to descent and press billet through dies and to regulate speed to extrusion for prevention of tears in metal and adherence of metal to container walls. Raises ram to top of stroke and lowers cut off device to shear of residue and free extruded tube or selection from die. Maintains record of pump pressure, number of tubes and sizes formed, kind of metals extruded etc. as prescribed. May operate vertical or horizontal extruding press. May do minor repairs to machine.

ISCO 08 Unit Group Details:

Code 8121
Title Metal Processing Plant Operators

8121.5800 **Metal Drawing Operatives**

Metal Drawing Operatives perform variety of routine and low skilled tasks in making or drawing of wire from billets such as loading of billet into furnace, pushing hot billets to discharge doors, opening furnace discharge door and pushing billets to pinching rolls, lifting and guiding rods into loping channels, cutting samples, oiling, cleaning, etc. and may be designated as Cold Billet Pusher, Hot Billet Pusher, Furnace Hooker, Finishing Hooker, Sample Cutter etc.

ISCO 08 Unit Group Details:

Code 8121
Title Metal Processing Plant Operators

8121.9900

Metal Processing Plant Operators, Other

Metal Drawers and Extruders, Other include all other metal drawers and extruders such as those engaged in assisting operation of hydraulic extrusion press, assisting in setting dies for wire drawing, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8121

Title Metal Processing Plant Operators

Family 8122

Metal Finishing, Plating and Coating Machine Operators

Metal Finishing, Plating and Coating Machine Operators operate and monitor equipment which finishes, plates and coats metal articles or parts, in order to give them improved resistance to corrosion and abrasion, for decorative purposes, or to impart electrical or magnetic properties.

8122.0100

Electroplater

Electroplater gives coating of gold, silver, nickel, chromium, copper etc. of required thickness to metal parts by electrolytic process. Examines strength of metallic solution and sets anode plates (positive terminal) in solution. Suspends de-greased components well dipped in side plating solution and connects cathode (negative) to it. Regulates current and allows components to remain dipped in solution for specific period depending upon type and thickness of plating required. Removes components and swills them in hot and cold water baths. Dries them in

sawdust or centrifugal air dryer. Transfers components to unrigging rack or other specified place for polishing. May prepare plating solution under guidance of shop supervisor. Is designated as GILLDER if engaged in gold plating and ANODISER if colours aluminium and light alloys article using specific chemical solutions.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and
Coating Machine Operators

8122.0101

Surface Treatment Technician

Surface Treatment Technician is responsible for conducting electroplating, powder coating and Anodizing operations as per the product and the customer requirement to ensure that the surface of the metallic body becomes resistant to chemicals, moisture and other wear and tear.

Qualification Pack Details:

QP NOS Reference ASC/Q3801

QP NOS Name Surface Treatment
Technician Level 4

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and
Coating Machine Operators

8122.2000

Enameller, Chemical

Enameller, Chemical applies thin film of enamel on metal components by dipping in enamelling solution and drying them in ovens. Checks quantity and quality of enamel in glazed porcelain bath (vat). Dips components in bath and suspends them in

mechanical conveyor passing through closed drying oven. Checks components after drying and repeats process to ensure good finish. May dip and dry components manually. Is designated as LACQUERER or JAPANER if engaged in manually applying solution of film forming substances or Black Japan Varnish. May also apply enamel or other solution by brush or spray.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.3000

Reeling Machine Operator

Reeling Machine Operator, Metal Drawing tends to continuous supply of wire to lead bath for coating and reeling of finished wire. Mounts reels on shaft and draws wires through lead, acid, and washing baths to other side. Fixes ends to empty reels mounted on electrically driven shaft. Starts motor and watches smooth running of wires. Changes reels and joins ends of wires as and when required. Stops motor and pulls out wire in case of breakage. May be known as REEL OPERATOR, BACK SIDE, and REEL OPERATOR, FRONT SIDE, according to position of work.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.3500

Galvanizer/Operator- Electroplating, Galvanising

Galvanizer applies coating of zinc on ferrous articles by dipping them in molten zinc. Checks and controls quantity, quality and temperature of acid (hydrochloric

acid), flux (zinc chloride) and zinc baths. Preheat articles if necessary and dips or passes them either manually or mechanically through, acid, water, flux and zinc baths successively at controlled speed. Skims dirt from baths and continues operation with necessary adjustment of solution, temperature etc., ensuring regular and uniform coating. May similarly apply tin coating using palm oil as flux and be designated as TIN PLATER or TINNING MACHINE OPERATOR. May regulate temperature by gauges and by colour of melting metals.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.5500

Metal Sprayer

Metal Sprayer sprays metal on worn out metal part either for increasing size or for coating them. Fixes part in lathe, fastens spray gun in tool post of lathe, pushes wire feed through hole in spray gun, connects rubber pipe with oxygen, acetylene and compressed air container through respective nozzles of gun and regulates valves for their correct supply. Ignites mixture with flint. Starts lathe to revolve part for uniform application of metal, adjusts wire feed, moves gun to and fro for even spray of metal on portion to be sprayed and checks part from time to time for size and uniform coating. May use different type of fixtures and may manually operate spray gun.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.6000

Sample Checker, Metal Making

Sample Checker, Metal Making; Sampler, Metal Making checks samples of metal under production in furnace, rolling mill, foundry section, etc. by sight, gauges or instruments to ensure these are according to specifications. Checks blooms, billets, forgings, metal castings etc. in production in furnace, rolling mill, forging, foundry or other metal making sections by sight, gauges, measuring devices, crack defectors and other necessary instruments Ensures correct dimensions, weight, soundness and absence of blow holes, irregular formation, etc. as per specifications and tolerances. Approves or records defects observed and suggests rectifications or rejections as necessary. May be designated as SAMPLER, BLAST FURNACE; VIEWER, ROLLING MILL; VIEWER, FORGING, CHECKER, FOUNDRY; etc. according to section and type of work done.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.6200

Shot Blaster

Shot Blaster cleans metal surface by spraying steel grits on it at high pressure by means of compressed air. Lays articles to be cleaned in side shot blasting chamber, gets covered completely with protective clothing fitted with respiratory arrangements. Regulates air pressure and flow of steel grits, holds hose fitted with nozzle over articles, opens nozzle and sprays steel grits over them at high pressure for required period of time. Checks metal surface from time to time for finish and repeats process if required,

is designated as SAND BLASTER if uses sand instead of steel grits.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.6700

Picker

Picker removes foreign matter and cleans both ferrous and non-ferrous articles by dipping them in succession in acid and water baths. Loads articles in cradles or in some hooking arrangement and dips them in acid bath or tank. Agitates bath or tanks by moving articles manually or mechanically for few minutes depending on type and condition of material. Transfers articles mechanically or manually to water bath or tank and washes acids off by stirring them in bath or tank. May use more than one acid bath or tank of varying concentration. May also dip articles in alkaline tank for neutralizing acid effect.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.6900

Hardness Tester, Metal

Hardness Tester, Metal checks hardness of metal by operating hardness testing machine. Places metal to be tested on table of machine Attaches specified weights to give required pressure and fixes steel ball or diamond cone tester in machine depending upon type of metal to be tested and machine used. Operates lever to automatic press steel ball or diamond cone with prescribed force on metal surface and make deep impression,

a dent on it. Reads hardness registered by machine or form chart and records it. Approves or rejects tested metal according to standard prescribed. May keep record of number and nature of articles tested. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.7000

Speeder Machine Operator (Abrasive Wheel)

Speeder Machine Operator (Abrasive Wheel) Abrasive Wheel Tester speed tests abrasive wheels on electric testing machine over normal operating speed to ensure that wheels are free from cracks. Opens protective hood of machine and fits securely finished abrasive wheel on hub of electric testing machine by tightening nuts and bolts using flanges, washers and bushes where necessary, closes hood door; adjusts meter and arbour of wheel to set machine for specified number of revolutions; starts and runs machine at specified test speed for specified test period; observes meter reading to check and ensure that wheel disc is revolving at set speed without cracking; stops machine after set period of running or earlier if disc cracks (indicated by cracking noise). Opens hood door and removes discs from spindle after bringing it to rest. Places tested discs at specified point. May stencil on wheel working speed in r.p.m.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.7100

Sizing Machine Operator (Abrasive Wheel)

Sizing Machine Operator (Abrasive); Sizer (Abrasive) operates automatic sizing machine to coat glue on abrasive coated cloth or paper. Fills glue tank of machine with glue; draws of abrasive coated paper or cloth roll from drying chamber of abrasive making machine and feeds it into feed rolls of sizing machine; observes operation of drawing and passing of abrasive coated cloth or paper through rolls above glue container where thin layer of glue coating is applied to abrasive coated material for fixing it, and thereafter through drying chamber to take down machine; stops machine, if paper or cloth gets stuck up, releases blocking and re-starts machine; reports to superiors if machine does not function properly. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.7200

Abrasive Coated Cloth and Paper Maker

Abrasive-Coated Cloth and Paper Maker; Coating Flint Operator (Abrasive) roll in machine; draws end of paper or cloth roll through guide rollers of machine for feeding it with material; checks and ensures that glue container and abrasive grain hopper of machine are full with glue and abrasive material, starts machine and ensures drawing of paper/cloth through rollers and application of glue on its desired face proceeds correctly; observes passing of glued paper/cloth through series of rollers over electric grain

chamber where grain is sprayed to glue portion of paper/cloth by electro-magnetic device; opens glue tap as necessary to maintain steady supply of glue in glue container; stops machine if abrasive coated paper/cloth gets stuck up, cleans it and restarts; resets roll gaps as necessary for even tension of paper/cloth drawn; ensures that abrasive coated roll passes into drying chamber for onward transmission to sizing machine. Supervises work of helpers; replaces empty spool or beam of paper or cloth roll with filled ones to maintain continuous supply. Reports irregular functioning of machine to superiors for removal of defects.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and
Coating Machine Operators

8122.7300

Skiving Machine Operator (Abrasive)

Skiving Machine Operator; Skiver (Abrasive) operates skiving machine to remove abrasive grain from abrasive coated cloth and bevel edges for joining ends to form endless band. Starts machine and feeds ends of abrasive band by hand through revolving grinding wheel to remove coated abrasive grains to reduce thickness of material; checks skiving done at ends and ensures that they are uniform; repeats skiving if necessary. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and
Coating Machine Operators

8122.7400

Belt Press Operator (Abrasive)

Belt Press Operator; Pressing Machine Operator (Abrasive) presses glued ends of abrasive coated cloth or paper belt by pneumatic pressing machine to form endless belt. Collects abrasive coated material; applies glue over skived ends of belt with hand brush; joins one end of belt over another carefully to form continuous and endless belt without ridges at joint; sets pneumatic pressing machine and places joined end of belt over platen of machine; operates foot pedal of machine to lower upper ram of machine and press joint of abrasive belt at set pressure; removes material when press opens up automatically after set period. May trim edges with hand scissors.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and
Coating Machine Operators

8122.7500

Roll Winding Machine Operator (Abrasive)

Roll Winding Machine Operator; Take Down Machine Operator (Abrasive) operates roll winding machine to wind abrasive paper or cloth coming in continuous lengths, into rolls of prescribed size. Fixes empty spool to machine and clamps it securely; draws by hand, roll of paper or cloth coming from drying chamber and rolls it over empty spool giving few turns for holding it firmly; starts machine and observes winding of abrasive cloth or paper on spool; stops machine after roll attains prescribed size; removes rolled material from machine using hoist equipment and continuous operation with new spool. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8122
 Title Metal Finishing, Plating and
 Coating Machine Operators

8122.7600 Sheet Cutter (Abrasive)

Sheet Cutter (Abrasive); Abrasive Sheeting Machine Operator cuts roll of abrasive paper or cloth into sheets of prescribed sizes using sheet cutting machine fitted with rotating knives. Loads roll of abrasive paper or cloth on machine frame either manually or by hoisting equipment; draws free end of abrasive paper or cloth roll and passes it over feed rolls of machine; adjusts guides on scale to obtain specified length of sheet, screws guides to hold sheets in position sets knives or cutting blades to machine and adjusts them to cut material; starts machine and observes cutting operation and removal of cut pieces over conveyor system; stops machine if paper gets stuck up, releases block and re-starts machine. Replaces blunt knives with sharp ones when required. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8122
 Title Metal Finishing, Plating and
 Coating Machine Operators

8122.7700 Slitting Machine Operator (Abrasive)

Slitting Machine Operator (Abrasive) operates slitting machine to cut roll of abrasive paper or cloth into smaller sizes or rolls of lesser width and length. Loads roll of abrasive paper or cloth on machine frame either manually or by means of hoisting equipment; draws free end of paper or cloth roll by hand and passes it over feed rolls of machine; sets and

adjusts machine for speed, tension of paper or cloth and slitting of roll to required width and length; starts machine and observes slitting of roll to required widths and winding of slit material into rolls over collapsible spindle set on opposite side of machine; stops machine on completion of operation and removes smaller wound rolls on collapsible spindle or spool from slit roll; repeats process; keeps record of output given. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8122
 Title Metal Finishing, Plating and
 Coating Machine Operators

8122.7800 Clicker Press Operator (Abrasive)

Clicker Press Operator (Abrasive) operates power press to cut pieces of abrasive material to desired specifications. Sets die in machine in which material is to be cut; starts machine, feeds abrasive coated paper or cloth into machine and ensures that operation proceeds correctly and makes necessary adjustment to machine collects cut pieces from machine and bundles them. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8122
 Title Metal Finishing, Plating and
 Coating Machine Operators

8122.7900 Splint Feeder (Match)

Splint Feeder (Match) feeds match splints in automatic machine to insert them in grooves or holding device for dipping splint tips with match-head composition and dry them in drying chamber. Brings trolley containing levelled splints from

levelling section; takes wooden tray containing levelled splints from trolley and feeds levelled sticks in magazine of machine by transferring contents of wooden tray into it, keeping them arranged in same manner and position; dresses levelled splints in magazine by tapping with wooden pad and removing broken, uneven or cross splints; watches feed or flow of levelled splints into machine where stick feeding device automatically inserts each splint into groove or holding device of continuous rotating conveyor chain; keeps magazine continuously full by supplying levelled splints from wooden trays; collects fallen out splints from floor or pit and deposits them in basket to be taken to levelling section; pushes empty trolley and leaves it at levelling section; maintains place clean and tidy. May operate machine and collect fully dried matchstick.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.8000

Splint Drying Chamberman (Match)

Splint Drying Chamberman (Match) Match Splint Drying Machine Attendant tends drying and polishing machine to dry and polish match splints. Collects match splints from bins and spreads them evenly in wooden chamber tray; opens bottom door of drying chamber, pushes chamber tray containing splints into its moving platform and closes chamber door; starts machine to blow steam or hot air to heat furnace to desired temperature by regulating thermostats or by adjusting dampers; opens top door of chamber and removes chamber tray containing dried splints after specified length of time; feeds

dried splints into hopper of adjacent polishing chamber for getting dried splints polished in its revolving drum; pokes hopper of polishing chamber with wooden stick to remove chocking and to push dried splints inside revolving polishing drum. May carry splints from godown to bins.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.8100

Levelling Machine Attendant (Match)

Levelling Machine Attendant (Match); Leveller (Match) operates levelling machine to fill wooden trays with horizontally levelled splints. Place, trolley with empty wooden trays near machine, arranges them in machine frame with mouth turned towards hopper of levelling machine; locks levelling machine frame over empty wooden trays securely; fills match splints into hopper of levelling machine; spreads splints evenly by hand in hopper of machine; starts machine to agitate hopper, side to side to fill empty trays with splints horizontally; removes wooden trays filled with levelled splints and places them on rack of trolley for further processing. Oils and greases machine.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

8122.9900

Metal Finishing, Plating and Coating Machine Operators, Other

Metal Finishing, Plating and Coating Machine Operators, Other perform number of routine and low skilled tasks, such as fixing components in jigs, removing component from jigs, degreasing and cleaning components by scrubbing, drying them in saw dust, lifting materials from acidulated water tank, feeding sheets in roller and furnace for drying and heating of tin plate etc. and are designated as Jigger Un-Jigger, Plate Helper, Drier, Water Boy, Norton Roller Feeder, etc. according to nature of work done.

ISCO 08 Unit Group Details:

Code 8122

Title Metal Finishing, Plating and Coating Machine Operators

Group 813 Chemical and Photographic Products Plant and Machine Operators

Chemical and Photographic Products Plant and Machine Operators operate and monitor machines which process a variety of chemicals and other ingredients to produce pharmaceuticals, toiletries, explosives and photographic or other chemical products.

Occupations in this Group are classified into the following Families:

8131	Chemical Products Plant and Machine Operators
8132	Photographic Products Machine Operators

Family 8131 Chemical Products Plant and Machine Operators

Chemical Products Plant and Machine Operators monitor and operate units and machinery to blend, mix, process and package a wide range of chemical products.

8131.0100

Crusher Operator, Chemical

Crusher Operator, Chemical operates power driven crushing machine to break solid lumps of chemicals or other materials into smaller size for further processing. Collects material to be crushed; fills hopper of machine by hand or by operating mechanical feed; fixes screen to machine to retain pieces which are too large. Operates controls to start, stop and regulate speed of machine; breaks oversize or jammed lumps with a hammer; discharges crushed material into outlet container-cleans crusher and work-area. May weigh the material before and after crushing to know loss in crushing. May be designated according to type of process adopted/industry attached to.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.0200

Miller/Mill Operator (Chemical)

Miller; Mill House Operator; Ball Mill Attendant; Ball Mill Operator Grinder (Chemical) feeds and tends a machine that grinds solid chemicals or other materials, used in chemical and related processes, to reduce them to particles of specified size. Selects and fits to machine screens according to size of particles to be produced; starts machine and feeds material into mill; observes grinding process, takes samples of ground material

to ensure that particles of required size are obtained; discharges ground material into outlet container and supervises the removal of ground material. May keep records of weight of material ground.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.0300

Pulveriser Operator, Chemical

Pulveriser Operator, Chemical; Disintegrator Attendant, Chemical feeds and tends power-driven pulverising machine to reduce crushed chemicals or other material into fine particles or dust. Collects material; fixes screen to machine according to fineness of powder particles to be produced. Starts machine and feeds material into machine to pulverize kit to fine powder. Observes disintegrating process, takes samples of pulverised material, and ensures that required fineness is being obtained. Discharges disintegrated material into outlet container; cleans machine and work area.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.0400

Mixing Machine Man Attendant (Chemical)

Mixing Machine Attendant, (Chemical) feeds and tends machine to mix and blend different solid or liquid ingredients in required proportions. Weighs ingredients according to formulae or specifications and feeds prescribed quantities of ingredients into machine container by

hand or by operating valves, pumps or mechanical loaders; starts machine agitators to mix materials thoroughly; adds further ingredients, if required; runs machine until mixing process is completed; removes mixture from machine container; cleans machine and work area and prepares machine for fresh run. Observes and reports abnormalities in blending and mixing.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.0500

Compounding Man (Match)

Compounding man (Match) operates a grinding and mixing mill to make compound for match heads and match box sides according to formulae. Prepares glue solution and maintains it at specified temperature by keeping glue container in boiler; weighs and measures chemical ingredients according to formulae; fills ball mill with chemical ingredients and adds prescribed quantity of water to it; closes lid of ball mill and secures it tightly; starts mill by operating hand lever and runs it for specified period to make chemical paste; stops mill opens lid and fills in glue solution. Closes lid of mill and again runs it for required period to make match head compound of required consistency; stops mill and empties prepared compound into empty drum placed below; places drum on platform of mixing machine platform to place stirring rod of machine immersed inside composition drum; starts machine to agitate stirring rod to mix composition to required consistency; stops machine when ingredients are thoroughly mixed and removes drum to be collected by

Composition Supplier or Tableman; keeps place clean and tidy.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.0800

Sieving Machine Attendant, Chemical

Sieving Machine Attendant, Chemical feeds crushed or ground chemical material in sieving machine to automatically sift and collect sieved material. Selects sieve of the specified size, suiting thickness or diameter of the sieve material; fixes sieve to the machine; feeds crushed or ground material in machine; starts machine to sift material by required size; stops machine, discharges sieved material, and arranges its storing. May keep record of weights and sizes of sieved material. May sieve material progressively to smaller and finer sizes. May repair defective parts of damaged sieves.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.0900

Grading Machine Attendant (Abrasive)

Grading Machine Attendant (Abrasive) Shifting Machine Attendant (Abrasive) sifts and grades powdered ore or minerals by machine for use as abrasive powder and collects them separately according to their grades. Loads hopper of grading or sifting machine with powder ore; ensures that different grades or mesh of sieves are

set to machine by Fitter; places empty containers or bags at delivery end of each sizing or grading compartment; starts machine; maintains steady flow of powder into sieve and pokes rod to remove blocks as necessary; observes operations to ensure correct sifting and sorting of powder according to size of sieving mesh; collects sifted materials according to grades (coarse to fine particles) in bags and stores them in central place. Cleans machine with compressed air at close of shift and keeps surroundings clean and tidy.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.1400

Drying Chamber Attendant (Drugs)/Chamber Operators

Drying Chamber Attendant, Drug dries tables and powder in drying chamber. Spreads out powder and tables evenly in trays and loads trays on racks and shelves in drying chamber. Closes chamber and applies heat for fixed period of time; checks at frequent intervals to ensure that products are properly dried. Keeps drying chamber clean.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.1500

Drying Chamber Attendant (Match Boxes)/Chamber Operators

Drying Chamber Attendant (Match Boxes) tends a drying chamber machine to dry matchboxes by regulating speed of

conveyor inside drying chamber. Heats and maintains drying chamber at desired temperature by noting readings on meters and gauges. Starts conveyor machine; places match boxes on conveyor belt to carry them through heated chamber; regulates speed of belt through chamber in accordance with temperature of chamber for product to dry. Examines dried boxes coming out of chamber to ensure that they are dried to required quality. Makes necessary adjustments to machine and regulates movement of conveyor in chamber as necessary. May clean and oil conveyor system.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.1700

Size Maker (Abrasive)

Size Maker (Abrasive); Mixing Machine Man (Abrasive) prepares sizing mixture and ensures its continuous supply to sizing machine (abrasive). Weighs and measures sizing materials such as glue, resin, varnish, solvents, water, etc. as per formulae and fills them in heating kettle or tank fitted with steam pipes; opens steam valve to heat kettle and boil ingredients; allows ingredients to mix and boil for prescribed period; stops supply of steam after set period; opens outlet or drain valve of kettle or tank to drain and maintain regular supply of glue to sizing machine; cleans tank and keeps place clean and tidy.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.1800

Paste Maker

Paste Maker; Glue Cooker makes glue paste, gum, or other adhesives according to formulae in steam jacketed kettles. Collects specified quantities of dry flour, corn-starch, tapioca, washing soda, copper sulphate and other ingredients to prepare desired adhesive paste. Prepares copper sulphate solution by mixing copper sulphate powder with specified quantity of water; fills drum fitted with steam jacket with measured quantity of dry ingredients according to formulae and adds requisite quantity of water and copper sulphate solution in it; closes lid of drum and opens steam valve to admit steam into it for boiling solution for specified period observing thermometer to maintain required temperature; opens valve to drain solution into container when specified consistency is obtained. May draw off and send sample of glue to Chemist for test.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.2100

Ammonia Operator/Ammonia Plant Operator

Ammonia Operator controls converter and auxiliary equipment that combine hydrogen and nitrogen to produce anhydrous ammonia: Lights burner and starts pumps, compressors, scrubbers, and absorption units. Moves controls on panel board to regulate temperatures of solutions and opens valves to admit heated and purified air and hydrogen into combustion chamber of burner, where nitrogen driven from air combines with

hydrogen to form ammonia. Reads instruments, such as thermometers, pressure gauges, and potentiometers. Makes control adjustments according to operating instructions and charts. Pumps fresh solutions into scrubbing and absorption towers when readings indicate excessive alkalinity. Records operational data in logbook. May compute percentage of hydrogen and ammonia in burner gases, using standard test procedure.

ISCO 08 Unit Group Details:

Code 8131
Title Chemical Products Plant and
Machine Operators

8131.2200

Heat Treater

Heat Treater controls heat-treating furnaces, baths and quenching equipment to alter physical and chemical properties of metal objects, using specifications and methods of controlled heating and cooling, such as hardening, tempering, annealing, case-hardening, and normalizing; Determines temperature and time of heating cycle, and type and temperature of baths and quenching medium to attain specified hardness, toughness, and ductility of parts, using standard heat-treating charts, and utilizing knowledge of heat-treating methods, equipment, and properties of metals. Adjusts furnace controls and observes pyrometer to bring furnace to prescribed temperature. Loads parts into furnace. Removes parts after prescribed time and quenches parts in water, oil, brine, or other bath, or allows parts to cool in air. May test hardness of parts. May set up and operate die-quenching machine to prevent parts from warping. May set up and operate electronic induction equipment to heat objects. May align

warped fuel elements, containing radioactive uranium, using hydraulic ram straightener.

ISCO 08 Unit Group Details:

Code 8131
Title Chemical Products Plant and
Machine Operators

8131.2300

Filter Press Operator

Filter Press Operator operates filter press machine to filter impurities or other insoluble materials from slurries, chemical solutions or mother liquids. Opens filter press and covers filter plates with canvas, paper or other filtering media; closes press and ensures that its joints make a liquid tight seal; adds diatomaceous earth, saw dust, other settling compound to solution to precipitate impurities; pumps when specified pressure is reached. Removes filtered impurities from screen with compressed air, water or steam, and dislodges solid materials caught between frames. Occasionally replaces damaged filter media and adjusts and makes minor repairs to equipment.

ISCO 08 Unit Group Details:

Code 8131
Title Chemical Products Plant and
Machine Operators

8131.2400

Filter Press Operator (Ceramics)

Filter Press Operator (Ceramics) operates filter press to filter and separate clay from water in slip. Covers filter plates of press with cloth or canvas; closes press, causing plates to come together, forming seal; starts machine and opens valve to pump slip into filter press, where clay is retained and water is squeezed out through

filtering media; stops machine when specified pressure is indicated on gauges or when all slip in tank is pumped into press completely; opens filter press plates and removes pressed clay between plates. Cleans press and replaces damaged filter cloth or camods.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.2500

Strainer, Liquid

Strainer, Liquid filters liquids or solutions through strainers or filter papers to remove impurities and foreign matter. Selects and places strainer, covered with canvas, cloth, paper or mother filtering media below outlet of cooker; mixes and agitates saw dust or mother settling compound with solution to precipitate impurities; opens outlet valve to permit material to filter through strainer into tubs or other containers; cleans and replaces filters. May be designated according to material treated such as STRAINER, RUBBER; STRAINER PAPER PULP; STRAINER CANNING AND FOOD PRESERVATION, etc.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.2600

Box Filtration Operator

Box Filtration Operator; Filterman, Liquid; Filterer, Rotary Drum filters liquids, using rotary drum filtering screen. Opens valves to regulate flow of solution into filter tanks and starts drums (which are covered

with canvas, wire cloth, or other filtering media), rotating valves to control vacuum in drum to draw liquid through filtering media and hold solid particles on drum. Observes intake side of drum to ascertain that scrapers remove solids from drum. Adjusts drum rotation, lifter feed, or vacuum to obtain clear filtrate. May add chemicals to destroy bacterial growth. May tend washing sprays, setters or related equipment. May make minor repairs to equipment. May be designated according to type of solution filtered or solid separated.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.2700

Hydro Extractor Operator

Hydro Extractor Operator, Centrifuge Operator operates centrifuge machine that separates solids from liquids, or liquids of different specific gravity. Fills drum of machine with liquid material. Starts machine and adjusts drum speed to obtain efficient separation of substances; empties containers when separation is completed. May fix and clean filtering media in machine, operate heating attachment on machine and test samples for moisture content. May be designated according to type of materials separated.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.2800

Crude Oil Treater (Oil Field)

Crude Oil Treater (Oil Field) treats crude oil at wells in chemical, electrical or centrifugal units to remove sediment and water. Tests oil for contents of sediment and water using gravity-separation machines and according to result of test switches oil through treating units, to and from storage tanks or into pipe lines. Adds chemicals to chemical treating unit or routes oil through electrical or centrifugal units to break up oil and water emulsions and drain off water. Precipitates sediment in settling tanks. Gauges tanks to determine quantity of oil treated and delivered to pipe lines. Operates and maintains water and oil pumps of treating unit. Cleans and makes repairs to units. Records production results of tests and other data. May operate oil heaters to raise oil to desired temperature for treating. May pump wells.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.2900

Gauger (Cement)

Gauger (Cement) conducts simple tests of samples of cement in laboratory for physical properties at different stages of production. Collects samples of material, weighs and mixes ingredients to prepare moulds for laboratory test. Sets apparatus and conducts routine tests to determine physical properties such as compression, tensile strength, setting time etc., of cement at various stages of production. Adds or eliminates ingredients as directed by Chemist to remove defects and raise quality of product. Maintains readings and observations for calculations and reference purposes. Cleans and maintains apparatus in good condition. May do

minor repairs to apparatus and equipment. May undertake tests independently. May assist Chemist to conduct research work. May store, maintain account of instruments, equipment, apparatus, etc. if required.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.3000

Disc Operator (Abrasive)

Disc Operator (Abrasive) operates machine, which uses steel shot for producing flat surface on abrasive wheels prior to or sometimes as an alternative to turning. Mounts abrasive wheel on rotating spindle of machine and sets retaining plate ring to keep emery wheel at one point; manipulates levers to lower moveable arm of machine over abrasive wheel to hold it tightly in position; fills hopper of machine with steel grits; starts machine, opens bottom plate and regulates flow of steel grits over rotating wheel of machine. Observes, frequently during operation, grinding and smoothing of surface of abrasive wheel on rotating platform of machine with steel grits and blows off deposited dust and powder with compressed air as necessary; checks thickness and surface of abrasive wheel with measuring instruments such as callipers, gauges, to ensure correct size and finish; stops machine and removes abrasive wheel when required flatness is obtained. May clean and oil machines.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.3100**Crude-Oil Treater (Petrol and Gas)**

Crude-Oil Treater (Petrol and Gas) Operator; pumper; treater Operates chemical, electrical, and centrifugal oil-treatment units to remove sediment and water from crude oil before transporting oil by pipeline to refineries: Opens valves and starts pumps to pump oil from storage tanks to treating units. Opens valves to mix specified chemicals with oil, and adjusts controls to heat mixture to specified temperature. Starts centrifugal machines that break up oil and water emulsions and drain off water. Opens valves and starts pumps to transfer oil into settling tanks where sediment is precipitated from oil. Tests sample in gravity-or centrifugal-separation machine to determine content of oil specified for pipeline transportation. Pumps treated oil into pipelines leading to refinery. Cleans and lubricates motors, pumps, and other moving parts of units. Records data, such as volume of oil treated, operating temperatures of units, and test results. May operate pumps at oil well sites. May tend treating-plant equipment to remove impurities from natural gas.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.3200****Brine Maker (Chemical)**

Brine Maker (Chemical) tends tanks, filters, and auxiliary equipment that produce brine solution for use in electrolytic cells: Pumps water through salt beds or starts conveyor bringing salt from storage area for dissolution in water, producing mixture of specified salt

content. Admits salt water and specified amounts of liquid chemicals, such as caustic soda or acid, to mixing tank to produce brine solution meeting plant standard. Pumps solution to settling tank to settle out impurities and through sand-bed filters for final purification. Draws sample of brine for laboratory analysis or tests density, salt content, and acidity, using hydrometer, salinometer, and pH meter. Turns valves to transfer brine to electrolytic cells and maintain brine at specified levels in supply lines, tanks, and cells. May dump materials into brine to adjust chemical composition to plant standard, using titration test to determine strength of solution. May pump water through resin and carbon beds to demineralise it. May tend heat exchanger to maintain temperature of brine within specified limits.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.3501****Autoclave Operator**

Autoclave Operator; Sterilisation Attendant charges, operates and unloads an autoclave (high-pressure vessel) for processing chemicals, oils, or sterilising bottles, ampoules, etc. Charges or loads vessel with predetermined quantities of chemicals or objects; checks valves for operation; raises temperature of autoclave by increasing steam pressure. Observes pressure and temperature gauges, thermometers, timings and other instruments and makes necessary adjustments to ensure that process or sterilization is carried out correctly. Unloads product on completion of process and prepares vessel for next batch.

Implements safety measures in regard to operation of plant/machinery and in handling and processing materials, and maintains machinery. May keep records. May be designated according to product processed or sterilized.

Qualification Pack Details:

QP NOS Reference	RSC/Q0210
QP NOS Name	Autoclave Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8131
Title	Chemical Products Plant and Machine Operators

8131.3600

Evaporator Operator

Evaporator Operator; Pan Operator; Vacuum Pan Operator charges and operates evaporating tank, vacuum-pan or similar device to concentrate solutions by driving off excess water contents. Pumps weak (liquid) solution into evaporator tank or pan; operates vacuum pump to obtain vacuum in pan, if required; regulates flow of steam into heater coils of evaporator; periodically tests concentrations of solution by use of instruments or by making simple chemical tests; makes necessary adjustments to temperature and pressure to obtain required solution; pumps concentrated solution from evaporator for auxiliary heating. Implements safety measures in regard to operation of plant/machinery and in handling and processing materials, oils and maintains machinery. May tend auxiliary equipment such as settling tanks, preheating tanks, condensers and cooling equipment. May treat solutions, such as those of glue, glycerine, glucose and caustic soda and be designated accordingly.

ISCO 08 Unit Group Details:

Code	8131
Title	Chemical Products Plant and Machine Operators

8131.3700

Reactor Converter Operator

Reactor Converter Operator (Chemical Process, except Petr oleum) operates or tends number of pieces of equipment, other than those used for treating petroleum, which perform sequence of complex operations in chemical reaction process. Regulates feed of gaseous, liquid or solid material into equipment. Checks progress of process by looking through peep holes, observing temperature readings, pressure gauges and other instruments and making simple chemical tests. Regulates material feed and heating or cooling devices and makes other adjustments as necessary to ensure that processes are correctly carried out.

ISCO 08 Unit Group Details:

Code	8131
Title	Chemical Products Plant and Machine Operators

8131.3800

Converter Operator (Grain-Feed Mills)

Converter Operator (Grain-Feed Mills) controls converter to change starch into glucose or corn syrup, and tests products to verify purity (specified dextrose content): Turns valves to admit steam and water into converter. Introduces starch into converter so that cooking occurs as starch is added. Detects from sound of cooking process formation of paste, and adds acid, as necessary, to reduce viscosity. Closes converter and turns valve to attain specified pressure. Draws off

samples, and makes standard iodine and alcohol titration tests. Turns valves to blow syrup into tank when tests indicate conversion is complete.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.3900

Distiller (Chemical)

Distiller (Chemical) controls continuous still equipment to distil pine oleoresin into oil of turpentine and rosin: Turns valves to transfer heated oleoresin from melting vats into cleaning, filtering, and washing tanks to clean, filter, and wash trash, foreign matter, and other impurities from resin preparatory to distillation. Pours specified amounts of oxalic acid into tanks to facilitate cleansing process, using graduated cylinder. Drains impurities from wash tanks and starts pump that forces resin into still. Turns valve to circulate water through steam jackets. Observes temperature gauge and turns valve to regulate heat to specified temperature to condense turpentine vapours. Turns valve to drain rosin from still. Observes sample of distillate for clarity and separation of turpentine from oleoresin to determine completion of distillation. Occasionally replaces filters in tank and cleans tank as necessary.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.4000

Continuous Machine Operator (Match Box Manufacturing)

Continuous Machine Operator (Match Box Manufacturing); Continuous Machine Driver (Matches) operates continuous machine to dip match splints in liquid paraffin and match-head composition, dry and deliver them in finished form. Checks supply of liquid paraffin into machine; ensures that composition tank of machine contains match-head composition to prescribed level and that magazine of machine is kept continuously full with match splints; turns hand wheel to adjust machine to immerse match splints to specified depth in match head compound. Sets thermostat or thermometer in compound dip tank and turns steam and cold-water valves to regulate compound temperature and viscosity. Starts machine; compares size of match heads passing on conveyor with drawings of acceptable match heads and cuts unacceptable matches from conveyor with long handled push knife; raises or lowers conveyor or dip roll to immerse match splints in bath of paraffin and then in match head composition. Observes and ensures drying of match-head in drying chamber at specified temperature; drains and washes dip tanks to remove thickened compound. May replenish compounds and paraffin in dip tank.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.4100

Receiver (Match)

Receiver (Match) receives dried match sticks coming out of continuous machine in trays for delivering them to Box Filling Section. Pushes trolley containing empty trays to side of continuous machine; keeps empty trays on carrier of

continuous machine for filling them with dried match sticks; collects filled trays from carrier and replaces them with empty trays from trolley; dresses match sticks in trays evenly by padding them by hand or with flat wooden piece; removes damaged and incomplete stick; arranges filled trays on trolley racks and pushes loaded trolley to specified point; ensures that paraffin level in continuous machine is maintained at prescribed level and fills container with liquid paraffin as necessary by opening paraffin tank tap.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.4200

Box Making Machine Operator (Match)

Box Making Machine Operator (Match) operates power driven machine to fold veneers, paste them with paper and make complete outer and inner match-boxes. Collects outer, bottom and rim veneers and examines them for defects. Positions roll of blue paper on feed rack of machine and draws end of paper from roll over feed rollers; fills glue reservoir of machine and regulates flow of glue; feeds machine with sorted and dressed veneers, outer rim or bottom as required; starts machine by operating hand levels or by pressing electric button, ensuring that glue flows uniformly over blue paper, veneers move singly, folds and pasted properly, and finished outer and inner boxes carried over conveyor system ensuring that operation proceeds correctly, making necessary adjustments to machine. May operate outer box making machine or inner box making machine where two

types of veneers (rim and bottom) have to be fed simultaneously.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.4300

Box Filling Machine Operator (Match)

Box Filling Machine Operator (Match); Box Filling Machine Man (Match) operates Box Filling Machine which automatically fills match boxes with prescribed number of match sticks and delivers filled and closed boxes. Starts machine by operating hand lever; checks feeding of empty match boxes into moving chain plate of machine and ensures that they are automatically opened; collects tray containing arranged match sticks and feeds magazine of machine with sticks in same order of arrangement by removing bottom plate of tray; checks movement of open boxes over chain plate and observes filling of specified number of sticks in boxes and closing filled boxes automatically; removes by hand unfilled and damaged boxes; ensures that filled and closed boxes are collected at delivery end and are removed for further processing. Maintains continuous feed of magazine with arranged match sticks and stops machine when operation completed. Cleans and oils machine. May do minor adjustments to machine.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.4400

Friction Machine Operator (Match)

Friction Machine Operator (Match) operates friction machine which applies friction composition on sides of match box and dries them in drying chamber of machine. Fills composition container of machine with required quantity of friction compound; checks machine pump to ensure that friction solution is pumped over rollers at regular intervals; adjusts rollers, or aligns and fastens brushes, in machine; positions roll of levelled and band-rolled match boxes on feed conveyor; starts machine and observes coating of friction compound on two sides of match box and drying in drying chamber; examines dried boxes coming out of drying chamber for defects and makes adjustments to machine for proper operation. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.4500

Box Closing Machine Operator (Match)

Box Closing Machine Operator (Match) operates automatic matchbox closing machine to fit and close inner match box case into outer match box cover. Starts machine and checks and ensures proper feeding of inner and outer boxes into machine. Observes movement of inner and outer match box covers from bins over conveyors and their getting tilted into correct position, and inner case pushed inside outer cover; removes by hand damaged or broken boxes from conveyor and deposits them in waste container; collects completed boxes at delivery end of machine and arranges them in trays for removal to filling section;

stops machine if boxes get jammed over conveyor system, removes defects and continues operation.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.4600

Band roll and Labelling Machine Operator

Banderol and Labelling Machine Operator operates or sets up and operates on automatic machine that glues trade labelling banderol papers (excise duty papers) to filled matchboxes. Adjusts feed hoppers and guides according to size of label and match boxes to be labelled; Changes applicator plate according to size of labels, regulates feeding mechanism and pressure of applicator rollers. Fills glue reservoir and loads labels and filled match boxes into machine; starts machine, observes operation and makes adjustments if necessary; removes jammed boxes or twisted labels from machine.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.4900

Coke Oven Operator, Controller

Controlman, Coke Oven records meter and gauge readings and controls pressure and draft in coke ovens. Watches readings of thermo-couple recorders, pressure gauges, governors etc., and reports irregularities to Heater. Arranges for gas reversion. Adjusts and maintains gas pressure and air draft after gas reversal.

Checks working of chimney governors, foul gas governors and operates butterfly valves to prevent fluctuation of pressure inside coke oven battery. Checks deposition of tar in collecting main and arranges for its cleaning. Keeps in touch with blast furnace, coke oven gas holders, booster house and other departments to maintain flow of correct volume and pressure of gas into coke ovens. Keeps record of all pressure, draft and volume readings. May instruct Gas Man for operating gas reversal clock. May manually operate butterfly valves, if there is no governor. May also arrange for cleaning spray nozzles and cocks for proper flow of gases.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.5600

Charcoal Burner, Beehive Kiln (Chemical)

Charcoal Burner, Beehive Kiln (Chemical) operates series of beehive kilns to produce charcoal: Places kindling in kiln and starts fire. Seals top of kiln when specified heat is attained, using cement and hand trowel. Observes colour of smoke as it issues through draft holes in kiln bottom to ensure burning of charcoal as specified. Opens and closes draft holes, using bricks, to regulate forming of charcoal. Seals draft holes and cracks in kiln with cement to smother fire when charcoal has been formed

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.5800

Producer Gas Plant Operator

Producer Gas Plant Operator operates producer gas plant for manufacture of producer gas from burning coal for metallurgical or other purposes Ignites coal, opens valves and injects steam and air on red hot coal by blower. Watches frequently quality of gas produced. Removes ash by operating mechanical ash plough. Operates gas release valve and directs gas to gas main, for distribution to sections concerned or to gas chamber. Records readings of meters, thermo-coupled indicators and gauges to assess quality, quantity and pressure of gas. May also introduce gas into new furnace and inspect furnace glues.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.5900

Bale Cutter Operator, Rubber

Bale Cutter Operator, Rubber cuts bales of crude rubber into small pieces by hand or hydraulic cutting press. Removes wired wooden wrapping or metal straps, using cutters covering from rubber bales and loads them on machine; pushes bale on bed of cutting machine and moves lever, actuating hydraulic ram that pushes bale against stationary knives or to lower knife or blades against rubber placed on platform of machine; pulls layers of smoked or crepe rubber apart by hand and completes operation; collects cut pieces, loads them in truck and moves truck to hot chamber for further processing; cleans, oils and lubricates machine and keeps work place neat and tidy.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.6000****Masticator, Rubber**

Masticator, Rubber; Mixing Mill Operator (Rubber) tends and operates plasticator machine that mangles and kneads chunks of raw rubber between two mill rollers to prepare raw rubber for compounding with other ingredients for further processing. Weighs specified amount of raw rubber chunks and dumps them into hopper of machine; turns steam and water valves to regulate heat of machine rollers, judges heat by touch; adjusts roll clearance for desired thickness of stock; starts machine and feeds stock through rollers to squeeze and knead material; pulls out warm stock in chunks at expiration of prescribed time or when visual examination shows material is satisfactorily milled; removes sheet rubber adhering to heated roll by cutting across it with knife and catching sheet as roll turns, or adjusting tension of scraper blade, that peels rubber from roll, by turning hand wheel; dips slabs in soap stone bath and hangs them for drying. Oils and cleans machine; keeps work surroundings neat and tidy. May manipulate controls of automatic feed delivery system.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.6100****Straining Operator (Rubber Reclaim)**

Straining Operator (Rubber Reclaim); Strainer Man screens out metal particles and other foreign objects from processed rubber reclaim, using strainer. Opens chute on feed conveyors or shovels, scrap rubber into hopper of strainer, starts machine that forces rubber through strainer screen; regulates speed of machine and conveyors to prevent jamming of stock; feels strainer, and opens water valves to prevent overheating of machine and scorching rubber; discharges strained scrap rubber to conveyors to transfer to refining mills or to hand trucks for transfer to storage; observes for colour and appearance and feels strained rubber to insure that foreign material is removed; replaces clogged and worn strainer screens, using hand tools. May tend magnetic device to facilitate removal of metal from rubber. May fill containers with screened rubber to specified weight and keep record of productions.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.6200****Mixer, Rubber/Mill Operator**

Mixer, Rubber/Mill Operator makes rubber compound by mixing crude rubber with other ingredients such as filters, antioxidants, plasticizers, activators, retarders, accelerators, sulphur etc., by operating a mixing mill. Sets machine by adjusting roll clearance for desired thickness of milled stock; turns water valves to regulate temperature of rolls; shovels batch of processed stock into feed hopper of mill; adds previously prepared liquid and solid pigment to aid plasticisation, using hand paddle; starts

mill and observes continuous pressing of stock between rolls; pulls out warm stock in chunks at expiration of prescribed time or when visual examination shows material is satisfactorily milled; hangs rubber chunks on racks to cool; removes cool stock from rack and places them on storage skids, separating layers with soap stone; adjusts and controls roll gap if machine stops due to over feeding; stops machine when layer of rubber strip on roller is exhausted; oils and lubricates machine.

Qualification Pack Details:

QP NOS Reference RSC/Q0101
 QP NOS Name Mill Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8131
 Title Chemical Products Plant and
 Machine Operators

8131.6300

Solution and Dough Making, Operator, Rubber

Solution and Dough Making Operator Rubber; Solution Maker; Rubber dissolves rubber compound in solvent and then mixes it in solution mill. Pours required quantity of solvent in mill chamber; adds specified quantity of rubber compound into solvent in chamber of mill; starts machine; runs machine for specified period of time or until mixing process is completed; draws samples to test solution for proper consistency; stops machine and drains solution from chamber.

ISCO 08 Unit Group Details:

Code 8131
 Title Chemical Products Plant and
 Machine Operators

8131.6400

Synthetic Fibre Maker

Synthetic Fibre Maker tends machine that forces specific liquid solution through fine holes into acid solidifying bath to form synthetic (chemical) textile filaments and winds them into untwisted threads. Starts machine and catches ends of filaments as they pass through acid bath. Brings several ends together, passes them over guide wheel and attaches them to spool, bobbin or similar winding device. Repeats process with other filaments. Ties thread together when it breaks and replaces. Fills winding devices with empty ones. May operate machine with centrifugal arrangement for drawing and piling thread into special boxes.

ISCO 08 Unit Group Details:

Code 8131
 Title Chemical Products Plant and
 Machine Operators

8131.6500

Refining Machine Operator (Oils and Fats)/Oil and Fat Plant Operator

Refining Machine Operator (Oils and Fats) tends machine to refine crude oils such as, ground-nut pea-nut, soya-bean etc., for preservation or for making hydrogenated oil. Turns valve to pump oil and caustic solution from storage tanks into machine tanks as specified. Starts machine to separate caustic from oil by centrifugal force. Sets thermostat, observes gauges and regulates valves to maintain prescribed temperature in wash and dryer tanks. Turns valves to pump mixtures to wash and dryer tanks to remove by-products with water and impurities with heat. Turns valve to pump refined oil to storage tanks or for further processing.

Cleans vessels, using water and steam. May be designated according to type of machine tended.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.6600

Hydrogenation Operator (Oil and Fats)/Oil and Fat Plant Operator

Hydrogenation Operator (Oils and Fats) controls equipment to process base oils used in manufacture of margarine, Vanaspati, etc., and shortening. Starts pumps to move premeasured batches of refined oils or fats into converter vessel. Turns valves to adjust rate of flow of hydrogen, steam, air, and water into converter and weighs and adds specified amounts of catalytic agents and other chemicals to hardened batch of oils or fats, as required. Tests samples, of batch using refractometer to ensure that hardness of product is in accordance with specifications. Pumps harden oil through filter press to remove catalyst and attaches lines to transfer filtered oil to blending vessel. Starts pumps to add specified amounts of blending oils to blending vessel and turns valves, to heat and blend oils, for required period of time. Observes temperature and pressure gauges and turns valves to make adjustments when necessary. Pumps finished oils through filter press to holding tank. May be designated according to equipment controlled.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.6700

Deodorizer

Deodorizer; Deodorizing Plant Operator (Oil and Fats) tends distilling equipment to deodorize processed oils used in manufacture of margarine, Vanaspati etc., and shortening. Turns valves to admit steam to heat oils to specified temperature, introduces and mixes nitrogen and create and maintains specified pressure and vacuum to remove fatty acids and gases from oil. Watches operation through inspection holes and ensures separation of fatty acids. Gets samples tested and finished oil transferred to filling section. May direct draining of fatty acids and residue for manufacture of by-products.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.6800

Crystallisation Attendant

Crystallisation Attendant removes mother liquor, syrup etc., from chemical solution and collects crystals formed. Operates valves to allow required quantity of heated liquor (chemical solution) to enter crystallisation tank. Starts stirrers in tank to agitate liquor. Admits cooling water to coils in tank, ensuring that liquor is cooled evenly and at controlled rate over fixed period of time. Stops machine when required state of crystallisation has been obtained, and drains off contents. May add crystals to induce crystallisation.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.7000**Tablet Machine Operator**

Tablet Machine Operator; Granulator Operator; Punch Machine Operator sets, feeds, operates tablet coating machine and operates tablet-making machine to compress powders into tablets of prescribed size, shape and weight. Sets machine; regulates the pressure by adjusting lever according to depth of tablets to be made; selects, fixes and adjusts die and punch of specified size and shape. Feeds and regulates flow of prescribed quantity of material into hopper of machine. Starts machine and sets die in motion for compressing powdered material into tablets; regulates valves to control flow of tablets through funnel; places empty container at delivery end of machine to receive pressed tablets. Test checks, at periodical intervals, weight of pressed tablets by weighing in balances. May deliver finished and pressed tablets at store for packing. May clean and maintain machine. May deliver finished and pressed tablets at store for packing. May clean and maintain machine. May operate tablet coating machine.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.7100****Tablet Coater**

Tablet Coater; Pill Coater coats compressed tablets or pills with syrup or other substance to preserve ingredients and make them palatable. Fills coating pot or pan of machine with tablets or pills. Pours measured quantity of syrup or other coating substance on tablets and starts pot revolving to coat tablets with syrup or

coating substance. Operates machine to rotate pot for required time to ensure even coating. Checks that tablets are coated; adds powder that adheres to tablets polish surface of coated tablets by rotating them in wax-coated churn. May coat pills with powdered sugar, French chalk (pearl coating) or sulphur.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.7200****Ampoule Machine/Plant Operator**

Washing Machine Operator, Ampoules sets and operates washing machine to wash ampoules, vials, etc. to free them from bacteria. Washes vials and ampoules with soap, water and brush; again cleans vials and ampoules with water; fills glass carboil with distilled water and connects it with the washing machine by a rubber tube. Starts the air compressor and adjusts levers to maintain required pressure, releases the valve and finally washes and cleans vials and ampoules with distilled water. Removes cleaned vials into trays. May attend to their physical testing and packing.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators**8131.7500****M.B. Tester**

MB Tester; Mythelene Blue Tester tests tightness of sealed ampoules by immersing them in Mythelene blue solution. Places trays with filled ampoules and Mythelene blue solution in vacuum

chamber solution; operates valves to create vacuum and allows trays to remain in chamber for specified period. Removes and washes ampoules in clean water; examines and rejects ampoules containing blue solution;

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.7600

Optical Examiner, Ampoules

Optical Examiner, Ampoules examines filled ampoules for clarity of solution. Holds ampoules against light; examines them visually for dirt and impurities and rejects defective ampoules. May fill and seal ampoules.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.7700

Acid Plant Operator

Acid Plant Operator maintains and operates acid plant for manufacturing sulphuric, hydrochloric, nitric or other acids by treating raw materials (sulphur, salts, etc.) with acid or steam. Collects required amount of raw materials for preparation of desired acid. Sets up and checks equipment, valves, gauges and other instruments; charges vessel with predetermined amount of chemicals, or regulates feed of materials into equipment; controls temperature in vessel by adjusting steam pressure; checks progress of process by looking through peep holes, observing temperature readings, pressure gauges and other

instruments and making simple chemical tests; regulates material feed and heating or cooling devices, as necessary; removes acid when process is completed. May keep records. May be designated according to product or process, e.g. SULPHURIC ACID PLANT OPERATOR; HYDROCHLORIC ACID PLANT OPERATOR; FERTILISER MAKER; PHOSPHORUS MAKER.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.7800

Sulphur Burner

Sulphur Burner melts sulphur in tanks by steam to make molten sulphur or sulphur gas for making sulphuric acid. Charges furnace with sulphur; regulates gas burners to adjust temperature; adjusts valves to pass air over vaporised sulphur and form sulphur dioxide. Pumps water over baffle plates in furnace, gas being absorbed by water to form sulphuric acid. Pumps acid into storage tanks. May melt sulphur in tanks containing steam heated coils and load furnace with molten sulphur. May make periodic titration to determine concentration of gas in water.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.8000

Acid Concentrator

Acid Concentrator maintains and operates equipment to concentrate or purify liquid chemicals. Charges retort with liquid to be processed; adjusts temperature control valves to heat and vaporise liquid; skims

waste material from surface of liquid in retort; feeds vaporized liquid through condensers to condense it; if concentrating chemical, occasionally tests specific gravity of liquid in retort. Observes gauges, records readings and makes any needed operating changes. Inspects and makes minor repairs to piping, pumps, blowers and condensers; installs clean burners in furnace.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.8100

Acid Worker, Other

Acid Worker, Other performs various operations such as charging containers with materials, controlling temperature, regulating movement of products, reading gauges, operating valves and controls, emptying containers, etc. under supervision of foreman or works chemist. May keep records. May be designated according to duties or product, e.g. ACID LOADER; ACID PUMP MAN; STILL MAN; DISTILLER; SOLVENT RECOVERY OPERATOR; BRINE MAN, POTASH.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.8200

Cell Room Attendant, Chemical

Cell Room Attendant Chemical tends electrolytic cells used in manufacture of caustic soda and chlorine. Inspects cells to ascertain that liquid levels, brine flows, cell pressure and current as indicated by manometers, sight glasses, flowmeters

and automatic recorders are maintained. Replaces any damaged tubing and washes cell surfaces with water or acid to clean them. Measures specific gravity of caustic soda solution produced by cell group, using hydrometer or by calorimetric titration and adjusts cell operation accordingly. May be designated according to type of cell tended, as HOOKER-CELL ATTENDANT, MERCURY-CELL ATTENDANT, GIBBS-CELL ATTENDANT.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.8300

Gas Storage Attendant

Gas Storage Attendant operates pumps and equipment to store gas. Maintains constant pressure in gas storage tank and compensates for withdrawal of gas by commercial users by observing pressure gauges on tank and pumping replacement quantities into tank as needed. Observes pressure gauges on storage tank to determine need for increasing or decreasing pressure, opens valves in gas-lines, and permits gas to flow into and out of pumps. Adjusts valves on gas or steam engines or throws electric switch to control appropriate high or low-pressure pumps in achieving desired pressure. Reads gas meters and records amount of gas received and dispensed from holders. Adjusts and lubricates pumps and prime movers. May adjust governors, to maintain desired pressure.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.8400**Soap Machine Attendant**

Soap Machine Attendant tends automatic machine for cutting, chipping or rolling of soap. Sets up machine and tightens steel cutting wires on frame. Pushes slab of soap directly into machine cradle; starts motor to force wires through slab to cut individual bars or chip into numerous pieces. May operate hand powered winch to draw cutting wires through soap slab. Maybe designated as SLABBING ATTENDANT; MILLING ATTENDANT; CHIPPING ATTENDANT; PLODDING ATTENDANT; CUTTING ATTENDANT or STAMPING MACHINE ATTENDANT according to nature of duties performed.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.8500**Extraction Attendant, Chemical**

Extraction Attendant; Chemical, Extraction Operator; Extractor Battery Attendant; Kettle Operator; Percolation Attendant; Acidification Operator boils necessary ingredients in kettles, vats, pans, and regulates temperature, pressure etc. as directed by Processman, Chemical, to effect desired chemical reaction. Collects different ingredients in required proportions and feeds them into pan separately or together, according to specification, adding required amount of fluids and other liquids, mixing them by stirrer. Switches on plant, injecting steam to boil and mix ingredients; observes temperature, pressure gauges, timings and other instruments, making adjustments, where necessary, to ensure process is complete. Collects samples for

observation and test; drains stuff for storage; cleans pan and work place. Implements safety measures in regard to operation of plant/machinery and in handling and processing materials, oils and maintains machinery. May tend open or wood fire pan. May be designated according to type of pan or industry associated with.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.8700**Laboratory Attendant**

Laboratory Attendant; Laboratory Bearer assists Demonstrators and Laboratory Assistants in their routine tasks for purposes of analysis, sampling, dissection, testing, demonstration etc. as directed. Receives instructions from Demonstrator or Laboratory Assistant as appropriate. Sets apparatus and instruments, gets materials ready for dissection, dissolves salts, prepares standard solutions, operates simple machines and appliances, makes battery connections, etc. according to instruction, nature of work and type of laboratory in which engaged. May prepare chemical reagents and do routine testing and weighing under guidance. May assist in demonstration of experiments to students.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

8131.8800**Agarbati Maker**

Agarbati Maker makes scented agarbatis to give pleasant fragrance when lighted.

Collects thin bamboo splints of required size. Mixes saw dust, gum and coloured powder of desired shade in specified quantities with water to make thick pulp; adds scent or sandal wood powder to pulp for desired fragrance and rolls splints with required quantity of pulp on wooden plank smeared with thin oil to prevent pulp sticking to plank; removes pulp coated splints and dries them in sun; packs dried sticks in convenient packets or makes them into bundles of desired weight or number with trade labels wrapped for sale. May prepare incense powders and cubes for burning in religious ceremonies and other occasions.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.8900

Pencil Maker

Pencil Maker performs one or more hand or machine tasks in making of wood-encased pencils. Weighs and mixes material such as graphite, china clay, chalk, colouring pigment or dyestuff, and water according to formulae, and passes mixture through rollers of grinding or milling machine; places milled graphite or clay mixture in cylinder of hydraulic extrusion press and starts machine which presses mixture through extrusion dies, thus forming pencil leads; stores extruded leads in drying chambers and cuts dried leads to pencil lengths, using gauze and hand lever knife; packs cut leads in furnace chambers and treats them with controlled heat; impregnates baked leads by placing them in container while suspended and partly submerged in molten wax or grease; places wood slats into automatic machine which cuts

grooves on one side and applies glue to grooved side; places leads in grooves of glued slat, covers this with other slat and presses them together; feeds pressed slats into automatic machine which shapes out pencil, applies paint, stamps maker's name and other identifying data, gives final polish; examines finished pencils for defects. May be designated according to type of work performed.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.9000

Assembler, Marking Devices (Pen and Pencil)

Assembler, Marking Devices (Pen and Pencil) performs any combination of following duties to assemble stencil marking and ink applying devices: Selects parts according to specifications. Aligns parts following guides, such as contours, edges, slots, or fastening devices. Joins parts manually or using hand tools, such as wrenches and power screwdrivers, or positions parts on holding device of machine bed under ram, and moves lever to lower ram, joining parts. Performs other tasks, such as cleaning parts, using air gun; fitting ink chambers; and positioning marker in holder of air pressure device that tests marker for leaks in ink valve and chamber.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and
Machine Operators

8131.9900

Chemical-Products Machine Operators, Other

Chemical Products Machine Operators, Other include those who operate and monitor machines which produce chemical-based products such as linoleum, candles, halogen gases and related items not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8131

Title Chemical Products Plant and Machine Operators

Family 8132 Photographic Products Machine Operators

Photographic Products Machine Operators operate and monitor equipment which makes photographic film and paper, and which processes exposed photographic film and makes prints.

8132.0100

Printer Photographic

Printer, Photographic; Contact Printer prints and develops black and white photographs by contact-printing method in dark room. Examines negative for contrast, and selects appropriate photographic printing paper of suitable grade according to degree of contrast in negative; positions negative and printing paper in contact printing frame, fastening down edges; arranges lights to compensate for variations of light and shade in negative; exposes negative and paper to light for carefully timed period, according to density of negative; unfastens printing frame after exposure and removes exposed printing paper from frame; develops exposed prints in series of timed chemical and water baths; washes and dries developed prints, and trims finished ones. May apply glossy

finish to prints by heated metal press. May print colour photographs using colour-filters, when processing colour prints, or by other methods such as projection or reproduction process, and be designated as Printer, Colour Film. May operate contact printing machine to produce photographic prints in large numbers. May be designated as Printer, Motion Picture Film, if operates film printing machine to print copies (positives) of film from picture or sound negatives in dark room. May be designated as CHIEF LABORATORIAN if directs, controls and co-ordinates work of other DEVELOPERS, PRINTERS.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0200

Developer, Photographic

Developer, Photographic treats and develops in dark room exposed films or photographic plates in series of chemical and water baths for prescribed period to prepare transparent black and white negative or positive film. Prepares various developing and fixing solutions in special acid-resistant containers by mixing chemicals with water according to formulae; immerses film or plate in developer solution for specified period to make image visible; times period of immersion in each bath and maintains solutions and water at required temperature; rinses film in water to wash off developer solution; places film or plate into fixing bath to produce transparent and light-constant negative; rinses negative in cold running water to wash off fixing solution; dries negative by swabbing off excess water with sponge and

exposing it to air in dustless location. May prepare transparent positives from negatives. May develop film on automatic developing machine. May develop positive or negative film in colour solution to produce colour film, and be designated as DEVELOPER COLOUR FILM. May print copies from negatives.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0300

Developer, Automatic (Photofinishing)

Developer, Automatic (Photofinishing) tends machine that develops sheets, strips, or continuous roll of film preparatory to printing: Pulls film through trapdoor into darkroom. Strips paper backing from film and attaches identifying label. Feels edges of film to detect tears and repairs film, using stapler. Reads work order or feels film for size or notches to determine type of process and developing time required. Positions racks of film on machine chain links according to developing time required through machine preparatory to processing. Activates machine that automatically transports film through series of chemical baths to develop, fix, harden, bleach, and wash film. Listens for sounds that indicate machine malfunctioning and notifies supervisor or maintenance personnel when repairs are needed. May run test strip through machine for inspection by supervisor and add chemicals to or adjust machine as directed. May tend equipment that develops, fixes image, and dries x-ray plates.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0400

Enlarger, Photographic

Enlarger, Photographic; Projection Printer; Projection Camera Operator enlarges or reduces photographs to required size with projection printer in dark room. Sets enlarger (camera) in dark room, placing plain white board or easel below lens of enlarger; inserts negative film in holder of printer (enlarger) and switches on light which shines through negative onto easel below; adjusts various parts of printer and centres image, to secure desired projection; determines exposure time and lens opening, and selects appropriate photographic paper; switches off light and fixes photographic paper in easel, switches on light, and exposes paper to light for set period, shading darker areas of image to produce prints with roughly equivalent intensity; develops exposed prints in series of timed chemical and water baths; dries and trims finished prints. May apply glossy finish to prints with heated metal press. May enlarge or reduce colour film, using appropriate colour-filter and correcting colour deficiencies of negative with coloured filters. May retouch enlarged prints.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0500

Retoucher, Photographic

Retoucher, Photographic; Finisher, Photograph; Artist, Photographic retouches photographic negatives, prints

and enlargements using pencils, brushes and water colours to increase contrast against background. Examines negatives and prints for retouching; places negative film on retouching desk to obtain illumination of negative film; fades out spots and blemishes on print or negative, using water colour or pencil; smoothens contours, eliminates stray hair, blots out facial blemishes and wrinkles, softens or reinforces highlights and shadows, using fine brush and colour or black pencil; eliminates excess light or shadow in negative or print to produce clearer and more attractive appearance.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0600

Photographic Dark Room Operatives

Photographic Dark Room Operatives perform various routine and low skilled tasks in photographic dark room or studio, such as developing, printing and enlarging photographs; setting up camera and arranging back-ground screen, furniture, etc.; preparing developing solution in prescribed manner; cleaning prints or negatives in water; drying negatives and prints and cutting them to sizes, mounting prints, etc.; assisting operator in operating automatic printing, developing or enlarging machine; and may be designated as Processor, Print Cutter, Print Mounter etc.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0700

Printing Machine Operator, Photographic

Printing Machine Operator, Photographic operates automatic film printing machine to print photographs from negative film. Examines negative film for contrast and for deciding on type and grade of printing paper to be used; selects appropriate photographic paper; places negative film in film-holder of machine; sets machine for light conditions and for time of exposure; feeds roll of printing paper into machine; starts machine by operating switches; observes machine, exposing negative and printing paper to light for specified time; delivers exposed prints for developing. Collects exposed prints and develops them in chemical baths (developing and fixing solutions) for varying but timed periods; washes developed prints in cold running water; dries wet prints under shady conditions. May fit colour filters for taking colour prints. May repair and overhaul printing machine.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0800

Film Developing Machine Operator

Film Developing Machine Operator; Developer, Films operates film developing machine and develops exposed film in series of chemical and water baths in dark room, dries film in automatic drying unit, and prepares transparent black and white negative or positive film. Receives exposed film and notes instructions regarding nature of exposure and

developing conditions to be followed; loads exposed film roll in magazine of developing machine; mixes, or supervises mixing of, developing chemical baths in prescribed proportions; gets tanks of machine filled to prescribed level with chemical solution and water, as required; regulates and maintains correct temperature of developing solution; draws end of film from magazine and feeds it through feed roller of machine. Starts machine, observes and regulates running of film roll, drawn over rollers, and passing through series of guides, immersed in developing solution and fixing baths; adjusts speed of machine and runs it for set period until developed film, emerging from chemical bath tank, is rinsed while passing through cold water tank to wash off fixing solution. Maintains temperature of drying chamber at continuously set level, and dries negative; winds developed and dried film automatically on reels. Supervises cleaning of water and chemical tanks periodically and ensures re-filling of tanks with fresh chemical solutions. May develop and prepare coloured film.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.0900

Photographic Film and Paper Maker

Photographic Film and Paper Maker performs one or more hand or machine tasks in making of photographic film and paper. Mixes gelatine, water and chemicals in kettle, heats for prescribed period and allows mixture to cool, to form emulsion jelly. Melts and ripens emulsion jelly prior to coating, controlling

temperature to produce emulsion of required viscosity and adding further chemicals according to type of coating required. Operates coating machine, feeding film or paper base material into machine, which moves it on rollers through liquid emulsion, over chill roll or into cooling chamber to set emulsion, and slowly through drying tunnel supplied with warm filtered air. Operates rotary slitting machine which slits film or paper into narrow width and automatically re-reels each width. May be designated according to type of work performed.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.1000

Linoleum Maker

Linoleum Maker performs one or more tasks in making of linoleum. Mixes materials such as oil, rosin and ground cork in mixing machine to produce linoleum cement. Operates calender machine which spreads linoleum cement on burlap or hessian. Stores coated cloth in heated rooms where it is left for several days to dry and harden. Operates rotary machine which prints patterns on linoleum by means of engraved or cut hollow rollers fed with various oil colours. Passes linoleum through machine which trims edges and cuts it off to desired length. Examines finished linoleum for defects. May be designated according to tasks performed.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

8132.9900

Photographic Products Machine Operators, other

Photographic Products Machine Operators, Other include workers who operate and monitor equipment which makes photographic film and paper, and which processes exposed photographic film and make prints not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8132

Title Photographic Products Machine Operators

Group 814

Rubber, Plastic and Paper Products Machine Operators

Rubber, Plastic and Paper Products Machine Operators operate and monitor machines which knead and blend rubber and rubber compounds, and produce various components and products from natural and synthetic rubber and plastics or produce different paper products from paper, paperboard, cardboard and similar materials.

Occupations in this Group are classified into the following Families:

8141	Rubber Products Machine Operators
8142	Plastic Products Machine Operators
8143	Paper Products Machine Operators

Family 8141 Rubber Products Machine Operators

Rubber Products Machine Operators operate and monitor machines which knead and blend rubber and rubber compounds, and produce various components and products from natural and synthetic rubber, such as moulded footwear, domestic articles, insulating materials, industrial accessories, or tyres.

8141.0100

Calender Machine Operator

Calender Machine Operator, Rubber operates calendering machine to convert rubber into rubber sheets by rolling process. Adjusts steam valves to regulate heat of machine rollers, judging heat by touch and by observing reaction of rubber; sets thickness gauge by turning hand-wheels; starts machine, feeds it with chunks of rubber; tests thickness of product with gauge and, if necessary, makes suitable adjustments; supervises helpers who load and unload material from machine. May attend to running repairs. May work as Calenderer, Rubberised Fabric.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.0101

Pre and Post Calendering Operator

Pre and Post Calendering Operator is responsible for feeding the correct quantity of compound to the Calender rolls.

Qualification Pack Details:

QP NOS Reference RSC/Q0729
QP NOS Name Pre and Post Calendering Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0200**Cord Dipping Operator**

Cord Dipping Operator operates a machine to prepare rubberised fabric by passing fabric through solution of latex and other chemicals and dries it over preheated drums. Places roll of material on machine feeder; threads end of roll through machine rollers and affixes it to winder at finishing end; ensures that chamber of machine is filled with required quantity of latex solution, chemicals etc., for treatment of fabric; starts machine and adjusts tension of fabric and pressure of rollers; regulates temperature of drying drum; observes coating of fabric on one or both sides with rubber solution and then after threading over preheated drums for drying; tests thickness of product with a gauge and makes necessary adjustments; removes solution coated dried roll of fabric from winder; supervises helpers who load and unload material from machine. Oils and lubricates machine. May operate calendering machine.

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0300**Extruding Machine Operator (Rubber)**

Extruding Machine Operator (Rubber) operates a machine in which compounded rubber is extruded through heated die fixed to machine head to form continuous

shaped strip. Selects die and fits it to machine; turns steam valve to heat die to required temperature; starts machine; adjusts machine for specified extrusion speed by means of gear lever or any other device and fixes proper-size dies to machine to get specified profile; adjusts centring screws in case of tubes, to get uniform wall thickness; feeds rubber stock into machine by hand or conveyor; verifies dimensions of extruded rubber with gauge, callipers and rubber; adjusts controls to synchronize speed of conveyor belt with speed of extrusion of rubber. May be designated according to product extruded as Inner-tube Tuber-machine Operator (Rubber tyre and tube), Hose Tuber Machine Operator (Rubber goods).

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0301**Feed Extruder Operator**

Feed Extruder Operator is responsible for feeding the rubber compound to the extruder and performing the extrusion operation using the extruder

Qualification Pack Details:

QP NOS Reference RSC/Q0623
 QP NOS Name Feed Extruder Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0302**Tube Extruder Operator**

Tube Extruder Operator is responsible for feeding the rubber compound to the extruder and performing the extrusion operation using the Extruder.

Qualification Pack Details:

QP NOS Reference RSC/Q 0625
 QP NOS Name Tube Extruder
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine
 Operators

8141.0400

Rubber Fabric Cutting Machine Operator

Rubber Fabric-Cutting Machine Operator; Fabric Cutter, Rubber cuts strips of rubberised fabric on bias for use in building up plies of pneumatic tyres to give added strength and flexibility to tyres. With aid of helper, lifts roll of canvas lined, rubberised fabric on rack of machine; passes end of fabric over guide rolls and on cutting table; adjusts tension of fabric over guide rolls. Measures with rule and sets cutter at desired points; starts machine, adjusts speed of feed and cutting action and removes and counts strips; checks fabric pieces periodically to determine conformity to specifications and makes necessary adjustments to machine; oils machine bearings; sharpens circular knife, using abrasive stone. May operate slitting machine.

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine
 Operators

8141.0500

Slitting Machine Operator (Cycle Tyre)

Slitting Machine Operator, Cycle Tyre; Fabric Tearing Machine Operator, Cycle Tyre cuts rolls of rubberised fabric to required widths over slitting or tearing machine. Mounts roll of rubber coated fabric to machine shaft using hoisting equipment; adjusts rotary knives to cut stock to desired widths using a wrench; threads end of roll of stock through guides of machine with aid of helper; adjusts guide rolls to give proper tension to fabric roll; starts slitting machine, catches end of cut strips and starts them on power driven shells or spools. In operating Tear off Machine, tears by hand required width of fabric from end of roll, passes each end over opposite rolls (top batch and bottom batch) so that fabric is automatically torn off and wound in separate rolls by rotation of rollers in opposite direction; observes machine cutting and winding cut strips and regulates tension of winding device by turning wheels; lifts off rolls of cut stock. Oils and lubricates machine.

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine
 Operators

8141.0600

Bead Maker (Rubber Tyre)

Bead Maker, Rubber Tyre; Beading Machine Operator; Bead Builder builds up rubber-covered wire portions of beads in bead forming machine. Selects desired size form and mounts it on power driven shaft with wrench; places end of single strand of rubber-covered wire under small clamp on form; steps on control pedal and allows form to revolve until specified number of wire strands have been laid in

groove of form; cuts wire with wire-cutting pliers, removes formed wires, and wraps small piece of rubber taps around ring to hold loose ends. May perform one or other of above operations and be designated accordingly as BEAD CUTTER, BEAD WELDER, BEAD GRINDER, BEAD NIPPER, BEAD SOLDERER, and BEAD WRAPPER. May cover beads with rubberised fabric. May oil and lubricate machine parts.

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.0700

Profiling Operator (Cycle Tyre)

Profiling Operator, (Cycle Tyre) warms rubber compound between mill rollers and passes it through profile bowls for giving shape to cycle tyre tread rubber. Adjusts steam valves to regulate heat of profiling machine rollers, judging heat by touch and observing reaction of rubber; turns hand wheels to adjust distance between rolls; inserts chunks of compounded rubber between rolls to feed machine or positions conveyor feeder in front of rolls that carry strip of rubber from warm up mill for continuous feeding; starts machine, observes material threading between mill rollers on to profile bowl and take off conveyor; adjusts knives to cut material to specified length; tests thickness of product with gauze and makes necessary adjustments; removes cut pieces and examines for defects.

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.0711

Continuous Curing Operator

Continuous Curing Operator feeds the rubber compound into the machine to ensure a greater consistency of the profile of the end product.

Qualification Pack Details:

QP NOS Reference RSC/Q 0208
QP NOS Name Continuous Curing Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.0712

Roto Curing Operator

Roto Curing Operator is responsible for loading the pre-fabricated “green” product, to be cured, appropriately on to the machine.

Qualification Pack Details:

QP NOS Reference RSC/Q 0209
QP NOS Name Roto Curing Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.0713

Injection Moulding Operator

Injection Moulding Operator is responsible for feeding the rubber compound/strip into the Injection

moulding machine for making rubber parts

Qualification Pack Details:

QP NOS Reference RSC/Q 0207
 QP NOS Name Injection Moulding Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0714

Transfer Moulding Operator

Transfer Moulding Operator is responsible for operating the machine and feed the rubber compound and other materials into the machine for making rubber parts.

Qualification Pack Details:

QP NOS Reference RSC/Q 0206
 QP NOS Name Transfer Moulding Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0715

Internal Mixer Operator

Internal Mixer Operator is responsible for mixing the raw materials in the internal mixing machine to prepare a rubber compound which is processed further to obtain final compounds

Qualification Pack Details:

QP NOS Reference RSC/Q 0201

QP NOS Name Internal Mixer Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0716

Kneader Operator

Kneader is responsible for mixing raw materials in the Kneader and feed the Rubber into the machine to prepare the rubber compound.

Qualification Pack Details:

QP NOS Reference RSC/Q 0103
 QP NOS Name Kneader Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
 Title Rubber Products Machine Operators

8141.0800

Finishing Operator (Rubber Tyre)

Finishing Operator, Rubber Tyres; Tyre Finisher cleans and paints tyres, tests for balance and conductivity of tread on testing machine. Mounts tyres on rotating spindle; revolves spindle and examines visually for side wall cracks, foreign material and blisters; feels beads to detect kinks and feels inner surface of tyre to detect spread cords, ply separations or buckles; trims toe of bead and mould over-flow with knife; removes tyre and positions it on balance table to check conformance to balance specification; releases lock that permits balance table to float freely on mounting and bubble gauge to function; observes bubble gauge

to determine if tyre balance is within specified limits; marks tyre where gauge indicates lightest area, for location of inner tube valve; marks defective tyres and affixes labels to acceptable ones.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.0900

Sealing and Valve Fitting Operator

Sealing and Valve Fitting Operator, Tube and Tyre Building punches holes in inner tubes for valve stems by machine, inserts valve stem from inside of tube into hole, cuts tube to length and seals cut edges in press. Places one end of tube over arm like table of machine; presses pedal forcing punch through tube; removes tube from machine, inserts valve stem from inside of tube into hole, slips washer over outer end of valve stem and turns locknut on stem with wrenches; assembles oval shaped rubber and rubberised pieces to build up pad placed over section of inner tube where valve stem is placed, following plant specifications; cuts tube to specified length, bevels edges at each end to prepare them for splicing in power driven rotary knife that automatically cuts bevel; brushes rubber cement or acid on each end of tube (inside skived edge has been turned back over tube to expose splice); joins stock together to form tube by lapping and bonding edges with hand roller or press. Removes tube for curing.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.1000

Finishing Operator (Rubber Tube)

Finishing Operator, Rubber Tubes examines cured rubber inner tubes for defects, such as cracks, blisters and thin spots. Inflates inner tube to facilitate inspection, using air hose; examines tube for defects, specified brand and valve while revolving on turn table; marks defective tubes and places them in storage area for removal to repair section; installs cores and lock nuts in valve stems of acceptable tubes, using electric screw driver; inserts valve stem into fixture and pulls lever to bend valve.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.1100

Sheet Maker (Rubber)

Sheet Maker, Rubber, Smokehouse Man prepares rubber sheets from tapped rubber milk and smokes them to required colour and transparency. Collects tapped rubber milk, progressively sieves it, using different sieves; coagulates it using acids; washes with water letting it drip dry in air; rolls it into sheets using mechanical or manually operated rollers. Collects rolled rubber sheets, spreads them evenly on racks in smokehouse; treats rolled sheets with hot smoke over prescribed temperature in closed smokehouse, changing position of sheets from place to place in the smokehouse, removing the rolled sheets after smoking for specified period till sheets have acquired correct colour and transparency.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine
Operators

8141.1201

Moulder (Rubber)/Compression Moulding Operator

Moulder, Rubber; Rubber-Moulding Press Operator; Compression Moulding Operator moulds rubber in a steam or electrically heated press to form various products, such as gaskets, doll parts, and shoe heels. Places uncured rubber between upper and lower dies of mould; inserts mould in press; turns valve to lower ram on mould and to apply pressure and steam heat simultaneously for a specified time; removes mould from press, opens die and removes formed pieces with tongs or by hand; hangs formed articles on racks. May operate press in which rubber is injected into moulds. May be designated according to articles pressed, as RUBBER HEEL AND SOLE PRESSMAN.

Qualification Pack Details:

QP NOS Reference RSC/Q 0205
QP NOS Name Compression
Moulding Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine
Operators

8141.1301

Calenderer Rubberised Fabric/Operator-Textile Coating

Calenderer, Rubberised Fabric Operator-Textile Coating warms rubber compound between mill rollers, passes fabric between calender rollers, feeding with

rubber to give rubber coating on surface of fabrics. Adjusts steam valves to regulate heat of machine rollers; charges fabric to be rubber-coated between rollers; sews ends of cloth rolls together and threads fabric through rollers to form continuous sheet; inspects sheet to detect turned edges, material defects; smoothens wrinkles and repairs holes, faulty seams, or frayed edges; starts machine and feeds it with chunks of rubber; tests with gauge thickness of rubberised fabric and makes necessary adjustments; examines thickness of coated sheets. May work as Calender Machine Operator, Rubber.

Qualification Pack Details:

QP NOS Reference RSC/Q 0728
QP NOS Name Operator-Textile
Coating
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine
Operators

8141.1400

Hose Maker (Rubber Goods)

Hose Maker (Rubber Goods) makes rubber hoses by wrapping plies (layers) of rubberised fabric and gum rubber stock on rubber tubes by means of wrapping machine and vulcanising pan. Places mandrel and pre-cut rubber tubing on workbench; swabs mandrel with soap stone solution and pushes it into rubber tubing; adjusts guides on machine to accommodate ply stock of specified width; positions mandrel on machine rollers and swabs rubber tubing on mandrel with rubber cement to provide adhesive surface; positions pre-cut ply stock between guides and depresses

pedal to wind and roll ply stock around rubber tubing; cements band on hose in specified location; examines hose for wrinkles and loose plies, smoothens wrinkles and presses plies together, using fingers and roller; measures dimensions of hose with rule, callipers, and gauges, and cuts off excess rubber with knife; trims and cements tubing to seal raw ends of ply stock; wraps fabric around hose to prepare hose for curing. May wind wire between plies for reinforcement of hose. May clamp or cement metal fittings to ends of hose using rubber cement and hand tools. May wind rope around hose, on corrugated mandrel to hold hose against contours of mandrel during cure.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.1500

Latex Worker

Latex Worker tends machine that dips forms into tanks of liquid latex to produce rubber goods, such as gloves, balloons, teats, valve tubes, and finger tips. Lifts form board from conveyor and fastens it to machine bed with hinge clamps and slide bolts; inverts bed by hand and moves lever to submerge forms in tank of latex solution according to specifications; raises and rocks bed to create movement that dries coagulant or equally distributes and sets latex on forms; lifts boards and applies carbowax on latex coated mould and carefully removes mould from latex coating by hand; adds solutions to tanks with dipper to speed drying time or replenish supply of specified level.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.1600

Latex Foam Cushion Maker

Latex Foam Cushion Maker moulds foam rubber products such as cushions, mattresses from latex by reducing its ammonia content, mixing and stirring it with chemicals and pouring and settling mixture in required mould in vulcanising tank. Pumps latex into tank of machine; turns valve to heat steam jacket of tank to specified temperature and observes gauge; sets timer and starts machine agitators that induce evaporation of ammonia; turns valves to regulate flow of treated latex and air into frothing tank to mix air with latex; determines density of latex mixture by weighing out specified quantity of mixed latex from frothing tank into holding tanks; weighs and pours specified amount of latex and chemicals in mixing machine and starts machine that mixes ingredients; places mould under discharge spout of mixing machine and fills mould with mixture; cures filled moulds by hydraulic press to form products; removes product from mould, squeezes out water by rolling process and finally dries it on spreading machine or drying chamber. May mix ground rubber particles with latex, using mixing machine and fills moulds with mixture.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.1701

Tyre Builder/Radial Building Operator

Tyre Builder; Tyre Maker; Radial Building Operator sets up and operates drum-type machine to build up pneumatic tyres. Positions ply stitcher rollers and drum according to width of stock, using hand tools and gauges; rubs cement stick on drum edge to provide adhesive surface for plies; pulls plies from machine spool and aligns with edge of drum; depresses pedal to rotate drum, winds specified length of ply on to drum, tears ply from spool, and splices ends; brushes solvent on to ply to ensure adhesion and repeats process as specified; alternating direction of each ply to strengthen tyre; pushes switch to move bead setters that press prefabricated bends on to plies and to position rollers that turn edges of plies under and over beads; winds chafers and breaker on to plies; aligns tread with guide, starts drum to wind tread on to plies; and splices depresses pedal to collapse drum and lifts tyre. May turn ends of plies under and over beads with steel rod and place it to one side in readiness for moulding and vulcanising (curing).

Qualification Pack Details:

QP NOS Reference	RSC/Q 0520
QP NOS Name	Radial Building Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8141
Title	Rubber Products Machine Operators

8141.1702

Tyre Building Operator-Commercial Vehicles

Tyre Building Operator-Commercial Vehicles is responsible for building the 2/3/4 wheeler commercial vehicle tyres.

Qualification Pack Details:

QP NOS Reference	RSC/Q 0521
QP NOS Name	Tyre Building Operator-Commercial Vehicles
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8141
Title	Rubber Products Machine Operators

8141.1703

Tyre Building Operator-Passenger Vehicles

Tyre Building Operator-Passenger Vehicles is responsible for building the 2/3/4 wheeler passenger vehicle tyres.

Qualification Pack Details:

QP NOS Reference	RSC/Q 0519
QP NOS Name	Tyre Building Operator-Passenger Vehicles
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8141
Title	Rubber Products Machine Operators

8141.1800

Tyre Moulder

Tyre Moulder shapes unfinished, new or reconditioned, pneumatic tyres in press mould. Places air or water bag of specified size inside unfinished tyre using tire spreading device and clamps, clamps tyre into mould; inflates bag with air or hot water under pressure to force tyre to shape of mould; places mould in vulcanising oven, regulates pressure and

steam heat to vulcanise tyre; removes tyre from mould when vulcanising is complete and extracts air or water bag. May be designated according to the type of tyre moulded such as TYRE MOULDER CYCLE; TYRE MOULDER, AUTOMOBILE; TYRE MOULDER TRUCK.

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.1801

Tyre Moulding Operator

Tyre Moulding Operator is responsible for operating the press, load the “green” tyre in the mould and remove the cured tyre from the machine.

Qualification Pack Details:

QP NOS Reference RSC/Q 0211
QP NOS Name Tyre Moulding Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.1900

Band Builder (Tyre Building)

Band Builder, Tyre Building; Pocket Maker; Ply Bander; Tyre Bander operates machine to glue together bands of ply stock for use in manufacture of rubber tyres. Positions play stock on drum and aligns with sides of drum; depresses pedal to rotate drum while guiding ply on drum to form band; swabs wrinkles with benzol and smooths by hand; splices ends of plies by pressing with fingers; repeats operation, reversing angle of splice until

specified number of plies are formed into band; depresses pedal or pulls lever to move rollers against band and rotates drum to band plies; pushes pedal to collapse drum and pulls band from drum. May roll gum stock between plies and cut with shears. May wrap canvas liners around bands to prevent adhering during storage. May measure ply stock with table marker and tear stock on bias to specified length to form banding strips.

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.2000

Trimmer (Tyre Building)

Trimmer, Tyre Building; Tyre Trimmer, Hand trims excess rubber formed on tyres during curing process. Places tyre on turn table or machine driven rollers; holds knife at angle to tyre to avoid cutting tyre and turns table manually or mechanically to cut excess rubber; lifts tyre from table or pulls lever to remove it from rollers. May trim motor, "giant", aero, cycle tyres, etc. May inspect finished tyres for defects and marks them with chalk for rectification or rejection.

ISCO 08 Unit Group Details:

Code 8141
Title Rubber Products Machine Operators

8141.2100

Tyre Repairer

Tyre Repairer; Tyre Repairman repairs or remedies defects in cured tyres by retreading, vulcanising or other processes. Examines and probes tyre with awl (a small pointed tool for making holes) to

determine extent of defect; buffs blemishes from tyre, using portable buffer; cuts out rubber around cracks and buffs area to prepare it for patching; cements gum rubber patch to cut-out to build up defective area; rolls down patch with hand stitcher and punctures air pockets in patch to remove trapped air; buffs and trims excess rubber from tyre; replaces treads by cutting defective tread from plies, buffing ply surface, and cementing new tread on plies. May tend vulcanizing machine to cure patch on tyre for specified time. May be known as RETREADER, TYRE, if engaged in tyre retreading.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.2200

Moulder, Rubber Tube

Moulder, Rubber Tube inflates joined raw inner tube with air, fits it in press mould and heats tube and mould to required temperature by means of steam for vulcanisation. Selects suitable shaping rim to correspond to mould in press; sets built tube in rim with its valve stem fitted in slot of rim; inflates tube with air hose to bring it to its normal shape; caps valve stem to hold air in tube; removes tube from shaping rim, places it inside mould; removes valve cap, connects hand grip to valve stem, and injects air in tube by pressing foot pedal to hold tube firmly inside mould; checks curing pot (oven) to ensure that covers and all connections are in place; operates hydraulic ram inside pot so that moulds containing inner tube are held firmly in place; starts clock to time period of vulcanising and controls temperature and flow of steam into pot;

watches gauges and makes necessary adjustments to ensure that correct vulcanising conditions are maintained; pulls moulds when vulcanising is complete; removes cured tubes from moulds and places them on hook provided.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.2300

Cycle Tube Reverser

Cycle Tube Reverser reverses cycle tubes by pneumatic system for grinding. Carries mandrels (a rod used to retain the cavity in rubber tube) with vulcanised tubes to reversing stand; inserts one end of the mandrel into the air chamber tube on stand; starts compressor to permit air into air-chamber tube; pulls by hand one end of rubber tube on mandrel into air-chamber tube; closes other end of mandrel by hand and pulls out mandrel by hand to separate tube from mandrel in reverse position; removes reversed tubes to joining section.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.2400

Rubber Stamp Maker

Rubber-Stamp Maker makes rubber stamps on order and mounts them for use. Composes metal type to match copy; locks type in chase and mounts chase on bed of vulcaniser; mixes French chalk, china clay, Plaster of Paris, dextrin and water and places mixture in metal

moulding plate; reverses moulding plate over chase to receive type impression; dries compound in oven; covers moulded impression with cut to size piece of uncured rubber; clamps rubber-covered mould under steam chamber of vulcaniser until rubber is cured; removes cured rubber from mould, trims away excess rubber, and mounts stamp on wooden or metal backing with rubber cement.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

8141.9900

Rubber and Rubberised Product Makers, Other

Rubber and Rubberised Product Makers, Other include all other workers engaged in making different types of rubber and rubberised products, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8141

Title Rubber Products Machine Operators

Family 8142

Plastic Products Machine Operators

Plastic Products Machine Operators operate and monitor machines which knead and blend compounds to obtain plastic materials and which make various plastic components and articles.

8142.0100

Tablet Machine Operator

Tablet Machine Operator, Tableting Operator (Plastics) tends tablet-machine that compresses plastics powders into pellets or biscuits of specified weight and shape for use in moulding plastics products. Sets appropriate punch on cylinder and die on die setting plate; feeds hopper of machine with desired blend of plastics powders; opens gate valve to control flow of powders from hopper into machine. Turns steam valve to regulate temperature of machine according to ammeter gauge, and adjusts die pressure to attain specified hardness of pill. Examines compressed tablets to ensure that they are of required weight, size and shape. May clean, change and adjust die. May operate mixing, sieving or milling machine. May be designated, according to type of machine used, as ROTARY PERFORMER; SINGLE STROKER PERFORMER.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.0200

Laminating Press Operator (Plastic)

Laminating Press Operator (Plastics) sets and operates laminating press to heat and press plastics or plastics impregnated material into solid laminated sheets. Selects metal plates according to finish desired. Weighs and assembles sheets of impregnated material and places assemblies between metal planishing plates; slides plates into platens of hydraulic press; moves controls to heat press to specified temperature and compress assemblies between plates; removes plates from platens after specified time and strips plastics sheets from metal plates, using knife; examines

sheets for defects. Cleans metal plates, using cloth, solvents, or scrapers or by dipping plates into vats of hot water, using chain hoist. May adjust heat and pressure controls.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.0300

Extruding Machine Setter (Plastic)

Extruding Machine Setter (Plastics) sets and adjusts die and extrusion machine to form dry or dough-like plastics into continuous rod, tube, strip or similar shape of desired dimensions. Installs dies, machine screws and sizing rings, using hand tools; couples hose to die holder to circulate steam, water, air or oil to die; fills machine hopper with materials, using conveyor auger or stuffs rolls of plastic dough into machine cylinders; starts machine and sets controls to regulate vacuum, air pressure, sizing rings and temperature and synchronizes speed of extrusion with pulling rolls; examines extruded sample product for defects, such as wrinkles, bubbles and splits. Measures extruded articles for conformance to specifications using micrometres, callipers and gauges and makes adjustments by regulating speed and weight controls or manipulating hot and cold water, air, oil or steam valves and observing gauges so as to obtain forms of specified dimensions.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.0400

Extruding Machine Operator (Plastic)

Extruding Machine Operator (Plastics) operates machine to extrude thermoplastic materials to form tubes, rods and film, according to specifications. Weighs and mixes pelletized, granular, or powdered thermoplastic materials and colouring pigments in tumbling machine set by Extruding Machine Setter (Plastics) couples hose to die holder to circulate steam, water, air or oil to die; fills machine hopper with mixed materials or stuffs rolls of plastic dough into machine cylinders; starts machine and synchronizes speed of conveyor belt with speed of extrusion through die; examines extruded product for defects, such as wrinkles, bubbles and splits; measures extruded articles for conformance to specifications, using micrometres, callipers and gauges and adjusts speed and weight, controls or turns hot and cold water, air, oil or steam valves to obtain product of specified dimensions. May reel extruded product into rolls of specified length and weight. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.0501

Injection Moulding Machine Operator (Plastic)

Injection Moulding Machine Operator (Plastics) sets up and operates injection-moulding machines to cast products from thermoplastic materials. Installs dies on machine, according to work order specifications, using clamps, bolts, and hand-tools; sets thermostatic controls to obtain specified moulding temperature;

dumps pre-mixed plastic powders or pellets into hopper and starts machine; pulls lever to close dies and inject into dies to cast part; removes finished product from dies, using hand tools and trims excess material from part using knife. May mix thermoplastic materials and colouring pigments in mixing machine, according to formulae. May grind scrap plastic into powders for reuse.

Qualification Pack Details:

QP NOS Reference ELE/Q3501
 QP NOS Name Injection Moulding Machine Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine Operators

8142.0502 Moulding Operator

Moulding Operator is a skilled operator capable to operate PU pouring machines and Injection moulding machine used in lasting process and also skilful to perform basic supervisory tasks to monitor the performance of the workers.

Qualification Pack Details:

QP NOS Reference LSS/N9101
 QP NOS Name Moulding Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine Operators

8142.0503 Encapsulation Operator

The Encapsulation Operator is responsible for providing cover to the lead frame or assembled LED by filling with epoxy. The individual at work operates the moulding press for active components or manually fills epoxy in the reflector-cum-PCB of LED and processes to complete the encapsulation.

Qualification Pack Details:

QP NOS Reference ELE/Q1703
 QP NOS Name Encapsulation Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine Operators

8142.0600 Compression Moulding Machine Operator (Plastic)

Compression Moulding Machine Operator (Plastics) sets up and operates compression moulding machines to mould plastics products by heat and pressure according to specifications. Installs dies on press, using clamps, bolts, and hand tools and coats dies with parting agents; sets thermostat to regulate temperature of dies; weighs premixed plastic compound and pours compound into die well, or spreads fabric on die and dumps compound over fabric; pulls lever to lower hydraulic ram that compresses compound between dies to form and cure part; removes cured part from mould, using hand tools and air hose. May mix catalysts and colouring pigments with plastic compound, using paddle and mixing machine. May operate compression moulding machines to form product under pressure only and be designated COLD-MOULDING-PRESS OPERATOR.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine
Operators**8142.0700****Bottle Blowing Machine Operator
(Plastic)**

Bottle Blowing Machine Operator (Plastics) feeds thermo-plastics material into hopper and operates buttons and levers of bottle blowing machine to extrude tube like material and pumps air to shape it into form of mould. Weighs and mixes pelletized, granular, or powdered thermoplastic materials and colouring pigments in tumbling machine according to formula; installs dies, machine screws, sizing rings, using hand-tools; and couples hose to die holder to circulate steam, water, air or oil to die; fills machine hopper with mixed materials or stuffs rolls of plastic dough into machine cylinders; starts machine and sets controls to regulate vacuum, air pressure, sizing rings and temperature; depresses lever of machine and ensures that parison tube reaches entire length of mould or die; cuts ends of tube with scissors near nozzle and blows air into mould by operating pump; opens moulds and removes finished article. Repeats process.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine
Operators**8142.0800****Vacuum Plastic Forming Machine
Operator**

Vacuum Plastic Forming Machine Operator tends machine that moulds

thermoplastic sheets into products, such as automobile pillar posts, nose pieces, rear quarter-panel covers, and toys. Places plastics sheet on top of mould, positions sealing frame around sheet, and fastens frame to rim of mould with clamps. Pushes button to start machine that heats sheet, draws it into mould to form product, and sprays product with cold water or air to harden it. Removes product from mould and reloads thermoplastic sheet into machine. May trim excessive moulding material from products, using knife, scissors, or band saw. May set up machine to form products.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine
Operators**8142.0900****Embossing Machine Setter (Plastic)**

Embossing Machine Setter (Plastics) sets up embossing machine that stamps and embosses design on plastic sheets. Installs and locks embossed plate in chase and locks chase in bed of press. Lays piece of card board on machine bed under plate and impresses it with plate. Cuts out impression and glues it to bed under plate adjusting table in order that impression and plate are in exact alignment; sets guides to hold plastics sheet in position under plate and adjusts table height to impart correct depth of impression. Starts machine and places sample piece of plastics sheet in guides and pushes it under embossing plate. Inspects embossing on sample for correct depth of identification and correct faults as necessary.

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine
 Operators

8142.1000 Embossing Machine Operator (Plastic)

Embossing Machine Operator (Plastics) feeds and operates embossing machine to stamp and emboss designs on plastics sheets. Installs engraved embossing roller, pressure roller and roll of plastics sheets to be embossed in machine by hand or using hoist; manipulates lever or clutch to regulate pressure between rollers; threads plastics sheet through machine and regulates flow of steam into rollers to counteract curling of sheet and to obtain desired depth of embossing or surface shine to sheet; starts machine, examines embossed sheet and makes adjustments to secure desired results; adjusts rotary cutting device to cut sheets or tend winding machine to wind embossed sheet into rolls. May feed plastics sheets to machine.

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine
 Operators

8142.1100 Printing Machine Operator (Plastic)

Printing Machine Operator; Printer (Plastics) sets up and operates printing machine to print colour designs on rolls of plastics material. Positions and clamps printing cylinder on press, using hand tools; pours inks into ink pans and threads plastics film through press rolls; starts press and turns wheels to adjust pick up, transfer, and printing rolls, turns rheostats to regulate speed and feed of press, and

temperature of drying box, examines printed sheet to detect defects, such as wrinkles, tears, smeared printing, and uneven colour distribution, cleans and oils press, and repairs or replaces broken or worn parts of press, using hand tools. May set print on printing cylinder and blend coloured inks, according to job order.

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine
 Operators

8142.1200 Button Maker

Button Maker performs one or more hand or machine tasks in making of buttons. Cuts button blanks from various materials such as composition or vegetable material, ivory or pearl by hand or with automatic cutting machine; removes rough edges, levels back and front of button blanks and reduces them to uniform thickness using automatic machines; makes holes in buttons by means of automatic drilling machine; cleans buttons prior to polishing by dipping them in chemicals and wiping them dry; polishes buttons by means of revolving buffer; examines finished buttons and rejects faulty ones. May be designated according to job performed such as BUTTON HOLE DRILLING MACHINE OPERATOR, BUFFING MACHINE OPERATOR.

ISCO 08 Unit Group Details:

Code 8142
 Title Plastic Products Machine
 Operators

8142.1300 Mould Setter (Plastic)

Mould Setter (Plastics) sets up and adjusts compression, injection and similar type of machines used to mould plastic materials to specified shape. Positions assembled mould on press bed of moulding machine or bolts matrix of unassembled mould to bed and aligns die (attached to ram) with matrix; adjusts stroke of ram, using hand tools. Connects steam, oil or water lines to mould or moves controls to regulate mould temperature; sets machine controls to regulate forming pressure of machine and curing time of plastic in mould; installs knock-out pins in mould, and makes other adjustments, using hand-tools; starts machine to produce sample products; examines sample for surface defects, such as bumps, bubbles, and scratches, and adjusts machine set up to eliminate defects; removes, cleans, and greases moulds and places them in storage racks. May supply plastic materials to moulding machines. May direct supplying of necessary equipment, such as jigs, containers or forms to workers engaged in tending moulding machines. May be designated according to type of machine set up, as COMPRESSION-MOULDING MACHINE SET-UP MAN; INJECTION MOULDING MACHINE SET-UP MAN.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.1301

Plastic Moulding Technician or Operator

Plastic Moulding Technician or Operator manages the specifications of the plastic and its granules, setting up and operating the moulding machinery and forming and finishing the output.

Qualification Pack Details:

QP NOS Reference ASC/Q4401

QP NOS Name Plastic Moulding Technician or Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.1400

Moulder, Hand (Plastic)

Moulder, Hand (Plastics) moulds plastics sheets into desired shapes in hand moulding press. Studies specifications for moulded product and assembles mould. Determines weight of charge, pressure, temperature and curing time for moulding; collects plastic sheets, cuts them to required size and heats them on electrically operated heater to soften for moulding; removes sheet when sufficiently heated and places it in female of wooden mould, fixes wooden slab of mould to keep sheet in position and inserts male block of mould; sets mould in hand press and manipulates controls to compress material and form material to shape of mould; removes moulded plastics object after specified time-interval by opening mould; examines and gauges product for conformity to plant or customer standards. May make minor adjustments in moulding procedure to eliminate defects, and remould product.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.1500

Cementer (Plastic)

Cementer; Assembler (Plastics) joins plastics sheets and moulded parts with solvents, steel plates, screws, etc. Selects plastics sheets of specified dimensions; arranges them according to pattern to give required shape. Smoothens and cleans parts to be assembled; Brushes parts with cement or dips them into tank containing cement. Assembles parts on jig and secures them in position with clamps until cement hardens. May join by using screws and steel plates, etc.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.1600

Plastic Fabricator

Plastics Fabricator fabricates, assembles, reworks, and repairs plastic products, applying knowledge of working characteristics of plastics and bonding techniques, using precision instruments, hand tools, power tools, machines, and equipment: Reads and interprets blueprints, work orders, and related documentation to determine methods and sequence of operations and dimensional and finish specifications. Lays out cutting lines on plastic materials, such as sheet stock and fibreglass or graphite cloth, following template pattern, blueprints, sketches, or sample part, using measuring and marking instruments. Cuts material to size, using shears, knives, cutters, scissors, router, or saw. Mixes ingredients, such as resins, catalysts, fillers, accelerators, and colours, according to formulae, manually or using mixer. Sets up and operates forming machines and presses, or laminates plastic cloth and resins or pre-impregnated cloth onto

layup mold or bonding fixture, to shape parts. Wraps bonding fixture or mold in vacuum bagging materials, exhausts air from vacuum bag to prepare lamination for curing or bonding. Operates oven to cure parts. Trims, drills, reams, countersinks, grinds, and finishes parts to specifications, using templates, hand tools, and power tools. Verifies dimensions of parts, using precision instruments, such as dial indicators, micrometres, and callipers. Fits and assembles parts and attaches hardware and fittings, such as brackets and hinges, using clamps, jigs, fixtures, power tools, and fasteners. Repairs and reworks damaged or defective parts and assemblies by lay up, foaming, cementing, moulding, potting, casting, or similar methods. May heat parts or materials to facilitate shaping, using oven or heat gun. May fabricate and assemble parts from fibre reinforced plastics (composites) and assorted materials, such as metal and honeycomb.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

8142.9900

Plastic Products Making Operatives, Other

Plastics Products Making Operatives perform number of routine and low skilled tasks in manufacturing plastics products, such as arranging and loading plastics or plastics impregnated sheets, assisting Printing Machine Operator, cleaning and finishing moulded plastics products etc. and are designated as: Laminating Press Helper (Plastics) if assists Laminating Press Operator by counting sheets of resin-impregnated wood, fabric, paper, or other

materials, by wiping surface of metal plates with cloth and special solution to prevent sticking, and by stacking sheets between plain or engraved plates.

ISCO 08 Unit Group Details:

Code 8142

Title Plastic Products Machine Operators

Family 8143

Paper Products Machine Operators

Paper Products Machine Operators operate and monitor machines which produce boxes, envelopes, bags and other goods from paper, paperboard, cardboard and similar materials.

8143.0100

Cardboard Box Maker

Cardboard Box Maker cuts cardboard pieces to required size and shape, folds, ends and joints to make cardboard boxes. Collects required quantity of cardboard or paper-board blanks. Cuts blanks to required size according to design or specification, by hand or machine; folds sheets along cut or grooved edges to make flaps for sides, top and bottom; glues ends or edges to make cartons or boxes, or fastens parts together with pins using stapling machine. Covers boxes by gluing protective or decorative paper. May operate gluing, bending, cutting, creasing and pinning machines to glue. Fold or cut cardboards and staple them. May impregnate box by dipping it in melted wax. May be designated as Paperboard Box Maker, if using paperboard for making boxes, containers, etc. May be designated as Cardboard/Paperboard Box Maker,

Machine if producing cardboard or paperboard boxes on machine.

ISCO 08 Unit Group Details:

Code 8143

Title Paper Products Machine Operators

8143.0200

Envelope Maker, Machine

Envelope Maker, Machine; Envelope Folder; Paper Bag Maker, Machine cuts, folds and glues edges of paper to make envelopes and paper bags of required sizes. Collects required quality and quantity of paper; studies specifications. Sets and adjusts machine to cut and fold paper to size of envelope or paper bag to be made. Feeds blank sheets or roll of paper into machine; pours into hopper of machine and regulates its flow; sets cutting, gluing and folding devices. Presses button to start machine; observes progress, stops machine to correct faulty operation; and discharges completed envelopes, bags in containers. Examines finished products for quality and makes necessary adjustments to machine to obtain products of correct specifications. May mix glue solution. May also set and operate a semi-automatic or automatic machine equipped for printing on products made. May be designated as ENVELOPE MAKER OR PAPER BAG MAKER, HAND, if produces envelopes or paper bags by hand, cutting paper to required size, folding and joining ends together.

ISCO 08 Unit Group Details:

Code 8143

Title Paper Products Machine Operators

8143.0300

Cellophane Bag Maker, Machine

Cellophane Bag Maker, Machine sets and operates machine that forms cellophane into bags. Sets into machine metal form on which to shape bag; loads roll of cellophane on spindle of machine; threads cellophane through folding, cutting and gluing devices; adjusts machine to produce bags of specified size. Starts machine by switching on power; observes operation by adjusting tension of parts and material, examines finished products for quality and specification. May set and operate machine also equipped for printing information and decoration on bags. May make bags from other materials such as paper etc.

ISCO 08 Unit Group Details:

Code 8143

Title Paper Products Machine Operators

8143.0400

Flower Maker, Paper

Flower Maker, Paper makes leaves and flower petals of paper of different shades and colours sets them on wire or bamboo wickers. Collects paper sheets of required quantity, colours and shades for making flowers of desired type; folds and cuts paper by hand, using pair of scissors or cutting die for mass production, for preparing flower petals, leaves, etc., shapes, twists and trims, cut bits to form into petals and leaves of desired pattern; assembles petals and leaves together by gluing around wire stem to make into buds; gives finishing touches by trimming and clipping edges and arranging them to form bunches or bouquet. May make flowers from cloth or other material. May prepare novelties, such as Chinese lanterns, flower festoons and paper hand-fans.

ISCO 08 Unit Group Details:

Code 8143

Title Paper Products Machine Operators

8143.0500

Papier Mache Moulder

Papier Mache Moulder prepares 'papier Mache' by mixing glue or rosin with paper pulp and makes statues, toys and other novelties by moulding 'papier Mache' to shape using patterns. Mixes paper pulp, glue and limestone powder in water to make into paste; prepares papier sheets out of paste by using hand roller; takes two halves' of appropriate mould or die figure or toy, and greases inside of form-mould 'halves' with brush; places wet 'papier Mache' sheets over mould and presses it hard with hand to form impression on 'papier Mache', builds up form to desired thickness, fitting and smoothing each sheet to mould; places two halves of mould together, pastes and presses lap projections of each half of form together, and leaves mould and cast for drying. Removes completed form from moulds after specified period; trims and smoothens edges, using sand paper, and fixes attachments as required. Places finished products for drying and paints giving finishing touches with ornamental decoration. May prepare own colour schemes for painting forms. May design own patterns.

ISCO 08 Unit Group Details:

Code 8143

Title Paper Products Machine Operators

8143.9900

Paper Product Makers, Other

Paper Product Maker, Other Makes other paper products not elsewhere classified such as Tube Maker, Paper, if operates power-operated machine which rolls

paper and makes finished paper tubes of required size for use as cover or tubes for dry battery cells. Paper Coater, if tends and adjusts machine which coats paper or board with binding medium and mineral matter or with tinfoil paste. Colourman, if mixes material and colours used for coating paper on board. Paper-Novelty Maker if makes paper candy and nut cups and miscellaneous paper novelties such as hats, party favours, etc.

ISCO 08 Unit Group Details:

Code 8143

Title Paper Products Machine Operators

Group 815

Textile, Fur and Leather Products Machine Operators

Textile, Fur and Leather Products Machine Operators operate and monitor various types of machines which prepare, process and treat fibres, yarn, thread, leather, fur; produce, modify and repair footwear, garments and manufacture or dry clean textiles or fur and light leather articles.

Occupations in this Group are classified into the following Families:

8151	Fibre Preparing, Spinning and Winding Machine Operators
8152	Weaving and Knitting Machine Operators
8153	Sewing Machine Operators
8154	Bleaching, Dyeing and Cleaning Machine Operators
8155	Fur and Leather Preparing Machine Operators
8156	Shoe Making and Related Machine Operators
8157	Laundry Machine Operators

8159	Textile, Fur and Leather Products Machine Operators, Not Elsewhere Classified
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Family 8151 Fibre Preparing, Spinning and Winding Machine Operators

Fibre Preparing, Spinning and Winding Machine Operators operate and monitor machines which prepare fibres, and spin, double, twist and wind yarn and thread from natural textile fibres. They twist two or more strands of yarn to prepare single stronger, smoother, uniform and heavier strands and treat textiles to make them stiff and water resistant.

8151.0100

Garnette Machine Man, Woollen

Garnette Machine Man, Wool tends garnette machine for cleaning and turning woollen yarn waste into fluffed wool. Collects woollen thread waste near feed end of garnette machine. Starts machine, picks up woollen waste yarn by hand and spreads it evenly on lattice of machine for cleaning and turning it into fluffed wool. Removes waste wool from doffer drum of machine using hand brush and iron nail and ensures running of machine. Cleans and oils machine. May cut hard knots if detected in woollen waste yarn with knife.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.0300

Rag Machine Man (Woollen Textile)

Rag Machine Man (Woollen Textile) tends and feeds rag machine for tearing woollen rags into fibre. Collects cuttings, rags and woollen cloth near feed end of machine. Sprinkles prescribed quantity of oil on rags using sprinkler to soften it. Starts machine, picks up handful of oiled rags and feeds them on lattice of machine. Spreads rags with hand on lattice evenly. Maintains regular feed of rags and their flow. Avoids choking of rage machine. Processes rags and turns it into fibrous condition. Removes waste from machine parts and cleans machine. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.0400

Doubling-Machine Operator (Textile)

Doubling Machine Operator (Textile) tends machine that winds two or more strands of yarn parallel onto bobbin or tube preparatory to twisting: Places supply packages in creel and draws yarn ends through machine guides and tensions onto take up tube. Starts machine and observes operation to detect yarn breaks, exhausting yarn supply and full packages on take up tubes. Pieces up yarn breaks, using knotter. Replaces supply packages in creel. Doffs full packages.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.0500

Combing Tenter

Combing Tenter; Comberman (Cotton Textile) tends combing machine for combing or separating short fibres from long ones and converting lap into sliver preparatory to drawing. Places lap rolls or spools in proper position on creel of combing machine. Pulls out and leads ends of lap through assembly on to feed-rolls. Sets calender rollers to position and starts machine. Watches running of sliver through machine. Detects and joins broken ends of sliver. Removes surplus sliver after stopping machine to avoid jamming and when necessary. Leads web coming through funnel like guide into can at delivery end and replaces filled can with empties. Removes waste sliver rolls from back of machine to specified place or to waste bag. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.0600

Spinner, Frame (Textile)/Ring Frame Tenter

Spinner, Frame (Textile) tends spinning frame that draws out and twists roving or sliver into yarn: Patrols work area and observes spinning to detect nearly exhausted supply packages and breaks in yarn, roving, and sliver. Pieces up breaks in yarn, roving, and sliver and replaces nearly exhausted supply packages with full packages. Twists end of material from supply package to material in machine or threads material from supply package through machine guides and drawing rollers. Brushes yarn or lint from drawing rollers, guides, and rails. Notifies

designated personnel of machine malfunction. May doff machine.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.0700

Drawing Tenter

Drawing Tenter; Draw Frame Tenter; Drawing Feeder; Drawing Receivers (Textile) tends draw frame (machine) having number of drawing sets, each set combining several slivers into one of nearly same weight and thickness as any of original sliver. Arranges number of cans full of card or comber sliver at rear of drawing machine. Threads ends of sliver from cans through machine. Replaces empty cans with filled cans, joining ends of slivers by matting and rolling them together with fingers. Watches slivers running into machine and joins broken ends. Replaces cans when filled at delivery end with empty ones. Cleans machine and may oil and varnish top rollers.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1000

Reeler Textile

Reeler, Textile operates reeling machine for winding yarn from bobbins or cops into coils (skeins or hanks) places yarn bobbins or cops on spindles of machine, pulls ends of yarn from each bobbin or cop through guide hook and traverse rail and loops it to pin on reel. Sets dial that measures yardage of yarn wound. Turns reel by operating lever or by hand so that

yarn is pulled from bobbins or cops and wound into coils. Replaces cops or bobbins when empty with filled ones and knots loose ends from new cops or bobbins to tail ends of coils. Stops machine when coils of prescribed yardage are made and removes coils from reel. May collect together required number of coil or hanks and make them in knots by hand. Is designated as RE-REELER or HAND MAKER when reeling silk yarn.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1100

Reed Man

Reed Man; Reed Repairer (Textile) repairs and replaces broken or defective reeds to be used in weaving. Locates defective or broken dents (wires) in reed frame, cuts out defective portions and nails new piece in place and repairs damaged frames.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1200

Healdman (Textile)

Healdman; Heald Repairer (Textile) repairs and replaces broken or defective healds, pulls out or cuts them with scissors or pliers and fastens new ones in their place by hand or by twisting them into position with pliers.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1300 **Reeler, Silk**

Reeler, Silk places cooked cocoons in basins of reeling machine, containing taped water. Stirs cocoons in water with fingers and draws loose ends of silk filament from each cocoon. Collects four or five loose ends together to form one yarn or composite filament depending on type of thickness of yarn required. Draws ends of silk yarn through hole of button of reeling machine and over pulleys. Fastens or ties ends to reel fitted to machine. Starts machine and tends reeling basis to draw out silk filament from cooked cocoons. Ensures that silk yarn or filament is drawn from each cocoon and twisted and reeled in reeling frame. Feeds fresh ends of silk filament from fresh cocoons by throwing ends of filament by hand to one already being reeled and ensures that continuity of reeling and thickness of filament is maintained. Stops machine when silk filament gets broken. Traces ends from reel and restores continuity by knotting ends together by hand. Restarts machine and continues reeling. Replaces empty spool or reel over machine when existing reel is fully wound. Collects waste filament from basin and dries it in sun for use as waste silk after teasing and cleaning. May oil and clean machine. May re-reel silk thread from small to standard reels to form hanks.

ISCO 08 Unit Group Details:

Code 8151
Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1400 **Yarn Tester**

Yarn Tester tests yarn by using various instruments for ascertaining its strength, elasticity, thickness, neatness, etc. conducts various tests such as 'winding-breaks, test' to ascertain continuity of hank, 'size test' by using sizing-skein-winder to find out thickness of yarn 'seriplane test' to find out uniformity and neatness of yarns 'serigraph test' to check strength and elasticity, cohesion test' to find out extent of wear and tear yarn will stand, 'conditioning oven test' to fix standard weight.

ISCO 08 Unit Group Details:

Code 8151
Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1500 **Wrapping Boy (Textile)/Wrapper**

Wrapping Boy; Wrapper (Textile) aids in testing wrappings (samples) of sliver, roving and yarn for count and strength. Collects samples of, in specified length, roving and yarn from drawing and spinning departments. Weighs each length on scale. Fixes each sample of yarn on testing machine and assists Yarn Tester in ascertaining strength, elasticity, twist per inch, thickness and uniformity. Cleans and oils the machine. May operate Yarn examining Board to test evenness of the yarn. May check weight of yarn against count. May record temperature and humidity readings.

ISCO 08 Unit Group Details:

Code 8151
Title Fibre Preparing, Spinning and
Winding Machine Operators

8151.1600 **Pin Setter (Textile)**

Pin Setter; Needler (Textile) replaces pins or needles in comb circle and gill box collar of combing and gill box machines. Examines pins and pulls out defective ones with pliers. Cleans pin slots, hammers in new pins taking care that they are set straight and firmly. Cleans trash from pins.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.1700

Roller Coverer

Roller Coverer; Roll Covering Man operates and resurfaces metal drawing rolls of various spinning, combing and lapping machines with new rubber or leather covers. Cuts defective cover from drawing roll and uses it as pattern for cutting new one from rubber or leather. washes roller with steam or caustic soda solution. Inserts cover and metal roller into roller cover machine which automatically mounts cover on roller. Transfers roller to buffing machine and buffs cover to smooth surface and uniform thickness. Varnishes cleaned roller and wraps with flannel replacing leather cover. Forms leather sleeve by gluing together sides of previously cut leather cover; pulls sleeve by gluing together sides of previously cut leather cover; pulls sleeve over roller with aid of hand operated device and seals ends of leather cover by painting with chemical solution. May substitute cork or other synthetic covering for rubber or leather.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.1800

Winder Textile/Winding Operator

Winder (Textile) tends winding machine for winding yarn from hanks to bobbins or from spinning bobbins to other bobbins, spools, cones, cheeses, etc. Mounts, by hand, hanks on swift (reel) or mounts full bobbins, cones, etc., on stands of machine. Draws end of yarn from each hank or full bobbin, through guide and tension arm and loops it round rotating empty bobbin, cone, cheese or spool, for winding. Pieces broken ends. Removes wound cones, cheeses, spools, etc., from spindles and replaces them with empty ones. Is designated as GREY WINDER, PIRN WINDER, CHEESE WINDER, CONE WINDER, SPOOL WINDER, COP WINDER, UNIVERSAL WINDER, COLOUR WINDER, TAILING MAN, etc., according to type of machine operated and bobbin or spool used.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.1900

Size Mixer (Textile)

Size Mixer; Starch Mixer (Textile) prepares sizing for use in stiffening and finishing cloth and yarn. Measures or weighs ingredients such as starch, tallow, resins, soaps and water according to instructions, mixes them in tank of mixer, opens steam valve and allows mixture to mix and boil for specified time. Opens outlet valve to discharge contents to sizing department. Cleans mixer and measuring pots.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.2000**Waterproofer, Textile**

Waterproofer, Textile treats textiles with chemicals (other than rubber) to make them water resistant. Fills container with chemical solution (other than rubber) and controls its temperature. Feeds lengths of material into rollers and joins ends together. Passes material through rollers into solution until it is impregnated and removes folds and creases, if any. Cleans equipment and maintains them in working order. May combine dyeing process with waterproofing; chemicals used and experience of controlling solution temperature; knowledge of combining dyeing process with waterproofing and if also able to treat textiles with rubber.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.2100**Weighter, Silk**

Weighter, Silk treats silk with solutions of tin and phosphates (chemicals) to give it weight or body. Wraps silk in blanket or coarse canvas and places it in container of centrifugal machine. Pumps solution of tin from mixing vat into machine and runs it for set period, keeping material immersed in solution. Draws off solution and transfers material to spray-washing machine. Returns material to centrifugal machine containing phosphates and runs it to fix tin to silk. Repeats process, as necessary to obtain desired weight.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.2200**Fetler (Woollen Textile)**

Fetler (Woollen Textile) cleans rollers and cylinders of carding machines to remove wool waste. Removes, slides off, or otherwise disconnects belts and chains that drive machine. Climbs on machine, slowly rotates rollers and cylinders by hand picks out accumulated dirt, fibres and foreign matter and assures that moving parts operate freely. Reconnects drive mechanism. Attends to cards until cards get filled with material. Assists Condenser Minder in taking out ends and putting them on proper position on condenser bobbins. May attend to card mounting and assist in repair work of cards.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

8151.9900**Fibre Preparing, Spinning and Winding Machine Operators, Other**

Fibre Preparing, Spinning and Winding Machine Operators, Other include workers who operate and monitor machines which prepare fibres, and spin, double, twist and wind yarn and thread not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8151

Title Fibre Preparing, Spinning and Winding Machine Operators

Family 8152

Weaving and Knitting Machine Operators

Weaving and Knitting Machine Operators set up, operate and monitor weaving and knitting machines which process yarn or thread into woven, non-woven and knitted products such as cloth, lace, carpets, rope, industrial fabric, hosiery and knitted garments or to quilt and embroider fabric.

8152.0100 Drawing Man

Drawing Man; Drawer; Reducer (Woollen Textile) tends drawing frame for drawing wool sliver into yarn. Fixes empty bobbins on spindles. Arranges sliver cans at feed end of drawing frame. Draws sliver from can and passes them through guides, rollers and gill-box and loops them around bobbins on spindle. Starts drawing frame. Detects broken ends, stops machine and pieces (joins) them by hand. Ensures continuous flow of sliver. Removes jamming when necessary by stopping machine and withdrawing surplus wool. Replaces filled bobbins with empty ones. Removes waste wool from machine and work area. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.0200 Doffer, Fly Frame/Speed Frame Operator

Doffer, Fly Frame: Doffer Boy (Textile) replaces bobbins filled at slubbing, inter or roving frames with empty bobbins. Brings empty bobbins and keeps them in between spindles. Removes filled bobbins from spindles and places empties instead. Loops ends of rovings around empty bobbins for winding. Cleans frames.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.0300 Knitting Jobber

Knitting Jobber; Knitting Mistry; Knitting Machine Fixer; Fixer, Knitting Machine sets and adjusts knitting machines according to design, shape and size of product desired. Inspects product of machines for defects in knitting and makes necessary adjustments. Replaces broken or worn out parts. Repairs and overhauls machines. Supervises work of knitters and ensures quality and production.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.0400 Card Cutter

Card Cutter; Punch Operator (Textile) operates card cutting machine for punching holes in card used for controlling pattern of cloth woven on jacquard or dobby looms. Studies designs. Spreads graph paper on table and prepares draft and plan for design, indicating places where warp is to be raised over weft. Fixes graph paper containing design on

machine board. Inserts plan card into cutting machine equipped with key-board. Depresses key with fingers to punch holes into card as per diagram for controlling pattern on cloth woven. Presses lever by leg to push punched card into inner portion of machine making room for punching unpunched portion. Numbers punched cards serially and inserts them in pegs in stand for subsequent lacing. Fixes and adjusts heald and card chain on jacquard machine. May prepare design for lattice pegging. May do lacing of cards by hand or machine to make complete design. May do lattice pegging. May fix up heald and lattice on dobby loom.

ISCO 08 Unit Group Details:

Code 8152
Title Weaving and Knitting Machine Operators

8152.0500

Mat Shearing Operator

Mat Shearing; Mat Trimmer (Cair) operates shearing and trimming machine to make surface and edges of mats even. Sets machine depth of shearing by adjusting gap between roller and blades. Feeds mat into machine which clips off high fibres. Trims sheared mat on all sides by holding aides between blades and roller. Removes loose fibres from surface. May repeat process if additional shearing is required.

ISCO 08 Unit Group Details:

Code 8152
Title Weaving and Knitting Machine Operators

8152.0600

Flat Knitter, Machine/Knitting Machine Operator-Flat Knitting

Flat Knitter, Machine-Flat Knitting Machine Operator; Flat Knitting Machine Man operates knitting machine for producing flat fabric (as distinct from tubular or circular fabric). Places cones of yarn on stand of machine and threads ends of yarn through guides and feeders. Starts machine. Replaces empty cones with filled ones and joins broken ends. Cleans machine. Replaces defective or broken needles. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8152
Title Weaving and Knitting Machine Operators

8152.0700

Sock Knitter/Knitting machine Operator-Socks Knitting

Sock Knitter; Sock Knitting Machine Man; Sock Knitting Machine Operator operates machine for knitting heel and toes of socks into ribs or tops cut from circular fabric. Places cones of yarn on stand of machine. Threads yarn through guides and feeders. Sets loops of one end of top on pins of transfer dial or ring, sets transfer ring by hand over needles of knitting machine and turns handle that transfers loops from pins of ring to needles of machine. Starts machine that knits rest of sock into top. Removes knitted material from machine. Replaces empty cones with full ones and joins ends. Replaces defective or broken needles. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8152
Title Weaving and Knitting Machine Operators

8152.0800

Sock Knitter, Automatic Machine

Sock Knitter, Automatic Machine; Automatic Sock Knitting Machine Operator operates knitting machine for knitting all parts of sock such as rib top or elastic top, leg, heel, foot and toe in continuous tube. Adjusts machine according to size of sock to be knitted. Places filled cones of yarn on stand of machine. Threads ends of yarn through guides and feeders. Turns cylinder by handle so that all ends are caught by latches of needles set in cylinder. Starts machine. Replaces empty cones with full ones and joins ends. Replaces defective or broken needles and sinkers (mechanism that pushes thread over needles to form new loops). Oils and cleans machine.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.0900

Knitter, Machine/Knitting Machine Operator

Knitter, Machine; Circular Knitting Machine Tenter; Circular Knitter, Tube Knitter operates one or more machines that knit seamless circular or tubular fabric from yarn. Places filled cones of yarn on stand of machine. Threads ends of yarn from cones through guides, tension springs and feeders and turns cylinder by handle so that yarn is caught by latches of all needles in cylinder. Starts machine which automatically knits fabric. Watches for defects in knitting. Replaces empty cones with full ones and joins ends. Removes knitted fabric by cutting it with scissors. Cleans and oils machine. Replaces broken or defective needles and

sinkers (mechanism that pushes thread over needles to form new loops).

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1000

Looper Man, Hosiery

Looper Man, Hosiery; Linking Machine Operator, Hosiery; Linking Machine Man Hosiery operates machine which seams openings in toes of socks. Places cones of yarn on stand of machine, and threads yarn through guide, tension disc and eye of needle. Sets loops of socks on looper pins or points of a circular dial. Starts machine. Replaces empty cone with filled one; cleans and oils machine and replaces defective pins.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1100

Warp Knitter/Knitting Machine Operator-Warp Knitter

Warp Knitter tends machine for knitting fabric used for mosquito nets, curtains etc. Mounts yarn beam on frame of machine. Draws ends of yarn from beam through guides and feeders. Operates machine by hand till knitted fabric reaches roller. Ties end of fabric to roller. Starts machine and joins broken ends as necessary. Cuts and removes knitted fabric from machine. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1200

Weaver, Lace (Machine)

Weaver, Lace (Machine) operates lace-making machines to weave lace according to set pattern. Starts machine and ensures that weaving is proceeding correctly. Mends broken threads by hand and removes faulty pieces. Keeps machine supplied with yarn. Reports mechanical faults to Jobber to get defects removed. May pass threads through machine guides in preparation for weaving and make minor adjustments.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1300

Braid Maker, Machine/Braiding Machine Operator

Braid Maker, Machine operates one or more machines to interweave threads into tabular cord or narrow band. Passes thread through machine guides. Starts machine and ensures that braiding is processing correctly. Maintains supply of thread and mends breakages.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1400

Lace Maker (Machine)

Lace Maker, Machine; Crocheter, Machine operates crochet machines to knit lace, trimming etc. of desired pattern or design.

Selects pattern of lace or trimming and places bobbins of selected threads on machine. Passes ends of thread from each bobbin through machine guides and eye of machine needle. Knots ends together and passes it over reel on machine. Adjusts machine for thread tension and clockwise or anti-clockwise movement of spindles according to pattern of lace, knit required, etc. Starts machine. Arranges material in position for crocheting and guides it under needle. Detects and joins broken ends of thread by hand as necessary. Checks running of yarn through each spindle. Stops machine and replaces empty bobbins and broken needles during operation. Collects knitted lace, trimmings, etc.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1600

Warp Tying Machine Man

Warp-Tying Machine Man operates warp-tying machine which knots warp ends from filled loom beam to ends from exhausted beam. Checks if both beams have been properly set on warp-tying frame and ties lease string to separate layers of yarn on beams. Sets machine in frame, turns hand crank to see if machine gathers end correctly and adjusts machine if necessary. Switches on machine for automatic knotting of ends. Knots, by hand ends not tied by machine. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.1700

Warper

Warper; Beamer tends warping machine for drawing and winding on a large spool (beam) many strands of yarn from several cones, cheeses or bobbins arranged on a creel. Fixes empty beam or drum in brackets of machine. Adjusts length gauge. Draws each thread through appropriate guide, dent and drop pin. Fastens all ends to beam or loops them on hook of drum. Starts machine and observes winding of yarn on beam whenever machine stops automatically, gets end of yarn brought from creel by Endman and pieces ends. Stops machine when required length has been wound, cuts yarn strands between comb and beam, knots all ends together into two or three bunches and removes beam from machine with help of Endman. Is designated as BEAMER when warping yarn from section drums to weaver's beam.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.2000

Front Sizer (Cotton Textile)

Front Sizer (Cotton Textile) tends sizing machine for drawing warp yarn through sizing solution and drawing devices to condition and strengthen it and to wind it on the weaver's beam. Lifts warp beams assisted by Back Sizer and puts them on back creel or machine by hand or by chain pulley. Gathers ends into bunches and ties them to corresponding bunches of ends left threaded through machine from previous run. Pulls ends from warp beam, when machine is empty, through sow box, around drying cylinders and on to weavers beam set in brackets in front of machine.

Counts and distributes ends in wraith (zigzag comb) according to specified pattern. Starts machine. Detects broken ends during run of machine, slows down machine, twists together broken ends of corresponding ends and returns machine to normal speed. Ensures that yarn receives proper amount and consistency of size and is being dried sufficiently. Stops machine when required amount of warp has been wound on weaver's beam. Cuts warp yarn, ties ends into 2 to 3 bunches or ties a gum tape and removes weaver's beam with overhead hoist or by hand. Supervises work of Back Sizer. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.2100

Back Sizer

Back Sizer (Cotton Textile) assists Front Sizer in setting and operating sizing machine. Helps in loading warp beams on back creel of machine by hand or by chain-pulley and in drawing ends through machine. Places lease strings across warp ends coming from warp beams to divide them into different layers. Detects broken ends at rear of machine and joins them together. Maintains required quantity and temperature of sizing solution in sow-box or sizing-back. Takes off flannel from sizing roller and washes it when necessary. Removes empty beams and assists Front Sizer in cleaning and oiling machine.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

8152.9900**Weaving and Knitting Machine Operators, Other**

Weaving and Knitting Machine Setters and Pattern Card Prepares, Other include all other workers engaged in setting weaving and knitting machines and in preparing pattern cards for weaving designs, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8152

Title Weaving and Knitting Machine Operators

Family 8153**Sewing Machine Operators**

Sewing Machine Operators operate and monitor sewing machines to make, repair, darn and renovate textile, fur, synthetic or leather garments or embroider ornamental designs on garments or other materials. They operate button hole making and eyelet holing machines to cut holes, stitch around holes, stitch buttons and fix eyelets to garments.

8153.0101**Sewing Machine Operator, General**

Sewing Machine Operator, General; Stitcher Machine (Textile and Fur products) operates sewing machine to join pieces of cloth, hosiery fabric, canvas, fur and leather for making garments, bags, upholstery and other textile and fur products. Places spools of required type and colour of thread and winds bobbins on machine. Draws thread under tension spring and through guides into eye of needle. Adjusts tension on thread and sets number of stitches per inch if necessary. Raises pressure foot of machine to admit

material to be sewed and lowers pressure foot on material. Starts machine and guides material to be sewed under needle of machine. Observes stitches while sewing. Stops machine, breaks and cuts threads and removes sewed material. Replaces empty spool and bobbin with full ones as and when necessary. Cleans and oils machine. May remove minor faults and assist in repairs and overhauling of sewing machine. May set and attach special gadgets to machine for having special type of stitches. May be designated according to type of machine operated such as BLIND STITCH MACHINE OPERATOR; ZIG-ZAG MACHINE OPERATOR; BAR TACKING MACHINE OPERATOR; TURNING AND PRESSING MACHINE OPERATOR; SHOULDER STRAP TURNING MACHINE OPERATOR; POSTBED MACHINE OPERATOR; DOUBLE NEEDLE SEWING MACHINE OPERATOR; etc.

Qualification Pack Details:

QP NOS Reference AMH/Q0301

QP NOS Name Sewing Machine Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8153

Title Sewing Machine Operators

8153.0102**Stitcher (Leather Goods and Garments)**

Stitcher (Leather Goods and Garments), also called a 'sewer' is an important job-role associated with Leather Goods and Garment sector. The primary responsibility of a stitcher is to sew fabric, fur, leather or synthetic materials to produce garments and other articles.

Qualification Pack Details:

QP NOS Reference LSS/Q6101

QP NOS Name	Stitcher (Leather Goods and Garments)
NSQF Level	4

ISCO 08 Unit Group Details:

Code
Title

8153.0103**Specialized Sewing Machine Operator**

Specialized Sewing Machine Operator is responsible for operating the specialized sewing machine to sew different kinds of stitches on fabric/garments in the apparel industry.

Qualification Pack Details:

QP NOS Reference	AMH/Q 2301
QP NOS Name	Specialized Sewing Machine Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code 8153
Title Sewing Machine Operators

8153.0200**Button Hole Maker, Machine**

Button-Hole Maker, Machine; Button-Hole Machine Operator operates button-hole making machine which cuts holes and stitches around holes automatically. Mounts spool of thread and wound bobbin on machine. Draws thread through guides and eye of needle. Adjusts gauge according to size of hole required. Presses pedal to raise pressure-foot, inserts part of garment where button-holes are to be made and adjusts it. Releases pedal to lower pressure foot. Presses another pedal to start machine which cuts hole

and stitches around hole. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8153
Title Sewing Machine Operators

8153.0300**Eyelet Holing Machine Operator**

Eyelet Holing Machine Operator operates eyelet machine to punch and stitch holes for fixing eyelets in garments. Selects thread of required colour and shade matching cloth and puts thread reel on machine or creel. Sets wound bobbin into shuttle of machine. Pulls thread through guide into eye of needle and sets thread tension by screwing regulator. Fixes punch of required size in machine and adjusts it. Operates foot pedal to raise pressure foot of machine and admits marked portion of garment where eyelet hole is to be made below it. Positions marked portion to garment below pressure foot and releases pressure foot to hold it. Starts machine which automatically drops punch to cut hole and stitches it on both sides of material. Replaces broken needle and empty shuttle as and when necessary. May operate different types of machine according to fabric and regulate super-tension of thread movement. May adjust number of stitches per inch.

ISCO 08 Unit Group Details:

Code 8153
Title Sewing Machine Operators

8153.0400**Button Stitching Machine Operator**

Button Stitching Machine Operator; Button Stitcher, Machine operates button stitching machine which stitches buttons to garments. Mounts spool of required

type of thread and wound bobbin on machine and draws thread through guides and eye of needle. Presses pedal to raise pressured foot of machine and inserts part of garment where buttons are to be stitched under it. Places button in clamp over pressure-foot and releases pedal to lower pressure foot. Starts machine which automatically stitches button. May clean and oil machine and attend to minor repairs.

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.0500

Embroider, Machine

Embroider, Machine embroiders various designs on fabric or garments by machines. Selects size and colour of thread and amounts bobbins of thread or machine. Threads needle and passes yarn through carrier of machine. Adjusts machine for thread tension and type of stitch. Presses lever to raise needle and inserts material under it. Guides material or sewing arm of machine in accordance with drawing or outline or guide points of pantograph on enlarged design. Changes thread as required and replaces empty bobbins and broken needles. Removes article when embroidering is complete. Cleans and oils machine. May mark outlines of design on material before embroidery is started. May operate machine which embroiders several articles or designs at one time. May be designated as CROCHETING MACHINE OPERATOR if embroiders designs using crocheting machine.

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.0600

Embroidery-Machine Operator (Semi-Automatic)

Embroidery Machine Operator (Semi-Automatic) tends semiautomatic sewing machine with multiple-sewing heads controlled by pattern chain that embroiders designs on garments or garment parts: Positions garment or part over embroidery hoops arranged in hoop frame, following edges or markings on fabric. Places hoop frame on machine bed and turns thumbscrews to secure frame to machine. Presses button to start machine that sews design onto garment or part and stops, or sews one colour of multiple-colour design and stops. When sewing multiple-colour designs, rethreads machine with subsequent colours of thread and starts machine to complete design. Removes hoop frame from machine on completion of design and removes garment or part from hoops.

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.0601

Embroidery Machine Operator (Zig Zag Machine)

Embroidery Machine Operator is responsible for operating the embroidery machine to embroider decorative designs on fabric/garments in the apparel industry. The Embroidery Machine Operator is able to perform different kinds of stitches and decorative work such as running shade work, cording and satin stitch, eyelet work, appliqué work, shade work and round, cutwork and open work, pin stitch and pitch stitch, china embroidery and fancy embroidery.

Qualification Pack Details:

QP NOS Reference	AMH/Q0801
QP NOS Name	Embroidery Machine Operator (Zigzag Machine)
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.0701**Framer-Computerised Embroidery Machine**

Framer of a Computerized Embroidery Machine is responsible for preparation and setup of the embroidery machine for embroidery and carries out hooping and framing operations. The Framer is also responsible for removal of frame and fabric panel once the embroidery has been completed. While the embroidery is done through the computerized embroidery machine, the Framer needs to monitor the progress, and ensure the required quality of embroidery is achieved.

Qualification Pack Details:

QP NOS Reference	AMH/Q1301
QP NOS Name	Framer- Computerised Embroidery Machine
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.0702**Helper-Parts Making (Leather Goods and Garments)**

Helper-Parts Making (Leather Goods and Garments) provides assistance to the Goods and Garments Machine Operators involved in material cutting, stitching, skiving, pasting etc. A Helper is required to co-ordinate with team members and is required to assist the operators to carry out activities based on the production schedule.

Qualification Pack Details:

QP NOS Reference	LSS/Q6102
QP NOS Name	Helper-Parts Making (Leather Goods & Garments)
NSQF Level	2

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.0703**Helper-Finishing Operations (Leather Goods and Garments)**

Helper – Finishing Operation (Leather Goods and Garments) provides assistance to the Goods and Garments Machine Operators involved in colouring, lamping, cleaning and packaging etc. A Helper is required to co-ordinate with team members and is required to assist the operators to carry out activities based on the production schedule.

Qualification Pack Details:

QP NOS Reference	LSS/Q6201
QP NOS Name	Helper – Finishing Operation (Leather Goods & Garments)
NSQF Level	2

ISCO 08 Unit Group Details:

Code	8153
Title	Sewing Machine Operators

8153.9900

Sewers and Embroiders, Other

Sewers and Embroiders, Other include all other sewers and embroiders engaged in hand and machine sewing and embroidering textile and kindered materials such as those sewing and embroidering household linen, hats, caps, upholstery, mattresses, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8153
Title Sewing Machine Operators

Family 8154

Bleaching, Dyeing and Cleaning Machine Operators

Bleaching, Dyeing and Fabric Cleaning Machine Operators operate and monitor machines that bleach, shrink, dye, and otherwise treat fibres, yarn or cloth.

8154.0200

Kierman (Textile)/Package Dyeing Machine Operator

Kierman (Textile) tends kier (vat for boiling yarn or cloth) for bleaching and dyeing. Puts chemicals in tanks and lets in water and opens steam to boil chemical solution. Puts cloth or yarn into kier with help of Piler ensuring that cloth or yarn is properly piled. Closes and secures mouth of kier and pumps chemical solution from tank into kier. Checks level and circulation of solution, controls temperatures and pressure in kier and ensures that yarn or cloth is properly boiled.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning Machine Operators

8154.0300

Scouring Man, Woollen Yarn

Scouring Man, Woollen yarn; Scourer, Woollen Yarn tends scouring machine for washing and cleaning woollen or worsted yarn preparatory to further processing. Prepares required amount of detergent by mixing soap and soda in water and pours it into bowls of scouring machine. Sets machine in operation and feeds woollen yarn into carrier of machine. Applies wooden presses to press yarn under rollers and allows it to pass through various processes of cleaning and washing in detergent to prepare it for further processing. Checks pressure gauges to ensure proper functioning of machine. Stops machine on completion of washing and cleans and oils machine. May feed raw wool into scouring machine to clean dirt. May operate drier for drying cleaned wool.

ISCO 08 Unit Group Details:

Code 8154
Title Bleaching, Dyeing and Cleaning Machine Operators

8154.0500

Washing Machine Man

Washing Machine Man; Bleaching Machine Man; Craft-Machine Man; Chemicking Machine Man; Desizing Machine Man; Scouring Machine Man tends machine for washing and bleaching cloth. Checks level and flow of water or chemical solution in pit, passes end of cloth through loops and rollers and starts machine. Stops machine if cloth gets entangled in loops or rollers; makes necessary adjustments and runs machine.

Supervises work of Pilers and cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.0600

De-Gummer, Silk

De-Gummer, Silk treats silk yarn, cloth or piece goods to remove natural gum. Fills container with water. Raises water to required temperature, adds soap or other cleansing agent to it and controls temperature of solution. Places skeins of yarns in boiling solution or on revolving arms of container. Attaches cloth or piece goods to suspended rods, canes or metal frames and moves these through solution. Rinses material in hot water. Drains and cleans container. May do drying.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.0700

Carboniser, Textile

Carboniser, Textile treats wool, woollen rags or clothes to remove vegetable matter. Feeds material into bath containing weak solution of sulphuric or other acid to carbonise matter. Allows material to soak, passes it through rollers to remove solution and then transfers it to bath containing alkaline solution to neutralise acidity. Dries it and feeds it through rollers to pulverise matter. Shakes out matter by hand or machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.0800

Scutcher Man, Bleaching

Scutcher Man, Bleaching; Cloth Opener (Cotton Textile) tends scutcher machine for opening folds and removing creases and twists formed in cloth due to washing and bleaching and to spread it into sheet. Starts machine and feeds one end of piled and twisted cloth into scutcher. Unfurls twisted cloth mechanically or manually and allows cloth to pass centrally through rollers to turn it into cloth sheet. Collects spread out cloth sheet at other end of machine. Cleans and oils machine. May operate washing and bleaching machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.0900

Dyed-Yarn Operator (Textile)

Dyed Yarn Operator (Textile) tends machine that coats fibreglass sliver with dye: Places supply package on machine platform and threads sliver through guides, over tension bars and dye roller applicator, through traverse guide, and attaches sliver to take-up package. Pours or turns valve to admit dye solution into trough of dye roller applicator. Pushes lever to lower winding head and start machine. Observes flow of sliver through machine to detect breaks in sliver and ties broken sliver by hand. Cuts sliver, using scissors, and doffs packages of dyed sliver from machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1000

Jigger Man (Cotton Textile)/Jigger Machine Operator

Jigger Man (Cotton Textile) dyes cloth by operating jigger machine. Fits undyed cloth rolls on machine and passes one end of rolled cloth carefully through vat on to other roller for making rolls of dyed cloth. Prepares dyeing solution of required shade, pours it into jigger vat and ensures that cloth passing through vat is completely dipped in dyeing solution. Starts machine. Allows undyed cloth to unroll from roller, pass through colouring solution in jigger vat to get dyed and then get rolled on other roller. Takes proper care to maintain temperature and level of dye liquor and ensures proper dyeing of cloth without spots and creases. Gets sample of dyed cloth approved. Cleans and oils jigger machine. May operate automatic or ordinary jigger machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1100

Dye Automation Operator (Textile)/Dyeing Machine Operator

Dye Automation Operator (Textile) controls and monitors programmed electronic equipment to bleach, dye, and finish cotton and synthetic sewing threads: Confers with Operator of dye machines to obtain information needed to process customer orders, and records data, such as number of dyeing machines to be used, production order numbers, and colour numbers specified for dye orders. Selects programmed procedures

based on knowledge of dyeing processes and familiarity with affinity of dyes to specific thread types. Depresses keys of data-entry unit to enter required data into computer. Observes display screen to verify data entered, to ascertain computer response to instruction entered, and to determine compliance with procedural steps. Depresses keys to edit instructions when necessary and to input answers for primary or alternate steps in procedure. Hangs tags on dye board, during shift, to indicate steps in dyeing process for each machine. Confers with workers to determine reasons for delays in dyeing process, and examines dyeing machines and equipment to ascertain reason for malfunctions. Notifies supervisor of malfunctions, and records reasons for delays in log. Receives instructions from supervisor, such as alteration of dyeing temperature, omission of specific steps in dyeing process, or repetition of specific steps. Keys in dyeing instruction changes. Confers with Operator on previous shift to ascertain drying steps to complete dyeing in progress.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1200

Wool Dyer

Wool Dyer; Woollen Yarn Dyer tends dyeing machine to dye wool or yarn. Puts by hand wool or yarn hanks into cage or bowl of machine. Pours in water to soak material. Mixes dye as per instructions in bucket or in overhead tank. Pours dye solution into bowl of machine or opens valve to let in dye solution through pipe. Starts pump to put heated dye solution into circulation through wool or yarn.

Stops machine when wool or yarn has been dyed. Drains off dye solution by opening outlet. Pours water from tap to cool wool or yarn and to wash off excess dye. Takes out dyed wool or yarn from machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1500

Dyer Garment

Dyer, Garment dyes garments to desired colours after washing, dry-cleaning or bleaching if necessary. Cleans garments by washing, dry-cleaning or bleaching to remove dirt, spots or foreign matter, if any. Prepares dye solution in container by mixing required colour in hot water; controls temperature of solution; tests strength of solution and colour by treating small piece of cloth. Immerses garment in solution and agitates it by hand or mechanically and inspects garment after prescribed period for desired colour. Stops, continues or adjusts treatment according to result of inspection. Removes garment from container when properly dyed and passes it on for rinsing and drying. Drains or cleans container. May do rinsing or drying. May dye leather garments using spray and be known as DYE-SPRAYER.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1700

Damping Machine Attendant

Damping Machine Attendant; Damping Machine Man; Cloth Conditioning Man tends damping machine for spraying cloth with solution to prepare it for calendering. Fills tank of machine with solution, passes end of cloth through machine and runs machine for spraying solution on cloth. Ensures that cloth passes through machine without folds and is uniformly damped. Cleans machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1800

Calenderman (Cotton Textile)

Calenderman (Cotton Textile) tends calendering machine for glazing and finishing cloth. Piles and fits roll of cloth at back of machine and feeds its loose end into calender rollers. Adjusts pressure on cloth by winding screws on rollers and starts machine. Observes gauges to control injection of steam into rollers for heating them to required temperature and ensures that cloth passing through rollers is without crease and is being uniformly pressed and glazed to desired finish. Stops machine, as required and removes nails, leather hits etc. noticed on cloth. Folds finished cloth at front end of machine. May work at feeding end as BACK CALENDERMAN or at receiving end as FRONT CALENDERMAN.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.1900

Miller

Miller; Milling Machine Man (Woollen Textile) tends milling machine to soften, shrink and strengthen woollen cloth. Passes one end of cloth through draft board to wooden rolls of milling machine. Stitches, by hand or machine, both ends of cloth to make it one endless piece. Starts machine and ensures that cloth runs through it smoothly. Pours soap solution over running cloth as required and checks texture of cloth milled. Stops machine after specified time, cuts, stitches and takes out cloth from machine. May check width of cloth at regular intervals during milling.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2000

Raising Machine Man (Textile)

Raising Machine Man (Textile) tends raising machine which raises fibres on surface of cloth by means of wire-covered rollers and brushes for use as lint, blanket, flannel etc. Stitches ends of cloth pieces to obtain continuous piece. Passes one end of cloth through guides and rollers of machine and starts machine. Ensures that cloth passes through rollers without folds or crease and fibres are properly raised on its surface for use as flannel, lint, etc. Observes gauges and adjusts speed and pressure of rollers as required to avoid damage to cloth while processing. Gets sample of raised cloth approved and removes it from machine. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2100

Stentering Machine Man/Stentering Operator

Stentering Machine Man; Tenter Machine Man; Tentering Machine Man (Textile) tends stentering machine or frame which dries and restores original width of cloth after dyeing, washing or finishing. Adjusts stenter frames according to width of cloth. Starts machine. Ensures that cloth passes through machine without damage from stenter clips and is properly stretched. May be known as ASSISTANT STENTERING MACHINE MAN or BACK STENTERING MACHINE MAN if working at delivery end of machine. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2200

Cropper

Cropper; Cropping Machine Man; Shearing Machine Man (Textile) tends machine for cropping excess fibre from cloth for giving it smooth and even finish. Adjusts cropping gauge according to requirements. Passes end of cloth through machine. Starts machine. Ensures that cloth is properly stretched and passes through machine without creases.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2300

Padding Machine Man/Padding Mangle Operator

Padding Machine Man (Textile) tends padding machine for treating cloth with light preliminary coat of dye or chemicals preparatory to further processing. Mounts cloth roll on machine and passes loose end of cloth through guide-rollers and trough to roller at opposite side. Pours dye or chemical solution into trough of machine and ensures that cloth is completely dipped in it. Opens steam valve to heat dye or chemical solution to required temperature. Starts machine. Adjusts pressure on rollers and ensures smooth flow of cloth through solution on to roller at opposite side. Cleans and oils machine. May rinse dyed material and pass it on to Drier for further processing.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2400

Brushing Machine Man (Textile)

Brushing Machine Man (Textile) tends brushing machine for cleaning and removing threads and foreign material from surface of untreated cloth preparatory to further processing. Sets and adjusts roll of cloth, passes its end through rollers of machine. Starts machine and ensures that cloth is properly brushed and passes through machine without damage. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2500

Crabbing Machine Man (Woollen Textile)

Crabbing Machine Man (Woollen Textile) tends crabbing machine for setting weave and giving stability to woollen cloth. Sets cloth roll at feed end of machine. Passes end of cloth length through guides and roller of machine and fixes it with collecting cylinder for processing in hot water tank and winding it into roll. Fills tank with water and opens steam valve to boil it. Sets pressure of rollers and starts machine to rotate cloth through water and rollers. Observes pressure gauges periodically and maintains required pressure and temperature of water. Drains off hot water by opening outlet tap and lets its cold water to cool processed cloth. Collects processed cloth for subsequent operations. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators

8154.2600

Sanforizing Machine Man

Sanforizing Machine Man tends sanforizing machine to shrink cloth to maximum extent. Opens steam valve to heat drying drums to required temperature, regulates speed of machine according to shrinkability of cloth and passes end of cloth length through guide rollers and damping, drying and stentering section of machine. Starts machine and watches cloth as it is drawn through it ensuring that cloth is properly damped, dried and stretched. Measures shrunk cloth and reports shrinkage. Observes gauges and adjusts machine where necessary or as instructed. Cleans and oils machine. May set feed rollers of required diameter to get optimum shrinkage.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators**8154.2700****Singeing Machine Man/Singeing Machine Operator**

Singeing Machine Man; Singeing Man (Textile) tends singeing machine to burn fluff and rough protruding fibres on cloth to get better finish. Adjusts cloth roll at feed-end of machine. Runs loose end of cloth through guides and feeds it through rollers. Lights burners in machine and regulates flow of gas to obtain desired flame. Starts machine and observes cloth as it runs over burner flames. Avoids scorching of cloth, ensuring burning of fluff and unwanted threads and better finish to it. Adjust machine where necessary for creaseless flow and proper singeing of cloth. Cleans and oils machine.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators**8154.9900****Bleaching, Dyeing and Cleaning Machine Operators, Other**

Bleaching, Dyeing, Printing and Finishing Operatives perform variety of routine and low skilled tasks in washing, bleaching, dyeing, printing and finishing of textiles and may be designated according to nature of work performed, such as: Piler; End puller piles cloth in kier or pulls end of cloth at washing or bleaching machine. Hydro-Extractor Attendant tends hydro-extractor to extract water from cloth or yarn. Drying Machine Man, Woollen Yarn feeds wet woollen or worsted yarn hanks

to yarn drying machine and removes dried yarn hanks coming out of machine. Back Tender, Cloth Printing assists Printer in preparing machine for new pattern performing all heavy work, such as lifting rolls of cloth and printing rollers into place, making adjustments on printing rollers tightening nuts and screws, tending machine in operation, regulating cloth tension screws, etc. Grey Cloth Tender Printing tends back-grey cloth, which is run under the white cloth being printed in printing machine to act as foundation to absorb any colour applied beyond edge of white cloth.

ISCO 08 Unit Group Details:

Code 8154

Title Bleaching, Dyeing and Cleaning
Machine Operators**Family 8155****Fur and Leather Preparing Machine Operators**

Fur and Leather Preparing Machine Operators operate and monitor various machines that prepare leather or treat fur-or wool-bearing pelts. They trim, scrape, clean, tan, buff and dye animal hides, pelts or skins to produce leather stock and finished furs.

8155.0100**De-Hairer, Machine/De-Hairer Machine Operator**

De-Hairer, Machine Operator removes hair from hide or skin by stretching it through machine rollers fitted with blunt spiral blades. Collects and keeps limed skins near machine for de-hairing. Places skin or hide over lower roller of machine stretching it by hand to remove wrinkles; starts machine to rotate upper roller of

machine fitted with blunt spiral blades; operates foot pedal of machine to raise lower roller of machine with skin on for de-hairing; adjusts blunt spiral blades of upper rotating roller to shave or de-hair skin or hide; lowers roller and changes position of skin for de-hairing remaining portion of skin and repeats process till entire skin is de-haired completely, ensuring that skin is not damaged while de-hairing. May clean and repair machine. May operate fleshing machine.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators

8155.0201

Flesher, Machine/Fleshing Operator

Flesher, Machine; Fleshing Operator removes flesh from skin or hide by passing it through machine rollers fitted with sharp blades, keeps de-haired skin over lower roller of machine, inner side turned upwards; smoothens out wrinkles by hand; starts machine to rotate machine rollers; presses foot treadle of machine to bring lower roller carrying hide, against roller fitted with revolving knife blades; adjusts roller to scrape flesh particles from skin; feeds half of hide through rollers; depresses pedal to rollers and removes hide; reverses hide and repeats operation to scrape other half of hide; ensures that skin or hide is not damaged or cut by blades when scraping; piles scrapped hides. May clean and oil machine. May set machine with appropriate cutters after grinding.

Qualification Pack Details:

QP NOS Reference LSS/Q0601

QP NOS Name Fleshing Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators

8155.0300

Scudder, Machine/Scudding Machine Operator

Scudder, Machine removes epidermis hair roots, pigment cells and lime salts from grain side of hide or skin by passing it through machine rollers fitted with blunt blades. Collects de-haired and fleshed skins or hides and keeps them near machine; spreads skin or hide with hair side facing upwards on roller of machine and stretches it by hand to smooth out wrinkles; starts machine to rotate rollers fitted with blunt knife blades; presses paddle to bring roller with hide against sorting roller equipped with knife blade (scudding knife) to remove hair roots, pigment cells etc.; reverses hide and repeats operation to scrape other half of hide; ensures that skin or hide is not damaged in process by knife cuts; removes de-haired skin from machine and places it near machine. May clean and oil machine. May set machine with fresh knife blades.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators

8155.0400

Hide and Skin Setter, Machine/Setting Machine Operator

Hide and Skin Setter, Machine; Leather Setter, Machine operates machine fitted with blunt knife to set grains on hide or

skin and to smoothen leather. Spreads leather stretched over machine table; starts machine and observes blunt edged knife fitted in machine; rubs surface of hide or skin with pressure to set grains and remove wrinkles; changes position of leather to get entire surface of leather set by machine and to make it smooth. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators

8155.0500

Hide Splitter, Machine/Splitting Machine Operator

Hide Splitter, Machine sets and operates machine fitted with horizontal endless belt type knife to split hide edgeways to form two or more pieces or to give uniform thickness. Starts machine and adjusts thickness of cut; places hide on machine table and smooths out wrinkles; guides hide between machine rollers which force edge of hide against machine knife; removes split hides from machine or directs helper to do so; checks split hide for accuracy and adjusts guides if necessary; ensures that knife blade is sharpened automatically by emery wheels fixed to machine; adjusts emery stone wheels if not in position for correct sharpening of knife blade. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators

8155.0501

Splitting and Sammying Operator (Leather)

Splitting and Sammying Operator operates the splitting machine to split the hide horizontally into a grain layer/flesh layer. It can be done in the in the limed condition or in the tanned condition. A Sammying Operator operates the sammying machine which absorbs the grease and excess moisture from the hide during the wet process in tanneries.

Qualification Pack Details:

QP NOS Reference LSS/Q0801

QP NOS Name Splitting and
Sammying Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code

Title

8155.0601

Hide Shaver, Machine/Shaving Operator

Hide Shaver, Machine; Shaving Operator operates machine fitted with spirally fixed knives to reduce thickness of hide or skin to uniform size. Places hide on machine table with flesh side upward; starts machine and presses foot pedal of machine to raise table with leather on to bring it closer to revolving wheel fitted with spirally fixed knives; holds skin or hide tightly as it is shaved by knives of rotating wheel; changes position of leather to shave rest of surface; checks visually that shaving of leather is even and to required thickness; ensures that emery wheels fitted to machine sharpen knife blades automatically in process of shaving; cleans and oils machine. May repair machine.

Qualification Pack Details:

QP NOS Reference	LSS/Q0301
QP NOS Name	Shaving Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8155
Title	Fur and Leather Preparing Machine Operators

8155.0700**Staker, Machine/Staking Machine Operator**

Staker, Machine operates machine fitted with movable arm with roller, which moves backward and forward over edge of blunt iron plate, to make conditioned hides soft and flexible. Conditions hides on previous day by keeping in moist saw dust; adjusts position or gap of iron plate fitted to machine depending on type of hide used; starts machine and stretches hide on edge of machine and feeds end of hide into moving arm of machine between roller and metal plate; holds one end of hide tightly by leaning heavily on hide (using body weight for holding hide) as hide is being flexed by moving rollers over blunt metal plate; changes position of hide or inserts fresh area of hide into rollers as moving arm comes forward to soften hide; keeps softened or flexed hide at central point. May oil and clean machine.

ISCO 08 Unit Group Details:

Code	8155
Title	Fur and Leather Preparing Machine Operators

8155.0801**Leather Buffer, Machine/Buffering Operator**

Leather Buffer, Machine; Buffering Machine Operator, Leather; Burnisher, Finishing Wheel Operator tends machine that buffs hides to specified finish. Turns set screws to regulate distance between rollers, according to thickness of hide; inserts hide between rollers and starts machine; holds half of hide while rollers buff surface of other half; repeats buffing operation on unbuffed portion of hide. May be designated according to hide buffed as BLACK-LEATHER BUFFER; WHITE KID BUFFER. May tend machine equipped with abrasive covered rollers that form nap on surface of leather and be designated SUEDING-WHEEL OPERATOR.

Qualification Pack Details:

QP NOS Reference	LSS/Q0201
QP NOS Name	Buffering Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8155
Title	Fur and Leather Preparing Machine Operators

8155.0900**Leather Glazer, Machine/Glazing Machine Operator**

Leather Glazer, Machine; Glazing Machine Operator glazes or gives glossy finish to leather by operating glazing machine fitted with movable hard glass roller. Positions leather on bed of machine and depresses pedal to lower hard glass roller into leather; starts machine to move roller over leather; shifts position of leather under roller to impart specified finish to entire surface; pulls finished leather from machine table and stacks it separately. May treat surface of leather with oil before glazing depending on type of leather.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators**8155.1000****Rolling Machine Operator (Leather)**

Rolling Machine Operator, Leather tends roller machine that smooths surface of leather by passing through moving rollers. Positions leather on bed of machine and depresses pedal to lower roller onto leather; starts machine to move roller over leather; adds or removes counter weights to rollers depending on type of leather and nature of rolling required; shifts position of leather under roller to impart specified finish to entire surface. May be designated according to section of hide rolled as BACK ROLLER; BELLY ROLLER or according to condition of leather rolled as DRY ROLLER; RETANNED-LEATHER ROLLER; WET ROLLER.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators**8155.1101****Tanner, Rotary Drum, Continuous Process (Leather Mfg.)/Drum Operator**

Tanner, Rotary Drum, Continuous Process (Leather Mfg.); Drum Operator operates rotary drum to remove hair and other soluble from hides or skins and convert hides or skins into leather or glue during continuous process: Loads drum with hides, skins, or other animal stock. Turns valves to admit water and steam to drum. Weighs and mixes specified amounts of lime, salt, and other chemicals in mixing tank or drum, following formula, to

prepare liming, deliming, pickling, and tanning solutions used in treating hides or skins. Turns valve to transfer solutions to drum during specified processing cycles. Moves lever to activate drum that cleans, washes, pickles, and tans hides or skins. Replaces solid door of drum with perforated door at specified intervals to filter waste from drum at completion of cycles. Verifies salinity and temperature of solutions, using salinometer and thermometer. Transfers tanning solution to drum and tans hides or skins.

Qualification Pack Details:

QP NOS Reference LSS/Q0701

QP NOS Name Drum Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators**8155.1102****Post Tanning Machine Operator**

Post Tanning Machine Operator performs the process of converting the crust leather into finished leather. These operations include softening of the crust, flattening it and finishing the surface of the prefinished leather by pressing/embossing on it.

Qualification Pack Details:

QP NOS Reference LSS/Q0901

QP NOS Name Post Tanning
Machine Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing
Machine Operators

8155.1200**Leather Measuring Machine Man/Measuring Machine Operator**

Leather Measuring Machine Man operates machine to measure size of pieces of leather. Sets machine indicators reading at zero and inserts piece to be measured into feed rolls of machine. Records area registered by indicator. May maintain account of leather pieces measured.

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing Machine Operators

8155.1201**Helper-Wet Operations (Multiskilled)**

Helper-Wet Operations (Multiskilled) provides support in various processes of wet process operations in a tannery such as preservation, soaking, liming, re-liming, fleshing, de-liming, tanning etc. An operator performs these functions along with an assistant and takes his support in passing the completed work onto the next stage in production. This position gives the helpers an opportunity to learn more about the operation and work with/learn from operators.

Qualification Pack Details:

QP NOS Reference LSS/Q0401

QP NOS Name Helper-Wet Operations (Multiskilled)

NSQF Level 2

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing Machine Operators

8155.1202**Helper-Dry Operations (Finished Leather)**

Helper-Dry Operations (Finished Leather) provides assistance in various processes of preparing finished leather such as in buffing, shaving, staking, toggling etc. An operator performs these functions and a Helper assists the operator and passes the completed work onto the next stage in production. They must have in-depth knowledge and understanding of the process of production, health and safety standards and quality parameters.

Qualification Pack Details:

QP NOS Reference LSS/Q0101

QP NOS Name Helper-Dry Operations (Finished Leather)

NSQF Level 2

ISCO 08 Unit Group Details:

Code 8155

Title Fur and Leather Preparing Machine Operators

8155.1203**Helper-Finishing Operation (Finished Leather)**

Helper-Finishing Operation (Finished Leather) provides support in various finishing processes in a tannery such as in such as brushing, spraying, coating etc. They assist the operator and pass the completed work onto the next stage in production. This position gives the helpers an opportunity to learn more about the operations and work with/learn from operators.

Qualification Pack Details:

QP NOS Reference LSS/Q0501

QP NOS Name	Helper-Finishing Operation (Finished Leather)
NSQF Level	2

ISCO 08 Unit Group Details:

Code	8155
Title	Fur and Leather Preparing Machine Operators

8155.9900**Fur and Leather Preparing Machine Operators, Other**

Fur and Leather Preparing Machine Operators, Other include workers who operate and monitor various machines which prepare leather or treat fur or wool bearing pelts not elsewhere classified.

ISCO 08 Unit Group Details:

Code	8155
Title	Fur and Leather Preparing Machine Operators

Family 8156**Shoe Making and Related Machine Operators**

Shoemaking and Related Machine Operators operate and monitor machines which produce and repair standard or special footwear, handbags and other accessories, mainly made of leather.

8156.0100**Pounding Machine Operator (Foot-Wear)**

Pounding Machine Operator (Footwear) operates machine to pound (grind off) roughness from lasted shoe-uppers. Starts machine. Holds and rotates shoe against emery wheel to flatten lower edge of

lasted shoe-upper, smooth rough edges and even heads of nails. Removes, cuts, off or drives in any protruding nails. Cleans and oils machine and requests any needed repairs.

ISCO 08 Unit Group Details:

Code	156
Title	Shoe Making and Related Machine Operators

8156.0200**Heel Breaster, Machine (Foot-Wear)/Machine Operator-Heel Breasting**

Heel Breaster, Machine (Footwear) operates heel breaster machine to cut breast (forward part) of shoe-heel according to style-specifications. Selects knife and cutting block and sets knife of required shape and size in machine. Adjusts cutting block and press plate on machine. Collects heels and places one of them on block. Presses foot pedal to bring down knife over block. Presses foot pedal to bring down knife over heel for cutting its forward part. Ensures accurate cutting and repeats process for cutting breasts of other heels. Stores them separately after cutting. Cleans and oils machine and gets mechanical defects removed when necessary.

ISCO 08 Unit Group Details:

Code	8156
Title	Shoe Making and Related Machine Operators

8156.0400**Heel Builder, Machine (Foot-Wear)/Machine Operator-Heel Building**

Heel Builder, Machine (Footwear) operates heel building machine to build up shoe heel by gluing and nailing heel lifts (small leather pieces) together. Glues heel lifts previously assembled by Heel Assembler or collects and glues them by hand. Places glued lifts one over another to build up heel to required size and height and retains them intact. Selects mould according to size of heel to be built. Sets and adjusts it in machine. Puts nails in die holes and places glued lifts in mould. Presses foot pedal to start machine which drives nails from die holes through lifts to hold them in position and make complete heel. Takes out built heel from mould and ensures proper nailing by touch and sight. Cleans and oils machine and gets defects removed to keep it in working condition.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.0500

Sole Rounding Machine Operator

Sole Rounding Machine Operator operates sole rounding machine to trim insoles and outsoles of shoe to required shape and size. Collects master shape wooden pattern of required size. Sets and screws it in machine. Sets cutting knife and pressing plate in machine. Places sole on maker shape wooden pattern, operates hand wheel to lower pressing plate on top of sole to hold it firmly. Turns guiding cam lever for positioning knife to cutting point. Depresses foot pedal to start machine and regulates movement of cutting knife to go round sole along edge of pattern and cut it to required shape. Releases foot pedal to stop machine and turns lever to take off knife from sole. Reverses hand wheel to raise up pressing

plate and removes rounded sole from machine. Checks rounding visually and ensures desired accuracy. Cleans and oils machine and gets defects removed if any. May be designated according to type of sole rounded such as INSOLE ROUNDING MACHINE OPERATOR, OUTSOLE ROUNDING MACHINE OPERATOR, etc. May operate improvised rounding machine where opening of space for insertion of sole and extent of rounding is regulated by foot pedal and actual insertion and rounding is guided by hand. May set channelling knife in rounding machine for channelling of sole.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.0600

Nailer, Machine/Machine Operator, Nailing

Nailer, Machine; Nailing Machine Operator; Tacking Machine Operator (Footwear) operates footwear nailing machine to nail or tack shoe parts together. Collects nails of required type and size and checks them for sharpness of points. Fills them by hand in hopper of nailing machine. Collects shoe parts to be nailed. Starts machine. Places or holds shoe parts to be nailed under nailing head of machine. Presses pedal to automatically release and drive nails through shoe parts to be joined. Releases pedal and takes out nailed pieces. Checks and ensures correct nailing by sight and touch. Cleans and oils machine and gets defects removed when required to ensure proper functioning. Is designated according to part of shoe nailed or tacked such as HEEL SEAT NAILER; TOP-LIFT

NAILER; IN SOLE ATTACHER; INSIDE HEEL ATTACHER, etc.

ISCO 08 Unit Group Details:

Code 8156
Title Shoe Making and Related Machine Operators

8156.0701

Cutter, Machine/Cutter (Footwear)

Cutter, Machine, Clicker Machine; Press Cutter (footwear) operates hand or foot-press to cut footwear components from sheets of leather. Selects and spreads on table of machine leather of thickness and quality appropriate to component to be cut (heel, tongue, sole, toe-cap, etc.) Notes direction of stretch and any defective areas in leather. Plans cutting to obtain maximum number of useable pieces. Places die on leather according to plan and operates hand or foot lever to force die through leather and cut out piece. Continues cutting until leather is used up. Bundles cut pieces for removal. Oils and cleans machine and reports defective operation for correction. May be designated as UPPER CUTTER, BOTTOM CUTTER, LINE CUTTER, etc. according to component cut.

Qualification Pack Details:

QP NOS Reference LSS/Q3201
QP NOS Name Cutter (Footwear)
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8156
Title Shoe Making and Related Machine Operators

8156.0800

Leather Cutter, Machine

Leather Cutter, Machine (Harness and Saddle Making) cuts leather by machine for use in making harness and saddles. Fits appropriate guide in machine and inserts leather under knives to cut components to desired shape. Checks sample piece for accuracy and continues production. May sharpen and change knife occasionally. May cut leather pieces using hand knife (rapi).

ISCO 08 Unit Group Details:

Code 8156
Title Shoe Making and Related Machine Operators

8156.0900

Welt Sewer, Machine/Machine Operator, Welt Sewing

Welt Sewer, Machine; Welt Sewing Machine Operator operates sewing machine to sew narrow strip of leather (welt) to lip of insole of shoe through upper and lining. Checks needle and awl of machine and replaces them if they are out of trim. Fixes spool of sewing cord in box container and draws it through heated wax, guide and needle. Puts welt in welt guide and depresses foot pedal to start machine. Manipulates carriage of shoe with both hands keeping sole upward under needle, awl and welt guide to stitch through upper, lining and insole lip. Feeds thread and welt when necessary. Ensures decorative value of welt as well as its proper stitching to hold it intact with upper, lining and insole lip. Cleans and oils machine and gets defects removed. May sew extra welt if necessary. May sew welt manually using awl and waxed cords.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.0901

Stitching Operator (Footwear)

Stitching Operator (Footwear) performs stitching operations to the upper components of the footwear as per the design instructions given by the designing section. They should be able to stitch the footwear with leather and non-leather components, using maximum accuracy. They should be passionate about creating intricate products without compromising on quality.

Qualification Pack Details:

QP NOS Reference LSS/N3501
 QP NOS Name Stitching Operator (Footwear)
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8156
 Title Shoe Making and Related Machine Operators

8156.1001

Skiver, Machine/Skiving Operator

Skiver, Machine (Footwear) skives (tapers) leather components of footwear on machine for joining. Observes parts to be skived and estimates appropriate depth and angle of skive. Adjusts screws on machines to set feed rolls and cutting angle of knives. Inserts part between feed rollers and depresses pedal to operate knives. Matches skived parts and occasionally adjusts angle or depth of cut in order to obtain smooth joint without ridge. Changes dull knives; cleans and oils machine and reports malfunctioning for repairs. May join skived parts by gluing and stitching. May do hand skiving.

Qualification Pack Details:

QP NOS Reference LSS/N3701
 QP NOS Name Skiving Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8156
 Title Shoe Making and Related Machine Operators

8156.1401

Laster, Machine/Lasting Operator

Laster, Machine; Lasting Machine Operator operates machine to pull upper tightly over shoe last and tack sole upper to insole. Pulls lining over last with hand pincers. Places shoe with sole upward against guide of machine and below the tack hammer. Presses pedal to start machine and manipulates shoe to get upper permanently tacked along edges of insole. Watches operation and ensures proper tacking and shaping of shoe. Cleans and oils machine and request repairs when needed.

Qualification Pack Details:

QP NOS Reference LSS/N3801
 QP NOS Name Lasting Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8156
 Title Shoe Making and Related Machine Operators

8156.1500

Sole Stitcher, Machine

Sole Stitcher, Machine; Sole Stitching Machine Operator (Footwear) operates sole stitching machine to attach outsole of welt or upper and insole of shoe. Places spool of sewing cord on stand of machine and draws cord through tension guide and

sewing needle. Sets bobbin in machine. Adjusts machine for size, tension and number of stitches per inch. Sets shoe with sole upwards on table rest of machine underneath needle and steps on pedal to start machine. Guides shoe with hand as needle sews around shanks (waist) and forepart through outsole to upper surface of welt or insole. Stops machine when sole is stitched and removes show from machine. Ensures that stitches are properly embedded in channel, cut in outsole. Replaces broken or defective needle and empty spool and bobbins. Oils and cleans machine. May be designated according to type of machine on which worked such as BLAKE-SEWING MACHINE OPERATOR LOCK-STITCHING-MACHINE OPERATOR OR DOUBLE-STITCHING MACHINE OPERATOR.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.1600

Seat Laster, Machine/Lasting Machine Operator

Seat Laster, Machine; Seat Lasting Machine Operator (footwear) operates seat lasting machine to fasten upper heel seat to insole. Operates hand wheel to set machine for size of last. Inserts last with attached upper on heel-seat of machine and heel part into seat-mould. Depresses pedal to raise heel seat to tacking position. Starts machine which automatically draws upper and lining evenly over heel-seat and drives tacks to fasten upper to insole. Removes last with upper from heel-seat and examines for correct shape and tacking. Cleans and oils machine and requests any needed repairs.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.1700

Splitter, Machine/Splitting Machine Operator

Splitter, Machine; Sole Splitter; Bottom Splitter; Splitting Machine Operator (Footwear) operates splitting machine which shaves off rough or flesh side of footwear components such as out-soles, insoles, heel-lifts, welts etc. to required thickness. Examines components visually and decides amount of splitting required. Checks sharpness of splitting knife by sight and touch and adjusts it according to thickness of component required. Switches on machine. Feeds component into feed rollers of machine to shave off fleshy and rough stuff to get surface to required thickness. Watches operation and ensures accuracy in splitting. Places split components manually in container. Oils and cleans machine and gets defects removed when required. May replace blunt or damaged knife in machine.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.1800

Heeler, Machine/Heel Attacher

Heeler, Machine; Heel Attacher, Machine; Heel Attaching Machine Operator nails leather and rubber heels to shoes by machine. Collects heels of proper size to be attached. Sets metal heel-mould of required size in machine. Collects nails of required size, examines them for sharpness of points and feeds them into

heel mould. Sets and adjusts pressing plate and nail driver and ensures proper functioning. Places shoe on mould and positions heel on shoe. Starts machine which automatically drives nails through heel and heel-seat and clinches them to insole. Removes shoe from mould and checks accuracy of joining. Cleans and oils machine and gets defects removed if any. May attach heel by hand. May nail iron tips in heel.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.1900

Heel Compressor, Machine (Foot Wear)

Heel Compressor, Machine (Footwear) operates heel compressing machine to compress heels and increase their durability. Selects top and bottom die of required shape and size and sets them in machine. Determines amount of compression required and adjusts gauge or bottom die accordingly to effect required pressure. Collects and puts heel on bottom die fitted on machine table or places them (heels) one by one on carrier of machine which carries them under compressing die. Switches on machine and presses foot pedal to bring top die on compressing die (bottom die) for pressing and stretching heel to its full flexibility (according to set pressure and shape in die) and stabilize durability. Checks thickness of compressed heels, sorts them according to sizes and ensures uniform compression. Oils and cleans machine and gets defects removed as and when required.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.2000

Sole Leveller, Machine

Sole Leveller, Machine, Sole Levelling Machine Operator levels soles of shoe on sole levelling machine. Adjusts machine according to size of shoe to be levelled. Places shoe on last stand of machine with sole upwards. Marks uneven portions of surface of sole and levels it by beating with hand hammer. Starts machine and rollers. Steps on foot pedal to raise hoe and let moving rollers roll over its sole to press and level it. Removes shoe from stand and ensures proper levelling. Cleans and oils machine and gets defects removed if any. May apply cement with brush while levelling.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.2100

Trimmer, Machine

Trimmer, Machine; Machine Trimmer (Footwear) operates trimming machine to smoothen and trim various parts of shoe. Examines parts of shoe by sight to determine extent of trimming required. Sets proper cutting tool in holding disc of trimming machine. Switches on machine. Holds shoe with both hands and manipulates edges to be trimmed against revolving cutter to trim surplus portions and make surface even. Ensures accurate trimming to avoid damage to other parts of shoe. Cleans and oils machine and gets defects removed if any. May change and grind blunt tools. May operate scouring or

sand paper machine to give finishing touches to various parts of shoe. May do trimming by hand.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.2200

Edge Setter, Machine

Edge Setter, Machine (Footwear) operates edge-setting machine to polish edge of sole of shoe for giving shape and desired finish to it. Selects heating copet (iron) according to thickness of sole and fits it in machine holder. Turns on gas flame or lights spirit-lamp fitted to machine. Turns holder containing copet over gas flame or spirit lamp as appropriate to heat it to required temperature. Switches on machine. Holds shoe in both hands against revolving copet and manipulates its (shoes) movement to burnish its entire edge. Applies coating of wax with wax stick on burnished edge of sole. Repeats process of burnishing after waxing to effect desired polish, shape and finish. Cleans and oils machine and gets defects removed if any. May apply solution over entire edge of sole to fill small holes.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.2300

Edge Burnisher

Edge Burnisher; Edge Burnishing Machine Operator; Edge Polisher (Footwear) burnishes skived edges of leather uppers of shoes by passing them through burnishing machine. Switches on to heat

burnishing iron and ensures stipulated performance of guides and roller. Sets skived edge of upper under iron against guides, keeping edge of one piece over other, guides upper under burnishing iron. Regulates heating of burnishing iron by pedal and ensures desired burnishing effect on edges of skived leather. Cleans and oils machine and gets defects removed if any.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.2400

Heel Padding Machine Operator

Heel Padding Machine Operator; Heel Polisher polishes heel of shoe on heel padding machine. Switches on padding machine. Holds wax stick against heated roller of machine to get wax carried to pad or disc of machine. Holds shoe with both hands and manipulates heel against waxed pad for application of hot wax on it (heel). Presses heel with hands against revolving brush of machine to shine and effect smooth finish. Cleans and oils machine and gets defects removed if any.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

8156.2500

Eyeletting Machine Operator

Eyeletting Machine Operator; Eye Letter; Eyelet Setter; Grommet Machine Operator operates eyeletting machine which punches holes and places eyelets in holes for lacing shoes. Collects uneyeletted shoes and eyelets and sorts

them out according to size, shape, etc. Fills machine hopper with required kind of eyelets. Sets machine and adjusts eyelet spacing plate. Places side of shoe upper to be eyeleted on machine die. Depresses pedal to start machine which automatically punches holes and fixes one eyelet in each hole. Removes eyeleted shoe from machine die and checks for proper eyeletting. Cleans and oils machine and gets defects removed, if any.

ISCO 08 Unit Group Details:

Code 8156
Title Shoe Making and Related Machine Operators

8156.2501

Pre-Assembly Operator

Pre-Assembly Operator performs the following operations: splitting, gimping, ironing, marking, edge colouring, pasting, folding and eyeletting. They should be well versed with the sequential processes involved in footwear manufacturing. They should understand the importance of quality within the footwear manufacturing processes and ensure set standards are achieved within the work area.

Qualification Pack Details:

QP NOS Reference LSS/N3601
QP NOS Name Pre-Assembly Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8156
Title Shoe Making and Related Machine Operators

8156.2600

Riveting Machine Operator

Riveting Machine Operator; Sole Screwing Machine Operator (Footwear) operates riveting machine to screw brass screw wire to sole of footwear. Collects spool (hollow cylinder for winding yarn or wire) of brass screw wire. Opens spindle cover and sets spool on it. Draws end of wire through nozzle, closes spindle cover and sets machine at high or low speed as required. Places shoe in horn of machine with sole upwards and starts machine. Presses pedal to raise horn till sole touches nozzle. Sets machine for feed and speed of screwing. Guides shoe with both hands and ensures screwing together of insole, middle sole and sole at desired points. Replaces spool of screw wire as necessary. Removes shoe from machine and checks for proper screwing by touch and sight. Cleans and oils machine and gets defects removed.

ISCO 08 Unit Group Details:

Code 8156
Title Shoe Making and Related Machine Operators

8156.2601

Helper – Bottom Making (Footwear)

Helper–Bottom Making (Footwear) provides assistance to the Footwear Machine Operators involved in material lasting, buffing, roughing, adhesive adding etc. They are required to co-ordinate with team members and is required to assist the operators to carry out activities based on the production schedule.

Qualification Pack Details:

QP NOS Reference LSS/Q3301
QP NOS Name Helper – Bottom Making (Footwear)
NSQF Level 2

ISCO 08 Unit Group Details:

Code 8156
 Title Shoe Making and Related Machine Operators

8156.2602**Helper–Upper Making (Footwear)**

Helper-Upper Making (Footwear) provides assistance to the footwear machine operators involved in material cutting, insole building, stitching, skiving, etc. and carries out folding, adhesive adding and edge colouring. They are required to co-ordinate with team members and is required to assist the operators to carry out activities based on the production schedule.

Qualification Pack Details:

QP NOS Reference LSS/Q3101
 QP NOS Name Helper – Upper Making (Footwear)
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 8156
 Title Shoe Making and Related Machine Operators

8156.2603**Helper-Finishing (Footwear)**

Helper-Finishing (Footwear) provides assistance to the footwear machine operators involved in footwear cleaning, polishing and buffing, final inspection and packing processes and carry out material lasting, buffing, roughing, adhesive adding etc. They are required to co-ordinate with team members and is required to assist the operators to carry out activities based on the production schedule.

Qualification Pack Details:

QP NOS Reference LSS/Q3401

QP NOS Name Helper – Finishing (Footwear)

NSQF Level 2

ISCO 08 Unit Group Details:

Code 8156
 Title Shoe Making and Related Machine Operators

8156.9900**Cutting, Lasting and Sewing Machine Operators, Other**

Cutting, Lasting and Sewing Machine Operators, other perform variety of routine and low skilled tasks in manufacture of shoes using appropriate machines or hand tools and may be designated according to nature of work performed such as Crimping Machine Operator operates crimping machine to give curved shape and wax finish to stitches. Welt Cutter cuts welt from leather sheet using knife. Welt Grooving Machine Operator operates grooving machine to cut groove in welt of shoe. Channel Opener operates channel opening machine to slit sole of shoe for stitching. Heel Assembler assembles heel lifts for making heel. Last Assembler assembles lasts and closed uppers of appropriate size and shape as per specification. Bottom Filler nails shank to insole at waist of shoe and fills bottom of shoe with sawdust, pieces of leather etc. Upper Cleaner cleans upper of shoes with water and brush and applies coating of prima and dressing. Stitch Cutter cuts stitches on insole and sole evenly using hand knife. Edge Polisher, Hand polishes edges of footwear by applying chemical compound with brush. Decorating Machine Operator (Footwear) operates decorating machine for making decorative patterns on insole. Cementer (Footwear) applies cement glue by brush on footwear

components for sole pressing and to ends of upper straps for pasting them on insole. Paster (Footwear) collects sole and midsole from conveyor rack and pastes them together by pressing them with hands.

ISCO 08 Unit Group Details:

Code 8156

Title Shoe Making and Related Machine Operators

Family 8157 Laundry Machine Operators

Laundry Machine Operators operate laundry, dry cleaning, pressing and fabric treatment machines in laundries and dry cleaning establishments.

8157.0100

Washing Machine Operator

Washing Machine Operator washes and cleans garments in power driven washing machines. Places soiled articles in container of machine. Operates valve to fill machine with water to prescribed level and adds soap and other cleaning agents to water. Opens valves to admit steam into machine to raise temperature of water to and maintain it at desired temperature. Operates controls to start rotation of container. Drains water from machine and refills it as required to rinse articles. Stops machine when articles are washed, cleaned and rinsed and then removes them to drying machine for drying. May operate hydro-extracted machine to extract water out of wet articles.

ISCO 08 Unit Group Details:

Code 8157

Title Laundry Machine Operators

8157.0200

Drying Machine Operator

Drying Machine Operator; Drying Tumbler Operator dries washed or dyed garments by operating hand or electrically driven drying-machine tumbler. Loads cleaned or dyed articles into drum of drying machine. Determines period of time for article to remain in drum according to its nature and texture. Manipulates hand levers or electric switches to start drum and electric fan, and turns hand valves in steam pipes that supply hot air to drum. Stops or switches off machine and ensures that articles are thoroughly dried and odour of cleaning fluid is removed. May operate extractor or washing machine.

ISCO 08 Unit Group Details:

Code 8157

Title Laundry Machine Operators

8157.0300

Dry Cleaner, Machine

Dry-Cleaner, Machine; Dry Cleaning Machine Operator cleans and disinfects woollen and silken garments, textile furnishings and other similar articles with chemical solution or petroleum product by operating power-driven cleaning machine. Places articles in drum of machine and fastens cover. Operates valves to feed chemical solution into machine and operates controls to start rotation of drum allowing drum to rotate until articles are cleaned. Stops rotation of drum and drains off solution. Opens machine, removes articles from it for pressing by machine or ironing by Presser. May periodically, filter dirty cleaning fluid. May sort articles according to colour and condition and type of material. May remove spots or stains by rubbing them

with solvent. May examine dry-cleaned articles for any defect or damage.

ISCO 08 Unit Group Details:

Code 8157

Title Laundry Machine Operators

8157.0400

Presser, Machine/Ironing Operator

Presser, Machine operates pressing machine to smoothen and shape garments, textile furnishings and similar articles. Lays garments or other material on padded table of press. Pulls pressing head of machine on to surface of material, pressing head down ward into contact with table and raises pressing head, re-arranges material and repeats process till pressing is complete. May oil and clean parts of machine. May press dry-cleaned saris by wrapping them by hand on calendars (Wooden-roller frames) and be designated as CALENDERER, SARIS.

ISCO 08 Unit Group Details:

Code 8157

Title Laundry Machine Operators

8157.0401

Pressman

Pressman also called an 'Ironer' iron the garment components and finished garments. The primary responsibility of a pressman is to iron the garments and fold it as per the customer specifications.

Qualification Pack Details:

QP NOS Reference AMH/Q0401

QP NOS Name Pressman

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8157

Title Laundry Machine Operators

Family 8159

Textile, Fur and Leather Products Machine Operators, Not Elsewhere Classified

This family covers Textile, Fur and Leather Products Machine Operators not classified elsewhere in the group 815, Textile, Fur and Leather Products Machine Operators. For instance, the family includes those engaged in operating and monitoring machines which make hats, tents, mattresses or miscellaneous articles such as braids or other trimmings.

8159.0100

Folder, Machine/Folding Machine Operator

Folder, Machine; Folding Machine Man (Textile) tends machine that folds cloth into measured lengths. Feeds cloth through machine rollers carefully to avoid creases in folded cloth. Watches for and cuts out defective portions. Cuts cloth at specified lengths and stack pieces. May be designated as FRONT MACHINE FOLDER if working at receiving end of machine and as BACK MACHINE FOLDER if working at feeding end of machine.

ISCO 08 Unit Group Details:

Code 8159

Title Textile, Fur and Leather Products Machine Operators Not Elsewhere Classified

8159.0200

Splicing-Machine Operator, Automatic (Textile)

Splicing Machine Operator, Automatic (Textile) tends machine that splices (joins) ends of partially filled spools of tire cord and winds cord from one spool to other: Places spools of cord on machine spindles

and pulls ends of cord through holding device under needle of sewing machine. Depresses pedal to start sewing machine that automatically sews ends of cord together, cuts thread at end of sewing cycle, and trims excess ends of cord. Removes spliced ends from holding device. Pulls lever to start spindle that winds spliced cord from one spool to another and to turn table, moving succeeding spindles into splicing position. Doffs full spools of cord as table turns complete circle. Mounts cones of thread on machine spindles, ties thread from spindle to thread in machine, and pulls thread through machine guides, tension springs, and needle to thread sewing machine.

ISCO 08 Unit Group Details:

Code 8159
 Title Textile, Fur and Leather Products
 Machine Operators Not Elsewhere
 Classified

8159.0300

Balling-Machine Operator (Textile)

Balling Machine Operator (Textile) tends machines that wind thread, twine, or yarn into balls preparatory to shipping or further processing. Places supply cones or spools on creel rack and threads yarn ends through guides and tension device. Pushes core over spindle of machine or wraps end of thread around shaping device of coreless winder. Pulls lever to start machine to wind specified amount of thread. Doffs balls of thread, using knife to cut thread. Inspects balls for defective winding or soiled thread. May insert labels under the thread. May place ball on the device to crush the centre and wrap end of thread around the centre as binder. May pack balls into boxes for shipment.

ISCO 08 Unit Group Details:

Code 8159
 Title Textile, Fur and Leather Products
 Machine Operators Not Elsewhere
 Classified

8159.0400

Press Operator

Press Operator tends machine that steams and presses wrinkles from woollen cloth: Starts press and manually guides cloth into machine and under weighted cylinder which steams material and presses out wrinkles. Turns hand wheel to adjust cylinder pressure according to type of cloth processed. Sews end of new material to end of material in press, using sewing machine. Cleans and oils pressing machine.

ISCO 08 Unit Group Details:

Code 8159
 Title Textile, Fur and Leather Products
 Machine Operators Not Elsewhere
 Classified

8159.9900

Leather Cutters, Lasters and Sewers and Related Machine Operators, Other

Leather Cutters, Lasters and Sewers and Related Workers, Other include all other Leather Cutters, Lasters and Sewers and Related Workers engaged in making fancy or other leather articles by processes of cutting, lasting, sewing, shaping, etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8159
 Title Textile, Fur and Leather Products
 Machine Operators Not Elsewhere
 Classified

Group 816

Food and Related Products Machine Operators

Food and Related Machine Operators set, operate and attend machinery used to slaughter animals, trim meat from carcasses; bake, freeze, heat, crush, mix, blend and otherwise process foodstuffs, beverages and tobacco leaves.

Occupations in this Group are classified into the following Families:

8160 Food and Related Products
Machine Operators

Family 8160

Food and Related Products Machine Operators

Food and Related Machine Operators set, operate and attend machinery used to slaughter animals, trim meat from carcasses; bake, freeze, heat, crush, mix, blend and otherwise process foodstuffs, beverages and tobacco leaves.

8160.0300

Pasteurising Plant Operator (Dairy)

Pasteurising Plant Operator; Pasteuriser (Dairy) operates pasteurizing plant to remove harmful bacteria from raw milk and other dairy products. Pumps cold raw milk or other dairy products through a heating tank; maintains liquid at required temperature for a specified time and pumps it through cooling unit into bottling machine; checks thermometers and gauges and makes necessary adjustments to ensure that liquid is properly pasteurized; cleans and sterilizes tanks and inter-connecting pipes; disconnects filter and renew or cleans straining

devices. May drain out pasteurized milk into container through tap fitted in plant.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.0400

Mixing Tank Operator

Mixing Tank Operator tends mixing tank to mix skimmed milk powder and water to form toned milk. Opens taps to admit specified quantity of water into tank as indicated by meter; measures required quantity of milk powder and adds it into tank; switches on machine which churns and mixes powder and water into milk; tests sample to ensure conformity to specification, using testing apparatus; empties tank, cleans and sterilizes equipment.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.0500

Dairy Processing Equipment Operator

Dairy Processing Equipment Operator operates continuous flow or vat-type equipment to process milk, cream, and other dairy products, following specified methods and formulae: Connects pipes between vats and processing equipment. Assembles fittings, valves, bowls, plates, disks, impeller shaft, and other parts to equipment with wrench to prepare for operation. Turns valves to pump sterilizing solution and rinse water through pipes and equipment and spray vats with atomiser. Starts pumps and equipment,

observes temperature and pressure gauges, and opens valves on continuous flow equipment to force milk through centrifuge to separate cream from milk, through homogeniser to produce specified emulsion, and through filter to remove sediment. Turns valves to admit steam and water into pipes to pasteurise milk and to circulate refrigerant through coils to cool milk. Starts pump and agitator, observes pressure and temperature gauges, and opens valves on vat equipment to fill, stir, and steam-heat milk in vat. Pumps or pours specified amounts of liquid or powder ingredients, such as skim milk, lactic culture, stabilizer, neutraliser, and vitamins into vat to make dairy products, such as buttermilk, chocolate milk, or ice cream mix. Tests product for acidity at various stages of processing. Records specified time, temperature, pressure, and volume readings.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.0700

Miller, Food Grains

Miller, Food grains processes rice, wheat, pulses, spices and other food grains by operating one or more machines or by supervising their operations by other workers. Adjusts and operates machines for removing husk or bran from grains, polishing rice, grinding and crushing grain and spices into smaller pieces or powder, grinding, shifting and screening grains, flour or spices etc.; observes and supervises milling process for desired results, maintains flow of milled product by regulating flow of ingredients in specified proportion; removes

obstructions by tapping clogged spouts with mallet and by adjusting gates; examines product periodically by rubbing sample between fingers or comparing it with colour and texture of standard sample; keeps records of materials received and products milled. May supervise other workers at various stages of processing. May be designated according to type of grains milled or processed such as MILLER, RICE; MILLER, SPICES; MILLER, DAL; etc.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.0800

Husker, Machine (Food Grains)

Husker, Machine (Food grain); Hullerman, Grain operates husking machine to separate grain from its outer covering or shell. Starts machine; pours grain into storage bin attached to machine; regulates feeding of grain into machine by manipulating lever: examines hulled grain periodically for proper husking and adjusts machine as necessary; switches off machine after completion of process or when machine does not function properly; removes minor defects and reports major defects to supervisor for rectification. Cleans and oils machine when not in use. May keep production reports, may direct workers in storage of graded grain.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.0900

Roller Man, (Food Grains)

Roller Man (Food grain) operates rolling machine to crush grain into flour. Adjusts rollers according to fineness of grinding required; starts machine and regulates flow of grain from hopper to grinding rolls; observes crushing process keeping grain moving at regular rate by tapping clogged spouts with mallet (a wooden hammer or one made of rubber or raw hide) and by adjusting gates; examines product periodically by rubbing sample between fingers or by comparing texture with those of standard sample; detects working defects if any of machine by sight or sound; removes minor defects and reports major defects to supervisor for rectification. May clean roller machine and also roll flour.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1000

Flour Mill Operator

Flour Mill Operator operates grinding machine or mill to grind wheat, gram or other grains into flour or animal feed. Sets mill by adjusting roller according to fineness of grinding desired; feeds grain into feeding bin of mill by hand; observes process, keeping grain moving at regular rate by tapping clogged spouts with hammer and by adjusting gates; examines crushed product periodically by feel of fingers and adjusts roller as necessary; removes flour collected in bag or container at delivery end; cleans and oils machinery. May weigh grain and flour, calculate charges and collect payment of services rendered to customers. May dress mill stones.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1100

Siever, Machine

Siever, Machine; Sieving Machine Operator; Sifter, Machine (Food Processing) tends battery of rotary or oscillating screens to separate and remove bran or other foreign matter from food grains, seeds, flour etc., or sort tea, coffee and other food grains by size. Fits sieves of desired size into machine frame; dumps product into hopper of machine; places empty container at delivery end of sieve; starts motor to activate screens; opens hopper gate which automatically allows product to pass through different sizes of sieves and removes bran, dust and other foreign matter or sort product into different sizes; checks product passing over different screens to prevent clogging and overflow; removes and replaces defective parts of damaged sieves. May wash grains with water.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1200

Oil Crusher Operator, Power

Oil Crusher Operator, Power operates crushing machine for extracting oil from seed such as cotton seed, castor seed, copra and groundnut. Places empty container below crusher; starts machine and feeds oil seeds into hopper of machine; sprinkles prescribed quantity of water over oil seeds to moisten them; turns hand wheel to adjust pressure between rollers and ensures that oil is properly extracted; examines oil cakes

visually or by touch to determine that sufficient quantity of oil has been removed; removes container when filled with oil at delivery end for further processing and replaces it with empty one; take out oil cakes from hopper of crusher and fills hopper with fresh oils seeds to maintain continuous production; cleans and oils machine and keeps work place clean and tidy. May specialize in extraction of oil from, particular type of seed. May operate animal driven indigenous crusher for extracting oil from seeds. May operate filter crushed oil.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1300

Filter Press Operator (Oil)

Filter Press Operator (Oil) operates filter presses to filter oil and remove mud and other sediments. Covers filter plates with canvas cloth. Closes press, causing plates to come together forming seal, opens valve to feed press with oil for filtering at required pressure by observing pressure gauge of filter press; ensures that filtered oil is collected at receiving end through taps; inspects filtrate for clarity and draws samples at various stages of filtering process for laboratory analysis; turns off tap or cock if oil runs cloudy through taps; stops pump or valve in case of leak developing in press; cleans filtered impurities and sediments from frames, screens and filters using water, steam, or compressed air; opens filter press, dislodges solid materials from between frames, and replaces filtering media; cleans and washes used filter cloth and dries them in sun before using again. May

operate one or more presses. May adjust or repair equipment.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1500

Wafer Baking Machine Operator (Baking)

Wafer Baking Machine Operator (Baking) operates wafer-making machine for moulding dough and baking it into wafers. Fills hopper machine with dough; starts machine and turns set screw to regulate amount of dough deposited in mould; turns thermostat to adjust temperature of moulds; observes colour of baked wafers being ejected into conveyor to detect defects; collects wafer sheets from machine and places them on clean smooth table; joins them properly in rack; may tend machine which also rolls dough into shape of cones prior to baking and be designated CONE BAKER, MACHINE. May arrange cut wafer biscuits in wafer stacking tray systematically.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1600

Cooker Operator

Cooker Operator; Crystallizer (Confectionery); Pan Attendant (Confectionery) operates steam heated open pan or vacuum pan to cook glucose, sugar, milk, water and other ingredients into syrup of required consistency for making candies or sweets. Mixes sugar, water, glucose, milk and other ingredients

in prescribed proportions according to formula and pours mixture into cooking kettles, turns valves to admit steam and sets pressure gauge and thermostats to cook ingredients at specified temperature; stirs syrup occasionally while it is cooking, tests consistency of syrup with a hydrometer; opens discharge valve and starts pump or tilts cooker or kettle to pour or dump syrups into heaters or onto cooling belts or tables. May beat or knead confection to attain specified consistency as determined by colour and texture. May be designated according to type of confectionery cooked as CRYSTAL SYRUP MAKER (Confectionery); COCONUT COOKER (Confection) or equipment used as VACUUM-COOKER OPERATOR (Confectionery).

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1700

Cutting Machine Operator (Confectionery)

Cutting Machine Operator (Confectionery); Candy Cutter, Machine operates machine for cutting candy into pieces or strips of desired shape and size. Cuts slab of candy into sections, using knife; selects cutting dies, mounted on shaft, according to specified width of cut, and installs cutting discs in machine; starts machine; feeds candy to machine through sizing rollers for automatic formation, slicing and cutting into strips and pieces of specified size and shape; weighs random samples to ensure conformity of product with size and weight specifications; dusts candy with flour or starch to prevent sticking; cleans machine and keeps place tidy. May be designated according to candy processed as CAMEL CUTTER,

MACHINE; MACHINE MAN, LOZENGES; TOFFEE MACHINE MAN.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1800

Chocolate Maker, Helper

Chocolate Maker, Helper operates any of following machines and equipment to relieve regular operators engaged in processing cocoa beans into chocolate liquor and in producing cocoa powder and sweet chocolate, according to formula: Controls roaster that roasts cocoa beans to develop specified colour and flavour and reduces moisture content of beans. Tends mill to grind nibs (cracked cocoa beans) into liquid chocolate of specified fineness. Tends hydraulic press to extract cocoa butter from chocolate liquor, and operates cocoa room machinery and equipment to grind and pulverise cocoa cakes into cocoa powder. Mixes ingredients, such as chocolate liquor, sugar, and powdered milk to make sweet chocolate. Operates refining machine to grind chocolate paste to specified consistency. Operates tempering equipment to control temperature of chocolate in cooling process before moulding. May tend moulding machines, pressure cookers, and dryers. May assist in supervising and training production line workers.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.1900

Flake Miller, Wheat and Oats (Grain-Feed Mills)

Flake Miller, Wheat and Oats (Grain Feed Mills) operates drier, huller, separator, steel cutter, cooker, and flake roller machines to produce wheat and oats flakes, according to specifications: Adjusts slides in chutes and turns valves to regulate flow of grain to machines. Adjusts flow of air to dry grain and feels grain to determine hulling capability. Observes hulling process and adjusts speed of machines that remove and separate hulls from oats. Turns valves to regulate temperature and moisture in cooker, and adjusts tension on flaking-machine rolls, according to hardness and size of grain.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.2000

Noodle Press Operator

Noodle Press Operator operates machine to blend ingredients, and knead, extrude, and cut dough used to make noodles: Installs specified die in press, using hand tools. Adjusts press rollers to regulate thickness of dough, using micrometre and hand tool. Dumps premeasured quantity of eggs into tub, sets meter, and turns spigot to admit prescribed amount of water. Starts beater to mix eggs and water for specified time. Starts pump s to transfer mixture to mixing unit of press. Opens hopper to admit flour into mixing unit and starts press to process mixture. Turns screw to set speed of knives to cut product to specified length. Patrols drying chambers and observes temperature and humidity readings recorded on charts for

variation in drying procedure. Reports chart deviations to Production Manager. Records type of product, date, and time of entry and discharge of product from drying chambers.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.2200

Peeling Machine Operator (Food Canning and Preserving)

Peeling Machine Operator (Food Canning and Preserving) operates and feeds machine to remove skin from fruit and vegetables preparatory to canning and preserving. Checks preliminary washing and cleaning of fruits and vegetables by hand; feeds product into hopper of machine; starts machine; checks at stages peeling process; regulates flow of water inside peeling tank; discharges product through outlet valve on completion of peeling. May be designated according to type of fruit or vegetables peeled such as APPLE PEELER; ONION PEELER.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.2300

Pitting Machine Operator (Food Canning and Preserving)

Pitting Machine Operator (Food Canning and Preserving) operates and feeds machine to remove pits, seeds or stones from fruits preparatory to canning and preserving. Feeds fruits by hand into hopper of machine; starts machine; observes revolving of drum containing

fruits, stoppage of drum when unpitted fruit positions pitting knives, peering of knives in between fruits to remove pits, seeds or stone; examines product periodically to ensure that process is proceeding correctly. Stops machine when process is complete and removes product. May be designated according to product pitted as CHERRY PITTING MACHINE OPERATOR; APPLE PITTING MACHINE OPERATOR.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.2400

Fruit Press Operator (Food Canning and Preserving)

Fruit Press Operator (Food Canning and Preserving) sets and operates power press for extracting juice from fruits for canning and preserving. Places frame equipped with filter cloth on press cart; pulls lever or turns valve to release fruit from hopper or pipe line onto filter cloth; spreads fruits evenly over filter, folds corners of cloth to cover fruit, and removes forming frame; pushes cart loaded with fruit into press; starts press; pulls cart from press and dumps fruit pulp into container. May start pump to transfer juice to storage tanks. May work on fruit reaming machine or pulping machine and be designated accordingly.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.2500

Seaming Machine Operator (Food Canning and Preserving)

Seaming Machine Operator (Food Canning and Preserving); Can-Sealer Operator seams tops or bottoms on metal containers to form open-top cans or to close filled cans by feeding and tending automatic double seaming machine. Loads feed hopper of machine with tin-can ends (tops or bottoms); starts machine; observes machine operations as can shells or filled cans enter machine in upright position by conveyor and are automatically closed to ascertain that cans and ends are properly joined and seamed together; stops and clears machine when jams occur. May oil and make minor repairs to machine. May make adjustments to mechanism to accommodate various sizes of containers.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.2600

Retort Operator (Food Canning and Preserving)

Retort Operator; Cooker, Pressure (Food Canning and Preserving) controls retort chamber (steam pressure cooker) to cook canned foods according to specifications. Pushes trucks or lowers baskets of canned foods into chamber of retort, using hoist; closes retort door or lid to seal chamber; observes dials and thermometers, and turns valves to admit steam to retort and to control temperature, pressure, and cooking time; turns valves to release steam and admit cooling water into chamber to prevent overcooking at end of cooking cycle. May open retort and move basket of canned food for cooling trough, using hoist.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.2700

Processing Man (Food Canning and Preserving)

Processing Man (Food Canning and Preserving) heats containers of canned or preserved foods to sterilise their contents, by means of hot water vats, troughs, or retorts. Fills vats or troughs with hot water; heats water to required temperature by steam or gas; loads material by hand or mechanical hoists; keeps seamed cans for a specified time in hot chest; removes sterilized seamed cans from chest box and cools processed cans in retort, injecting compressed air to counteract pressure within cans. May clean sterilising chambers at regular intervals.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.2800

Panman (Food Canning and Preserving)

Panman (Food Canning and Preserving); Cooker syrup; Syrupman tends equipment to mix ingredients that produce syrups used in canned fruits and preserves, flavourings, frozen novelty confections, or non-alcoholic beverages. Determines amounts of ingredients, such as sugar, water, and flavouring, required for specified quantity of syrup of designated specific gravity; opens valve to admit liquid sugar and water into mixer; adds flavouring ingredients and starts mixer to make syrup; opens valve to admit steam into jacket of mixer to invert sugar,

eliminate air, and sterilize syrup; tests syrup for sugar content, using hydrometer; pumps syrup to storage tank. May filter syrup to remove impurities and be designated as SYRUP FILTERER. May blend raw syrups and be designated as SYRUP BLENDER.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.2900

Exhaust Box Operator (Food Canning and Preserving)

Exhaust Box Operator (Food Canning and Preserving) removes or expels air from fruit tissues and containers by placing and keeping them immersed in hot water bath or steam chest for specified period. Places filled caps with top open on conveyor belt; starts exhaust box; regulates speed of conveyor to allow cans to pass through steam filled channel for a specified time; admits steam into exhaust box to raise temperature to heat can to expel air from fruit tissues; stops and clears machine when jams occur. May oil and clean machine.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.3000

Foodstuff Freezer

Foodstuff Freezer freezes fruits, vegetables and other foods before or after packing. Places prepared food or cartons of food on shelves or on moving belt in freezing unit. Regulates temperature and freezing time. May remove frozen food.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.3100****Peanut Blancher**

Peanut Blancher tends blanching machine that removes skins from shelled peanuts: Starts machine and pours peanuts into machine hopper. Inspects peanuts as they fall from machine onto moving belt and picks out foreign matter, unblanched peanuts, and peanuts that fail to meet production specifications. May sack blanched peanuts. May tend sorting machine that electronically locates and removes unblanched peanuts.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.3200****Dehydrator Tender (Canning and Preservation)**

Dehydrator Tender (Canning and Preservation) tends sulphur and drying chambers to bleach and dehydrate fruit: Starts conveyors to load trays with fruit, and levels fruit in trays to ensure thorough processing. Pushes loaded cart into sulfurizing chamber and lights burner to generate fumes. Moves cart from sulfurizing chamber into drying chamber to dehydrate fruit. Observes gauges, and regulates and maintains specified temperature and humidity in drying chambers. Feels and observes fruit during dehydrating process to ascertain firmness and colour in accordance with standards.

Pulls cart from heating chamber. May record drying time of each load.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.3300****Refining-Machine Operator (Oil and Grease)**

Refining Machine Operator (Oils and Grease) tends machine that refines crude oils, such as soya bean, cottonseed, and peanut: Turns valve to pump oil and caustic solution from storage tanks into machine tanks as specified. Starts machine to separate caustic from oil by centrifugal force. Sets thermostat, observes gauges, and regulates valves to maintain prescribed temperature in wash and dryer tanks. Turns valves to pump mixtures to wash and dryer tank to remove by-products with water, and impurities with heat. Turns valve to pump refined oil to storage tanks. Cleans bowls, using water and steam. May test samples of crude and refined oil to determine specific gravity and free fatty acid content, using hydrometer and refractometer.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.3400****Crusher Operator, Sugarcane**

Crusher Operator, Sugarcane; Mill House Foreman; Mill House In Charge Fitter; Mill House Head Fitter; Mill House Head Worker sets and operates power driven roll pressure to extract juice from sugarcane for making sugar, Gur and khandsari sugar. Receives instructions and

sets roll pressure according to type of sugarcane to extract maximum possible amount of juice without damaging rollers or machinery; watches cane crushing operations both by sight and sound; directs rate and speed of crushing according to load; mixing of juice from subsequent set of rollers to previous one and bagasse removal. Attends to oiling and cleaning of rollers and major and minor repairs, and conducts overhauling and major repairs during off-season. May be designated as KOHLU OPERATOR, if operates and feeds animal driven sugarcane crusher for extracting juice.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.3500

Filter Pressman

Filter Press Man; Filter Press Operator; Assistant. Press Man; Filter Press Mate; Press mate (Sugar) operates filter press to filter mud and other sediments from sugarcane juice preparatory to further processing for making sugar. Covers filter plates with cloth or canvass and tightens hand screw to close press; dries filter cloth, if necessary, by operating valve and passing steam into press; opens and regulates valve for juice to be pumped into press till specified pressure is indicated on gauge fitted to pump; watches flow of filtered juice into receiving channel, and directs juice to another press, when flow of filtered juice gets clogged. Washes mud on filter cloth by opening hot water valve; opens steam valve to pass steam into filter cloth for drying mud cake; opens press and gets mud scraped off filter cloth, uses filter press cloth washed for re-use, and filter

plates and floor cleaned and washed for next filtration. May be designated as ROTARY FILTER OPERATOR, if operates power driven rotary filter having perforated drum to separate mud and other sediments from juice, by admitting muddy juice into tank of machine and rotating drum through which juice is sucked while mud sticks to drum and is subsequently scraped off by knife or blade attached to machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.3600

Dorr Clarifier Operator

Dorr Clarifier Operator; Batch Attendant; Dorr Subsider Attendant; Dorr Clarifier Attendant operates clarifier which settles mixture of juice, lime and super phosphate heated to determined temperature for clarifying juice. Boils mixture of juice and lime to prescribed temperature in subsider unit; collects samples of juice in test tubes by turning test cocks of overflow pipe, observes them against light to ascertain clarity of juice before letting out to evaporators, or takes samples of juice periodically to check quality of clarification using BTB (Bromo-Thymal Blue) Paper; manipulates valves to let out juice from different compartments of Dorr, opens bottom cocks, checks sample and ensures mud level is not above prescribed limit; examines consistency of mud and regulates it draining out from unit. Drains out mud from subsider to mud tank, as necessary, and cleans mud deposited in tank once in each shift; pours heavy oil once every week over surface of juice in subsider to prevent vapour escaping.

Ensures efficient working of different compartments and components of unit. May guide Evaporator Operator in co-ordinating supply of decanted juice from Dorr into evaporator.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.3700

Evaporator Operator, Sugar

Evaporator Operator, Sugar; Evaporator Attendant boils sugarcane juice in evaporators to evaporate excess water till syrup of specified consistency is obtained preparatory to further processing in manufacture of sugar. Operates valves to admit juice in evaporator up to prescribed level; starts vacuum pump to create vacuum and admits exhaust steam into evaporator for heating juice to boiling point; watches and regulates temperature, pressure gauges, as necessary; transfers boiling juice from one evaporator to another, by operating valves, to re-boil juice in each evaporator for forming syrup of required consistency; checks frequently samples of syrup drawn from last evaporator, using hydrometer; repeats the process till syrup of required consistency is formed; releases syrup for storage in tank for further processing. Ensures against air leakage in line to prevent disturbance in boiling; keeps record of data relating to working of evaporators. May use live steam if temperature of exhaust steam falls considerably. May attend to more than one evaporator and be designate as TRIPPLEMAN, QUAD/QUADRUPLE MAN, etc., according to number of evaporators operated.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.3800

Pan Man, Sugar

Pan Man, Sugar operates vacuum pans to further boil syrup received from evaporators till syrup has crystallized to proper point. Creates vacuum in pan by steam ejector; operates intake valve to fill pan to proper level with syrup from evaporators; opens exhaust or live steam valve to let into pan hot steam to boil syrup to required density till it runs into massecuite (thick mixture of crystals and syrup); keeps watch on and regulates temperature; pressure gauge etc. to maintain correct boiling pressure; examines sample periodically, on clean glass slide to check visually against light or to feel by touch to determine if crystals have formed, as desired; takes in further seed i.e., grains of required size, obtained from earlier operation, more water to thin juice or syrup and re-boils, if necessary, to make specific type of massecuite; manipulates levers and valves to break the vacuum and shut steam; opens slide valve to drop massecuite into crystallisers below. May distribute or transfer syrup containing grains to other pans as required for making specific type of massecuite. May clean pan with steam. May be designated as HEAD PAN MAN, OR PAN IN CHARGE, if engaged on supervision of pan station; or ASSISTANT PAN MAN, if employed to assist Pan Man.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.3900**Crystallizer Man**

Crystallizer Man; Crystallizer Operator, Sugar; Crystalliser Attendant; Pan Floor Worker, Crystallizer Mazdoor tends crystalliser tank to cool boiling massecuite received from pans for developing into sugar crystals. Operates valves and pulls trap doors to allow required quantity of boiling massecuite into crystalliser tank through open sheet metal channels, called gutters; starts stirrers in tank and admits and adjusts flow of cooling water in coils around tank to prevent solidification of massecuite and to ensure its cooling evenly and at controlled rate; stops machine when required state of crystallisation has been obtained; opens trap doors and drains off massecuite from crystalliser for pumping to centrifugal machine after specified cooling; cleans and washes gutters, trap doors etc. with water after delivery of massecuite. May add powdered sugar to massecuite to induce crystallisation.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.4000****Centrifugal Man**

Centrifugal Man; Centrifugal Operator; Centrifugal Machine Man; Centrifugal Mate operates centrifugal machine for separating sugar crystals from massecuite. Switches on motor; operates lever to lower delivery channel; admits required quantity of massecuite pumped from crystalliser into container of centrifugal machine; closes sliding top covers of centrifuge, allows it to develop speed and spin massecuite at high speed separating

syrup or molasses from crystals which adhere to walls of container; sprays water with hose or manipulates valve for automatic spray to wash sugar once or twice during operation for developing massecuite; pulls lever, stops machine and scrapes off sugar from walls of centrifugal container by wooden scraper, manipulating worm and worm shaft; drops scraped off sugar into magma mixer or conveyor according to type of massecuite operated. May manually feed massecuite into centrifugal machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.4100****Magmaman**

Magma Man; Magma Mixture Attendant; Magma Operator; Magma Mazdoor prepares magma (solution) from sugar of massacuites by adding water, syrup and molasses and by mechanically stirring for re-processing. Receives sugar extracted from different massacuites into mixing tank; operates lever and starts its mechanical stirrer; opens valves and adds hot or cold water and sulphurated syrup with sugar in tank, as necessary, for making required type of magma; ensures thorough mixing; operates steam pumps and delivers magma to pan station, sulphitation tank, or seed mixer, as specified, for re-processing.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators**8160.4200****Cutter Driver**

Cutter Driver; Knife Engine Driver; Engine Driver Knife; Motor Attendant, Knife operates electrically or steam driven high speed knife engine cutter to size incoming sugar-cane and to transmit sized sugarcane by elevator to mill house for extracting juice. Switches on motor to operate cutter; signals Cane Carrier Driver to operate cane carrier; watches load on cane carrier to avoid jamming or breaking of cutter blades; stops cutter, when necessary, by operating valves; changes cutter blades and does minor repairs periodically, and during stoppages, if necessary. May attend to lubrication of engine, look after machine, and assist in repair and overhauling of cutter.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.4300

Cane Carrier Driver, Mill House

Cane Carrier Driver, Mill House; Carrier Driver Sugar operates power driven mill house cane carrier to feed sugarcane into mill house rollers. Starts mill house cane carrier and regulates its speed by regulator or clutch wheel to prevent extra load and choking; removes jamming of sugar-cane in first rollers; gets speed of crushing mill and cane conveyor regulated to suit ultimate feeding into rollers. May attend to repair and overhauling of cane carriers.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.4400

Raw Juice Tank Pump Attendant

Raw Juice Tank Pump Attendant; Juice Pump Man regulates flow of juice from mill house to top tank by operating and adjusting valves of juice pipe line. Watches flow of raw juice to top tank and controls flow by opening or closing valves; closes and stops pump valve when top tank gets filled; collects juice samples for laboratory tests; cleans empty raw juice tank periodically; lubricates maceration and mixed juice pumps.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.4500

Juice Measuring Man

Juice Measuring Man; Raw Juice Measuring Tank Man; Juice Weighing Man; Juice Weighing Attendant measures or weighs and records weight of, sugarcane juice received from mill house by automatic weighing and recording machine for calculating sugar recovery. Watches automatic filling of juice pumped from mill house into weighing tanks and records readings of automatic recording instruments, tabulates weight of juice from recorded readings, and maintains registers showing number of times tanks filled, indicating data also on black board for ready information; collects samples of mixed juice from every tank for analysis and arranges for addition of super sulphate to mixed juice, if necessary; checks up tare weight frequently; supplies account of juice received to various officers, as scheduled. May operate valves, in absence of automatic arrangement, to fill measuring tanks with raw juice.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.4600

Lime Juice Tank Attendant

Lime Juice Tank Attendant; Milk of Lime Tank Attendant; Lime Attendant supplies juice by operating valves, from milk of lime tank to juice heater for mixing it further with raw cane juice for boiling. Ensures that milk of lime tank is full; opens valves by hand and watches flow of milk of lime into juice heater; controls pumping rate to prevent overflow of milk of lime tank and to give steady supply of milk of lime into juice heater; opens valve to fill juice heater with raw cane juice from top tank; watches level of mixed juice in juice heater and closes inlet valve when prescribed level is attained. May add prescribed quantity of milk of lime and sulphur dioxide to raw cane juice.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.4700

Juice Heater Man

Juice Heater Man; Juice Heater Attendant heats raw juice by steam to required temperature in tubular or cylindrical juice heaters for further processing. Receives juice into tubes or cylinders of juice heater by opening or directing opening of inlet valve; heats juice to required degree of temperature by opening steam valve and letting in exhaust steam inside heater; maintains constant pressure by regulating pressure gauge and steam valve. Prevents inter-mixing of raw juice and sulphitated juice and leakage of juice into condensers

by guarding against leakage from cover, walls and tubes of juice heaters; informs shift Chemist in case of leakage or other defect. Gets tubes, cylinders and other parts of heaters cleaned by Juice Heater Helper. May use live steam if temperature of exhaust steam falls below prescribed limits. May direct removal of hot juice in buckets in case of pump failure. May conduct periodical repair and over-hauling of heaters.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.4800

Juice Heater Helper

Juice Heater Helper; Juice Heater Cleaner cleans juice heaters and assists juice Heater man in operating heaters for heating juice in sugar manufacture. Opens and adjusts valves as directed by Juice Heater Man and admits raw juice, into tubes or cylinders of juice heater; assists in maintaining constant specified steam pressure during heating; lifts heater top cover, removes left-over juice and cleans periodically tubes, cylinders and other parts of heaters, using portable power driven or hand brush, cleaning rod, water, etc. Gets the juice heater emptied by carrying hot juice in buckets in case of leakage of tubes or breakdown of heater. May assist in letting in live steam in juice heater and in repair and overhaul of heaters.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.4900

Carbonation Man

Carbonation Man; Carbonation Mate; First Carbonation Man; Lining Man tends carbonation tanks to purify sugarcane juice by mixing heated juice with milk of lime and carbon dioxide with a view to precipitating mud and impurities from it. Admits heated juice in first carbonation tank up to overflow-pipe level; admits and controls flow of prescribed quantity of milk of lime into juice; lets in continuous flow of carbon dioxide and allows ingredients to mix thoroughly; tests solution with testing paper to determine sufficiency of ingredients; makes adjustments to ensure correct composition of mixture, if necessary; discharges the carbonated juice into storage tank for onward pumping to filter press. May get pipe line, tank and other equipment repaired or overhauled. May be designated as SECOND CARBONATION MAN, if engaged on passing and adjusting flow of carbon dioxide into juice flowing into second carbonation tank after first filtration, testing solution with testing paper, and allowing juice to flow off for second heating.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5000

Carbonation Storage Tank Attendant

Carbonation Storage Tank Attendant; Carbonation Juice Pump Attendant tends carbonated storage tank and arranges pumping of carbonated juice to filter press. Ensures filling of carbonated juice in main storage tank and filling of bottom tank from it, by operating tap or valve and

watching overflow pipe, opens pump line valve to pump off juice to filter press at desired speed; cleans tank strainer frequently to maintain easy flow of juice in pumping. May regulate flow of juice in bottom tank and operate pump, if necessary. May be designated as FIRST/SECOND CARBONATION STORAGE TANK ATTENDANT if engaged on first or second carbonation tank.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5100

Sulphitation Man, Sugar

Sulphitation Man, Sugar; Sulphitation Tank Attendant; Sulphitation Tank Mate tends sulphitation tank for passing sulphur dioxide into filtered juice to further clarify and bleach it before further processing. Operates valve to let in juice, after filtration, into sulphitation tank up to prescribed level; tests specific gravity, if required, with hydrometer; manipulates valves to admit required quantity of milk of lime and sulphur dioxide into tank and allows it to be mixed with juice, takes out samples of mixed juice frequently and tests it with indicator (BTB) paper to determine sufficiency of lime and sulphur, adding needed ingredients, where necessary. Conducts second sulphitation, in similar manner, by taking in syrup, instead of juice, coming in from evaporators, by passing sulphur dioxide to clarify it and by taking out samples in test tubes to test with BTB paper. Opens delivery valve to pump out sulphurated juice or syrup to storage tank or clarifier through juice heater. Conducts periodical cleaning and checking of tank equipment and pipe line to maintain it in proper

working condition. May be designated as SULPHITATION MAN, (JUICE) if engaged on (first) sulphitation of juice; or SULPHITATION MAN, SYRUP, if engaged on (second) sulphitation of syrup.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5200

Eliminator Attendant, Sugar

Eliminator Attendant, Sugar; Eliminator Mate boils sulphurized juice or syrup received after sulphitation to remove certain impurities. Opens valve to let in juice or syrup into tank up to prescribed level; opens steam valve to heat coils and boil juice or syrup by maintaining temperature of juice or syrup at specified level; checks periodically temperature of juice/syrup with thermometer; closes steam valve after boiling for prescribed period; operates valve to discharge boiled juice or syrup into settling tanks; opens bottom valve of tank to drain off sediments to another tank; takes samples of clean juice/syrup in test tubes to check it for desired clarity May be designated as SULPHURATED SYRUP TANK ATTENDANT OR SYRUP HEATER ATTENDANT if engaged on boiling and clarifying syrup.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5300

Settling Tank Man, Sugar

Settling Tank Man (Sugar); Settling Tank Attendant; Clarifier Attendant, Sugar attends to settling tanks to separate sugar cane juice/syrup from mud and other

sediments. Receives juice/syrup from eliminators into settling tank and allows it to remain in tank for specified period to let mud and other sediments settle down at bottom; opens valve to allow clear juice/syrup to flow out for further processing, lets out muddy juice/syrup for further filtering. Cleans and washes tanks assisted by operatives.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5400

Works Poor Attendant

Works Poor Attendant tends works poor machine to cool massacuite to required temperature before being pumped to respective centrifugal machine for separating sugar crystals. Opens valve from crystalliser and allows massacuite to flow into works poor machine up to prescribed level; presses hand lever to start stirrers in machine; checks and ensures running of cold water through tubes inside machine; prevents solidification of massacuite by diluting with water, if necessary; regulates flow of massacuite from works poor into pump feeding centrifugal machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5500

Gur Maker

Gur Maker makes 'gur' from juice of sugarcane, palm, etc. Sieves raw sugarcane or palm juice to clean impurities; boils raw juice to required

temperature in open pan over fire or using suitable heating device, taking out scum from top of boiling juice from time to time; frequently sprinkles water on boiling juice to avoid overflowing and for maintaining proper temperature; evaporates excess water till syrup of desired viscosity is obtained; adds milk of lime or other cleaning agent, as necessary, to clarify boiled syrup; strains syrup and allows it to settle to remove sediments, mud and impurities; transfers concentrated syrup from pan into wooden vats; allows it to cool and harden into gur. May clean pans, vats, work area.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5700

Tea Maker

Tea Maker controls various processes in tea factory to treat and prepare green tea leaves fit for brewing and final preparation of green or black tea. Checks that green tea leaves are withered in lofts, by Withering Loft Attendant and have proper moisture content, before rolling; ensures that withered leaves are properly rolled by Roller Attendant; arranges for fermenting of rolled leaves and examines them by touch, sight and smell for proper fermentation before firing or drying; checks that fermented leaves are dried at required temperature by Firing Machine Attendant and processed tea leaves are properly sorted and graded by Tea Factory Operatives; examines sample infusion of different grades of tea and tastes to decide if colour, flavour and aroma are according to desired standards.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5800

Withering Loft Attendant (Tea)

Withering Loft Attendant (Tea) tends lofts on which green tea leaves are withered and supplies withered leaves to rolling machine. Spreads green leaves thinly with hands or stick on layers of gunny or hessian cloth in withering lofts; allows leaves to wither for required time, according to their moisture contents and weather conditions; checks leaves in different lofts for proper withering, judging by touch or sight; collects withered leaves from lifts by hand and pushes required quantity through opening on floor to feed rolling machine below on receipt of signals from Roller Attendant. May tend Rolling and Firing Machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.5900

Roller Attendant

Roller Attendant; Rolling Machine Attendant (Tea) feeds and tends rolling machine to roll withered tea leaves. Signals Withering Loft Attendant to supply withered leaves for rolling; charges roller drum with required quantity of withered leaves by hand or basket; starts machine pushing lever to roll withered leaves for specified time; adjusts pressure of machine as required by manipulating lever; stops machine when leaves have been rolled and opens trap door to release them into container placed below. May feed and tend roll breaking machine to sieve rolled leaves.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.6000**Pulp Houseman (Coffee)**

Pulp Houseman (Coffee); Pulping Machine Attendant operates pulping machine which cuts and removes fleshy pulp from ripe coffee berries. Feeds or dumps into hopper of machine with ripe coffee berries manually; opens valves to let water flow into machine; regulates flow of berries into machine by adjusting hopper door opening to let them drop steadily over running water; starts machine; observes operation of cutting and removing of flesh from berries; allows pulped berries to flow into tank which drains water and retains berries; removes pulp from machine to dump-yard; refills tank with water up to required level and rakes beans in water using wooden ladle to clean remaining fleshy skin from beans; drains out water and removes cleaned coffee beans and spreads them in open yard for drying; keeps pulp house clean and tidy. May attend to running repairs to machine.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.6100**Peeling Machine Attendant (Coffee)**

Peeling Machine Attendant (Coffee); Huller Man (Coffee); Machine Room Worker (Coffee) tends huller to remove husk from pulped coffee beans. Starts machine; feeds required quantity of beans

into hopper of machine; adjusts gate in spout to regulate flow of beans into reel; observes milling process, inspects beans and adjusts rollers to prevent damage to beans and proper dehusking of beans. Performs related duties such as lubricating equipment and repairing machinery. May keep production report. May direct workers in storage of graded coffee beans.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.6200**Firing Machine Attendant (Tea)**

Firing Machine Attendant; Drier (Tea) tends firing or drying machine to dry rolled and fermented tea leaves, spreads rolled and fermented leaves evenly on tray beds of firing or drying machine; manipulates valves to control flow of hot air for maintaining proper temperature in drying chamber; checks by touch, smell and sight whether leaves have been properly dried; manipulates levers to drop dried leaves on floor or containers placed below; sends samples of cured tea leaves to Tea Maker for testing.

ISCO 08 Unit Group Details:

Code 8160
 Title Food and Related Products
 Machine Operators

8160.6300**Tea Blender**

Tea Blender operates machine which mixes various grades of tea. Opens boxes of tea and weighs out specific quantities of each sort. Scoops or shovels weighed out quantities into machine and starts it. Ensures that tea is blended properly and

decides when blending is finished. May deliver mixture to packing machine.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.6400

Coffee Blender

Coffee Blender operates machine to mix various grades of green coffee. Empties bags of various grade of coffee, as specified in formula, into bin of machine. Starts blending mechanism, which mixes coffee. Ensures that coffee is blended properly and decides when blending is finished. Manipulates levers to dump blended coffee into elevators to get it conveyed to clearing bins or to other processing units prior to roasting.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.6500

Coffee Roaster

Coffee Roaster; Coffee-roasting Machine Operator tends oven that roast green coffee beans. Weighs batch of coffee beans in scale-hopper, and opens chute to allow beans to flow into roasting oven; observes and adjusts controls to maintain required temperature; roasts coffee for specified time or estimates roasting time by comparing colour of beans from oven with standard sample; opens discharge gate to dump roasted beans to cool them. Stores roasted beans in airtight containers for powdering. May tend machine that grinds coffee.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.6600

Roaster, Cocoa-Bean

Roaster, Cocoa Bean roasts cocoa beans in heated revolving cylinders. Loads cylinders with cocoa beans and starts it. Observes roasting process and adjusts heating mechanism as necessary. Tests beans during roasting process by tasting, smelling and feeling and decides when roasting is finished. Discharges roasted beans into cooling receptacle. May operate machine in which beans are crushed and husks and chaff are separated.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.6800

Brew Master

Brew Master supervises all production activities in making beer and other malt liquor from grain. Observes and supervises operations, such as receiving, cleaning and steeping (soaking in water) of grain; germination of grain; drying of germinated grain; making of mash and extraction of wort; fermentation of wort and other processes in manufacture of malt liquors, e.g., filtration, bottling, storing of liquors. Gives specific instructions on handling of each batch; tastes liquor, giving directions as to alteration of malt content and other composition changes, as necessary; and ensures quality and quantity of production. May place order for purchase of, or purchase of raw materials. May

control stocks of barley, malt and different qualities of bear brewed and bottled. May direct repairs and alterations.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.6900

Malt Maker

Malt Maker; Germination Maker; Malt House Supervisor makes malt from barley or other grain closely supervising different processes in manufacture. Weighs and dumps grain or barley into steeping (soaking) tank by operating valve to increase or decrease supply of steam; allows it to soak for specified time, stirring it with long pole; spreads soaked grain on floor and turns it over with wooden hand plough or shovel to aerate it and cool it, sprinkling water on it, as necessary; or loads soaked grain into drums, compartments, or kilns, and lets in and controls hot air current, temperature, water sprinkling, and rotation of drum, or operation of agitators for drying sprouted grain; supervises its unloading from kiln. May keep record of temperature maintained and time taken.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7000

Masher

Masher, Cooker, Mash, Brew House Worker cooks malt with water to prepare mash and malt extract (called wort) for making distilled or malt liquors. Fills tubs,

pans or cookers equipped with mechanical agitators to specified level with water and heats by steam to prescribed temperature; weighs out prescribed quantity of malt and puts it into heated water; cooks mixture while it is mechanically agitated for specified time at prescribed temperature, converting it into malt extract known as wort; transfers mixture into filtering tank using strainer for separating pulp from liquid; and pumps mash to tank, preparatory to fermenting. May cool mash preparatory to distilling, by pumping it into cooling vat equipped with coils through which cold water circulates.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7100

Fermentation Man

Fermentation Man; Fermenting Room Man; Fermentation Worker controls fermentation process in making distilled or malt liquors or wine. Removes steam by compressed air from fermentation tanks and cools them to specified temperature by admitting cold water to pipe lines; pumps wort (liquid separated from solid part of cooked mash) or mash into fermentation tank and simultaneously admits yeast from another pipe for mixing with wort or mash; maintains solution at specified temperature during fermentation process by observing thermometer and regulating valves of steam heating coils; makes periodic tests of specific gravity with hydrometer; adds yeast, sugar or water, as necessary; accelerates chemical reaction by admitting air through a valve; periodically removes froth formed at top

of fermenting beer; removes yeast by suction or other means, and pumps fermented solution to cistern or other settling vessel; flushes tanks and pipes with cold water, sterilizes them, closes drain, and refills them, with live steam.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7200

Yeast Maker

Yeast Maker produces yeast required in fermentation of mash used in production of distilled and malt liquors. Weighs out prescribed quantity of barley, rye or other grain meal; dumps it into measured quantity of water heated to specific temperature in special wooden vat; mixes grain and water, using agitator; cooks mixture by admitting steam into coils, in vat; cools mash by running cold water through cooling coils in vat; pours prepared yeast solution or culture into mixture and stirs with agitator; regulates temperature of fermenting mash by running hot or cold water through coils in vat; ascertains specific gravity and acid content of mash by using hydrometer and performing simple chemical tests; separates yeast from liquor by means of centrifugal separator or filter press. May draw off yeast from fermentation tanks by suction pump or by skimming.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7300

Malt Vinegar Maker

Malt Vinegar Maker supervises all process concerned with manufacture of malt vinegar. Observes operations, such as receiving and cleaning of grain; steeping of grain in tanks filled with water; spreading of steeped grain on floor; grinding of grain; making and fermenting of mash; clarifying of fermented vinegar by filtering. Gives directions concerning temperature, rate of flow of materials and quantity of materials needed. Tastes vinegar and gives instructions as to alterations in composition of contents. May buy raw materials.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7400

Filterman

Filterman; Filtration Worker controls filtration plant to filter beer to remove sediments and impurities. Attaches pulp filter pads in filter machine; opens valve to pass beer through it; maintains correct pressure of liquor by adjusting gauges, valve; removes filter, cakes and pads and cleans in hot water for re-use; flushes equipment with hot water and sterilizes with steam.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7500

Pasteuriser, Brewery

Pasteuriser, Brewery pasteurises beer bottles and sorts out defective ones. Opens water inlet cock in pasteurisation tank containing beer bottles to fill water

few inches above crowns of bottles; opens steam valves to heat water to specified temperature; checks water temperature periodically with thermometer, operating steam valve to ensure constant temperature; removes bottles showing leakage of gas due to defective crowning; opens cold water spray pipes to cool down bottles after required period; drains out water by opening outlet cock of tank after bottles have cooled down. Records pasteurisation time of each tank.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7600

Syrup Plant Operator

Syrup Plant Operator prepares sugar syrup by dissolving requisite quantity of sugar in known volume of water in steam heated pan and pumps it through filter press and chiller for filtration, cooling and onward transmission to mixing chamber. Sets volume, meter, fitted to steam heated closed pan or vessel, and opens valve to admit known volume of water in heating chamber; opens valve to let in steam into coils of heating pan; switches on stirrer; and weighs and adds required quantity of sugar to heated water. Continues heating and records temperature of sugar solution from time to time by manually dipping thermometer in it; ensures by sight that heating pan is full to specified level to form homogenous solution; changes filter papers, if necessary and sets filter press and chiller; heats sugar solution up to prescribed temperature. Opens discharge valve of heating pan and switches on pump to force syrup (sugar solution) through filter press and chiller for onward transmission to syrup mixing chamber.

Ensures proper filtration and cooling by getting samples tested, as necessary. May wash and clean heating pan, filter-press, chiller and pipe lines after preparation of each batch of syrup by passing hot water through whole system. May set steam pressure of heating chamber when necessary. May guide Syrup Mixing Plant Operator.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7700

Syrup Maker

Syrup Maker prepares syrups of different flavours for making sweet aerated drinks by mixing and boiling ingredients. Weighs or measures sugar or saccharine and mixes specified quantity of water; boils solution in kettle or pan to desired consistency, removing scum from top of syrup; allows syrup to cool down; filters and pours it into different pitches, or conveys syrup by means of plastic-hose to syrup room; adds and mixes requisite quantity of essences, fruit juices or other ingredients for making flavoured syrup, such as lemon, ginger, orange, rose etc. May make flavoured syrup for "sherbet" and be designated as SHERBET MAKER. May fill bottles with specified quantity of syrup. May wash and clean utensils, vessels etc. after making syrup.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7800

Syrup Mixing Plant Operator

Syrup Mixing Plant Operator operates syrup mixing plant for making cold drinks and aerated water. Opens valve to admit syrup up to prescribed level in mixing chamber; switches on mixing chamber agitator for adding essence, colour etc. to syrup; continues mixing for specified time and gets samples tested, if necessary; opens valves and switches on pump to admit cold water into cooler and to transfer solution from mixing chamber to bottling plant through coolers; prepares solution of weighed quantity of soda-bi-carb with water, filters and mixes it with treated water in mixing chamber, and pumps it direct to bottling plant for making soda water. May wash mixing chambers with hot water after preparation of each batch of solution. May keep record of quantity of solution prepared. May keep shop floor clean and assist in periodical repairs. May mix essence, dye, etc. in mixing chamber.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.7900

Syruper

Syruper; Syrup Mixer, Aerated Water fills bottles with specified quantity of syrup for making sweet aerated drinks. Receives empty washed bottles, checks if properly cleaned; pushes neck of bottle to nozzle connected with syrup tank; opens valve and drains required quantity of syrup in bottles. Passes on filled bottles to Filler for making sweet aerated drinks. May fill bottles manually from pan, vessel, pitchers containing syrup, using measures. May cook and prepare different flavours of syrup.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8000

Bottling Plant In Charge

Bottling Plant In Charge; Bottling Plant Machinist; Bottling Plant Mistry/Operator sets, adjusts and operates washing, filling, bottling, mixing, crowning and other machines in aerated water factory or brewery. Ensures automatic and thorough washing of bottles; disconnects supply line and trial runs various machines for testing proper filling, making necessary adjustments in machines, if warranted by trial run; connects supply line for feeding purified water (in aerated water plant) or beer (in beer bottling); starts machine by operating lever, regulating air pressure to ensure uniform filling of bottles. Sets and operates various other machines, adjusting levers, gears, gauges, pressure and temperature controls for proper mixing, crowning and sorting of bottles. Co-ordinates and guides workers to maintain stipulated production, remove defects and minimise wastages; repairs, maintains and overhauls machinery and equipment. May attend to water treatment plant for purifying water. May set carbon dioxide gas purifier, carbonator plant, bottling plant and related equipment, if engaged in aerated water factory.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8100

Bottle Washer, Machine

Bottle Washer, Machine; Washing Machine Operator operates bottle washing machine for washing empty used or dirty bottles. Arranges for collection of empty used bottles from go-down to washing machine; adds prescribed quantity of chemical to water in washing tanks, changing cleaning brushes, if required; opens and regulates steam valve to heat up tank water up to prescribed temperature; guides and watches operations to ensure good condition of brushes used, adequate pressure of spray and proper scrubbing and cleaning of bottles. May check bottles at delivery end of machine and remove damaged, defective or unclean bottles. May pull out stuck-up bottles by lifting stopper weights.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8200

Carbonator Machine Attendant

Carbonator Machine Attendant operates carbon dioxide gas purifier cylinders and carbonator plant for passing specified volume of gas to bottle filling plant. Connects carbon dioxide cylinder with pipeline of purifying cylinders, containing potassium permanganate water, activated carbon or any other suitable material, and adjusts valve of carbonator plant; opens valve of carbon dioxide cylinder with spanner and allows gas (carbon dioxide) to pass through purifying cylinders, carbonator plant and thence to filling machine; watches pressure gauge reading and adjusts gas valve or replaces cylinder to regulate flow of gas; sprays hot water on carbon-dioxide cylinder to vaporise liquid carbon dioxide in cylinder, if any. May feed crowns in crowning machine

hopper. May act as Bottling Plant In Charge.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8300

Filler, Aerated Water

Filler, Aerated Water; Filling Machine Operator, Aerated Water operates automatic filling, mixing and crowning machines to fill bottles with syrup and carbonated water, fix crowns on them and mix contents. Feeds crowns in crowning machine hopper, and syrup and carbonated water in filling machine; switches on syrup and bottle filling machines, opens conveyor gate trap to allow bottles to pass first to syrup filling and then to carbonated water filling machine, preventing jamming of bottles by controlling conveyor gate trap, as necessary; switches on crowning and mixing machines and chain conveyor for crowning filled bottles and mixing their contents, tapping crowning machine hopper with mallet, if crowns get stuck up. Watches operations and readings of gas and oil pressure. Water temperature and speedometer; removes stuck-up and defective bottles; and feeds crowning machine hopper, as necessary. May be designated as CROWNING MACHINE OPERATOR, if engaged on particular type of machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8400

Filler, Aerated Water, Hand Machine

Filler, Aerated Water, Hand Machine operates manually controlled filling machine to fill carbonated water in bottles. Fills crown or marble stoppered bottles with prescribed quantity of purified water; opens lid of machine and places filled bottles in single or multi-chambers of filling machine; closes lid, opens valve to let in carbon dioxide gas from cylinders into filled bottles at particular pressure; rotates machine by hand, giving specified number of rotations to machine to obtain correct carbonation; checks up carbonation by opening lid, whenever necessary; removes carbonated water bottles from machine and hands over for crowning (sealing). May attend to repair and maintenance of machine. May be designated according to make of machine handled-CLUB MACHINE FILLER; if operates club machine for filling only carbon dioxide gas in bottles, purified water having been filled in bottles separately.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8600

Drier and Cooler Operator, Tobacco

Drier and Cooler Operator, Tobacco operates drying and cooling machine to dry and cool processed and shredded tobacco by subjecting to hot and then to cool air. Starts driers (rotating drums) and turns valves to admit steam to heat coils of driers, or opens valves of gas burners and sets thermostat; periodically feels tobacco to determine dryness and regulates heat to dry tobacco within

specified limits. Starts blower and regulates flow of air in cooling drum to cool shredded tobacco coming from drier. May feed tobacco to machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8700

Cutting Machine Operator, Tobacco

Cutting Machine Operator, Tobacco; Shredding Machine Operator, Tobacco tends machine that cuts tobacco into shreds for use in making cigarettes. Sets cutting knife and adjusts machine; fills hopper of cutting machine with leaves; starts machine, causing feed rolls to revolve and knife to reciprocate; watches cutting process to ensure that machine is shredding tobacco correctly; makes minor adjustments to machine, such as tightening bolts that hold knives in place and adjusting rollers; checks cut tobacco by feeling it with fingers to ensure moisture content; draws cut tobacco from knife by hand to platform; removes/rejects such as stems, uncut leaves, and other foreign matter and pushes rest of cut tobacco to conveyor; replaces dulled knives with sharpened ones when necessary. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8160

Title Food and Related Products
Machine Operators

8160.8800

Cigarette Making Machine Operator

Cigarette Making Machine Operator tends automatic machine to make cigarettes. Places roll of cigarette paper on spindle; sets monogram printing device to print brand name on paper at specified position; regulates flow of shredded tobacco to insure that cigarette contains specified amount of tobacco; fills ink and glue reservoir; threads cigarette paper between guide rolls and adjust friction tension on holding spindles using wrench; starts machine and observes operation to ensure that shredded tobacco is automatically drawn and wrapped in cigarette paper, forming a continuous tube, and that tube of wrapped tobacco is cut at correct intervals into cigarettes; when making filter, cork-tipped cigarettes, places coil of tipping material on spindle and fills hopper with filters; replaces full cigarette catching trays with empty ones; reports malfunction to superiors; cleans paper scraps and waste materials from machine. May be designated according to type of cigarettes as FILTER-CIGARETTE MAKING OPERATOR.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.8900

Stingy Cigarette Slitting Machine Operator

Stingy Cigarette Slitting Machine Operator; Defective Cigarette Slitter tends machine that cuts paper from defective cigarettes to reclaim tobacco. Attaches hoisting bar to tub of cigarettes; starts machine and pulls rope to hoist tub and dump cigarettes into hopper that feeds cigarettes under cutting knives and on to separator (Vibrating Screen) that

separates paper from tobacco. May attend to minor repairs to machine.

ISCO 08 Unit Group Details:

Code 8160
Title Food and Related Products
Machine Operators

8160.9900

Food and Related Products Machine Operators

Food and Related Products Machine Operators, other include operators who set, operate and attend machinery used to slaughter animals, trim meat from carcasses; bake, freeze, heat, crush, mix, blend and otherwise process foodstuffs, beverages and tobacco leaves not elsewhere classified.

ISCO 08 Unit Group Details:

Code
Title

Group 817 Wood Processing and Paper Making Plant Operators

Wood Processing and Papermaking Plant Operators monitor, operate, and control automated lumber mill equipment sawing wood, cutting veneer and making plywood, and otherwise preparing wood for further use. Pulp Mill Machine Operators operate and monitor various types of processing machinery and equipment to produce pulp.

Occupations in this Group are classified into the following Families:

8171 Pulp and Papermaking Plant Operators

8172 Wood Processing Plant Operators

Family 8171
Pulp and Papermaking Plant Operators

Pulp and Papermaking Plant Operators operate and monitor multi-function process control machinery and processing equipment to control the processing of wood, scrap pulp and other cellulose materials in the production of pulp.

8171.0100

Chipper man, Paper Pulp

Chipperman, Paper Pulp; Chipping Machine Operator, Paper Pulp operates machine to cut logs, wooden-blocks, bamboo etc. into small chips for making paper pulp. Selects cutting blade according to material to be chipped and mounts it on cutting head of chipping machine. Starts machine and feeds logs, blocks, pieces of stumps or other wood into hopper of chipped machine; Removes chips when container is filled. May segregate over-size or unusable wood. May inspect and change knives on machine.

ISCO 08 Unit Group Details:

Code 8171
 Title Pulp and Papermaking Plant Operators

8171.0200

Grinder, Paper Pulp

Grinder, Paper Pulp; Grinding Machine Operator, Paper Pulp operates power-driven grinding machine to reduce wood chips into pulp for use in making paper, adjusts distance between grinding stones in machine, loads hopper with chips,

starts machine and regulates water sprays to cool grindstones and control consistency of pulp. Sets pressure of hydraulic pistons to force material between revolving stones; observes colour of flowing pulp for evidence of bans caused by dulled or broken grindstones or by jamming of material; loosens jams with hand tools and notifies supervisor of needed repairs. May be designated according to type of grinding machine used.

ISCO 08 Unit Group Details:

Code 8171
 Title Pulp and Papermaking Plant Operators

8171.0400

Sorter, Paper Pulp

Sorter, Paper Pulp sorts and picks rags, waste papers, straw, etc. to eliminate foreign and undesirable matter for making paper pulp. Spreads stock on floor; discards coloured, greasy and other undesirable material; packs acceptable material in bags. May be designated DUSTER, PAPER PULP if engaged in manually rotating conical screen for removing dust from waste material.

ISCO 08 Unit Group Details:

Code 8171
 Title Pulp and Papermaking Plant Operators

8171.0500

Cutter, Paper Pulp

Cutter, Paper Pulp cuts rags, waste paper, straw, etc. to small pieces with cutting machine for making paper pulp, appropriate cutter blade on cutting head of machine. Places material such as rags, waste paper and straw on feeder roll or

conveyor belt of machine. Starts machine, examines cut material for size and adjusts or sharpens machine knives if necessary. May clean dirt and dust from dust compartment.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant Operators

8171.0600

Liquor Maker, Paper Pulp

Liquor Maker, Paper Pulp prepares liquor for cooking paper pulp. Collects standard chemical substances such as lime and soda ash and mixes them with water in fixed proportions in vat; agitates mixture to dissolve solids and produce uniform solution; takes samples periodically to determine concentration.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant Operators

8171.0800

Causticman, Paper Pulp/Causticizing Operator

Causticman, Paper Pulp processes paper pulp to required viscosity by treating it with caustic acid. Opens valves to load mixing tank with soda ash and milk of lime in predetermined quantities; starts agitators to dissolve and mix ingredients. Measures specific gravity and adds more ingredients or water as needed. Pipes mixture to reactor tank and continuously samples concentration to determine its viscosity.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant Operators

8171.0900

Bleacher, Paper Pulp

Bleacher, Paper Pulp; Bleaching Machine Operator, Paper Pulp operates bleaching equipment that bleaches material, such as wood pulp, rags, straw or waste-paper pulp. Charges machine with material and bleaching solution and starts agitator; admits steam for heating mixture and regulates valves in accordance with temperature readings; observes bleaching process, notes colour of material and sends samples to laboratory for testing; transfers bleached material into washer for neutralizing it with water sprays, then to blending tank for mixing with other batches to obtain uniform quality. May add chemical during bleaching process and make chemical or electrolytic tests. May prepare bleaching solutions and be designated accordingly.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant Operators

8171.1100

Agitator, Paper Pulp

Agitator, Paper Pulp agitates paper pulp in semi-liquid stage on sieve to spread pulp evenly. Pours semi-liquid pulp on sieve, agitates sieve containing pulp to drain off surplus water and to spread pulp evenly; picks out dirt and other foreign matter and flips partially dried pulp on to felt sheet for later pressing and drying.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant
Operators

8171.1200

Machine Operator, Paper

Machine Operator, Paper sets up and operates paper-making machine to convert wet pulp into paper or paper board. Starts flow of paper pulp from storage tank through rotary screens to machine, adding water as necessary to thin pulp; removes dirt and other foreign matter from rotary screens and regulates flow of pulp to moving wire mesh belt on which paper is formed. Co-ordinates speed of belt and flow of pulp to obtain paper of desired weight. Sets machine controls for width, thickness and moisture content of paper. Threads formed paper between press rolls to squeeze out moisture and give it shape; supervises machine crew in drying, sizing, calendaring, winding and cutting paper. Adjusts, cleans, repairs and replaces machine parts. May weigh samples of paper and install Dandy Rollers to impress water mark in paper.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant
Operators

8171.1400

Wireboy, Paper

Wireboy, Paper adjusts wet felt between presses to ensure that paper is not spoilt due to faulty movement over endless wire-mesh belt. Checks flow of paper pulp on wire-mesh belt through rotary screens to machine and adjusts position of wet felt between presses so that paper is not spoiled due to faulty travel over wire mesh; examines and marks defects and

informs Machine Man about malfunction; separates felt and paper after pressing.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant
Operators

8171.1600

Cutter, Paper

Cutter, Paper; Guillotiner, Paper cuts paper or card-board sheets to desired size on cutting machine. Adjusts guides on scale to obtain specified length of sheet; places sheets against guide and presses lever to force knife blade through sheets. Turns stack, resets, guides and cuts sheets breadthwise. Cleans and oils machine. May be designated according to type of knife used, as GUILLOTINE CUTTER.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant
Operators

8171.1700

Finisher, Paper

Finisher, Paper sorts, counts and packs paper in standard quantities. Checks and examines cut paper sheets for defects; removes defective and non-standard sheets, counts sheets of finished paper into quires or reams, packs them in labelled wrappers; seals bundles with gummed tape.

ISCO 08 Unit Group Details:

Code 8171

Title Pulp and Papermaking Plant
Operators

8171.1800

Vatman, Hand Made Paper

Vatman, Hand Made Paper; Paper Drifter dips screen into paper pulp and drains off water after pulp settles on wireframe. Fits bevelled wooden frame (deckle) on wire mesh mould; checks consistency of paper pulp in vat and adds water as necessary to thin pulp; stirs pulp with hand or wooden stick to remove dirt and foreign matter and mix pulp properly; dips mould with deckle into paper pulp; gauges amount of pulp to be lifted, with draws mould, and forms 'waterleaf' by shaking to intertwine fibres of pulp; removes deckle. May work as TRANSFERER, HAND MADE PAPER or PRESSER HAND MADE PAPER.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.1900

Transferer, Hand Made Paper

Transferer, Hand Made Paper; Coucher turns over paper mould and deposits sheet of hand-made 'waterleaf' on wet felt. Removes deckle (beveled wooden frame) from pulp vat and turns over mould to deposit sheet of handmade 'waterleaf' on wet felt; piles 'waterleaf' and felts alternately to form a stack for pressing; forms pile. May perform duties of Vatman and Presser.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.2000

Tub-Sizer, Hand Made Paper

Tub-Sizer, Hand Made Paper dips paper in sizing solution to make it non-absorbent. Cooks ingredients (glue, starch or similar agent) in water; adds chemicals to prevent decomposition; transfers size to storage tank or tub; dips individual sheets in solution to moisten both surfaces; lays out dipped sheets for further processing.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.2100

Drier, Hand Made Paper

Drier, Hand Made Paper dries sized paper sheets. Separates sheets from compressed pack and suspends them on soft ropes or lays them out on hessian sheets to dry. Checks paper for dryness; removes and packs dried sheets.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.2200

Presser, Hand Made Paper

Presser, Hand Made Paper operates screw press manually to squeeze and remove moisture from paper sheets. Places moist sheets, wrapped in cloth, in presser; closes press to squeeze moisture from paper.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.2400

Calenderman, Hand Made Paper

Calenderman, Hand-made Paper glazes paper by placing sheets between two zinc/iron plates and pressing them in manually operated stack of rollers. Collects dried paper sheets to be calendered; sets and arranges sheets of paper in between iron/zinc plates; inserts plates into rollers; moves handle to press paper sheets between rollers in order to glaze and smoothen them. Removes glazed paper from plates, stacks them separately. May operate electrically driven calendering machine.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.2500

Coating-Machine Operator, Hardboard (Paper Goods)

Coating-Machine Operator, Hardboard (Paper Goods) operates machine to spray paint and print surface finish on hardboard sheets: Fills hoppers of machine with ready-mixed paint. Starts machine and moves controls to regulate spraying action, specified tension of rollers, and temperature of infrared drying lamps. Tests density of paint, using viscometer. May tend machine that coats unfinished insulation board with talc to prevent sticking during subsequent pressing.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

8171.9900

Pulp and Papermaking Plant Operators, Other

Paper Making Plant Operators, Other perform various routine and low skilled tasks in preparation of paper such as putting rolls of paper on cutting machine, peeling sheets of paper from each other and are designated as; Cutter Helper assists Cutter Operator by hoisting rolls of paper into Cutter rack, threading paper into machine and adjusting speed of cutter. Peeler paper assists in peeling sheets of paper from each other, etc.

ISCO 08 Unit Group Details:

Code 8171
Title Pulp and Papermaking Plant Operators

Family 8172

Wood Processing Plant Operators

Wood Processing Plant Operators monitor, operate, and control automated lumber mill equipment for sawing timber logs into rough lumber, cutting veneer, making plywood and particle board, and otherwise preparing wood for further use.

8172.0100

Wood Sawyer, Machine, General

Wood Sawyer, Machine, General sets and operates different kinds of wood sawing machine such as band saw, circular saw, crosscut saw etc. for sawing timber to required sizes. Selects and sets circular saw, band saw or cross cut saw as appropriate securely on machine ensuring proper alignment and tension, adjusts guides, steps and applies other controls to determine speed and quality of cut according to nature of wood and size of planks to be cut. Places timber or logs

over machine table, using hoists, pulleys, etc. Adjusts or inserts end stops and gauges on table to desired length and width and starts machine. Pushes log against running saw along marking, removes cut wood from table and repeats process. May measure log and scantlings and calculate percentage of turnover. May sharpen saws and clean and oil machine to maintain it in working order. May specialize in any particular type of sawing machine and be designated accordingly.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.0200

Wood Sawyer, Edger

Woods Sawyer, Edger; Edger Machine Operator sets and operates multiple blade sawing machine to straighten uneven edges and cut rough wood planks into boards of required widths. Collects wood planks and determines depth of cut necessary to obtain straight edge, places the planks on edger table. Checks sharpness of saw and sets and spaces saw blades to required positions to cut plank to required dimensions. Adjusts power and speed of feeding mechanism according to thickness of plank. Starts machine and pushes plank into feed rollers to carry it into saw cutters. Cuts and straightens uneven edges to shape them into planks of desired width. Checks edging and cutting of plank to ensure accuracy and quality and readjusts blades when necessary cleans and oils machine. May sharpen or replace dull saw blades. May operate other power driven wood working machine.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.0300

Band Saw Operator

Band Saw Operator operates power driven endless steel band saw to cut log beams or planks to required sizes, Selects and fits band saw of appropriate size and sharpness over pulley of machine depending on type of wood to be cut and secures it tightly by turning hand wheels of machine ensuring proper alignment and tension. Places log or timber over platform of machine using hoisting equipment or with help of workers and secures it firmly to traverser with clamps, hooks, wedges etc. Adjusts machine table, guides, stops, and other controls to ensure that band saw cuts log or clamps to required sizes. Selects speed for movement or rotation of band saw, starts machine and operates hand lever to move traverser with log against rotating saw for cutting log or plank to required sizes. Controls movement of log against rotating saw, slowing its speed when knots in wood are to be cut. Removes cut pieces from table. Cleans sticky saw dust from pulleys and band saw to remove friction and oil machine. May sharpen teeth of saw over grinding machine. May braze joints of band saw. May operate vertical or horizontal log band mill.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.0400

Circular Saw Operator

Circular Saw Operator saws plank and lumber by power driven circular saw. Selects and fits circular saw of appropriate

size (toothed disk) to spindle of machine and secures it tightly in position with nuts and bolts. Adjusts machine table to required height and sets guide setters on machine table according to size of plank to be cut. Sets cutting angle of saw if required and starts machine to rotate spindle with disk at required speed. Gets timber placed on machine table using hoist and other equipment and adjusts it against guide setter. Pushes timber along guide setter against rotating saw for cutting it and places cut pieces at one end. Cleans and oils machine. May sharpen teeth of saw manually or on grinding machine.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.0700

Veneer Cutter

Veneer Cutter; Veneer Machine Operator sets and operates rotary cutting machine for cutting wood stock into thin shaving or veneer of required sizes. Selects cutters and fits them on to rotating spindle of machine. Mounts and fastens wood stock in position on machine table. Adjusts blades in machines close to wood stock and starts machine to cut wood into thin shavings or veneers of required size. Checks quality of shaving and veneers, ensuring that no damaged wood is processed. May fit circular saw or blades to process wood stock. May grind and sharpen tools.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.0800

Peeling Machine Operator

Peeling Machine Operator sets and operates wood peeling machine for cutting wooden billets into veneers of required size and thickness for making match boxes, splints, plywood, etc. Selects and fits cutting required sizes of veneer and scouring of grooves on it for folding it. Adjusts and fastens billet on machine by tightening end forks of rotary lathe sets angle of cutting tool. Adjusts gap between pressure bar and knife and operates machine to remove required size of thin strips of veneer from surface of billet. Checks size of veneer to ensure required specification. Runs machine at steady speed to obtain uniform sized strips eliminating knotted and defective area of billet. Replaces blunt cutters and lancets. May clean and oil machine. May attend to running repairs of machine.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.0900

Barrel-Lathe Operator, Outside (Wood Container)

Barrel-Lathe Operator, Outside (Wood Container) operates machine to scrape and smooth outer surface of barrel by holding hand tools against barrel: Removes temporary hoops from barrel and places barrel horizontally on barrel rest. Starts machine. Clamps barrel between chucks of lathe. Holds barrel plane against surface of revolving barrel and guides tool along length of barrel to scrape and smooth barrel. Lifts tool from surface of barrel, releases pressure of tail chuck on barrel, and lifts barrel from machine.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.1000

Wood Chopping Machine Operator

Wood Chopping Machine Operator sets and operates wood chopping machine for cutting veneer layers into required sizes. Adjusts machine table, guides, stops and other controls depending on size of veneer or splint to be cut. Places veneer pieces on machine table in position and adjusts it against guide setter. Starts machine and slides veneer pieces along table against end stop to cut them as required. Removes cut pieces of veneer. May clean and oil machine.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.1100

Core Laying Machine Operator

Core Laying Machine Operator tends machine, which automatically lays face, back, and core veneer sheets in sequence and spreads glue on core sheets to form plywood panels. Starts machine, observes its operation, and turns wheels, valves and dials to adjust and synchronize conveyors, reach end vacuum of mechanical arms, tension on glue-spreading rollers, and to regulate flow of glue. Pushes pedal to control conveyor, which moves stacked panels to hot plate presses.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.1200

Core Layer, Plywood

Core Layer, Plywood assembles plywood panels from glue covered veneer sheets, core board and face sheets, working as member of team. Receives veneer sheets as they emerge from glue spreader and places them cross-grained in sequence on wooden core until specified thickness is obtained. Pushes trays of plywood on to conveyor or stacks plywood on hand truck. May assist in cleaning rollers of glue spreader. May brush glue on irregularly shaped veneer sheets which do not fit in glue spreader.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

8172.9900

Wood Processing Plant Operators and Related Workers, Other

Wood Processing and Papermaking Plant Operators, Other perform variety of routine and low skilled tasks such as holding lumber while sawing, feeding boards and planks against cutter, spreading glue in adjacent surfaces etc. and may be designated as Sawyer Helper, Gluing Machine Operator, Paster, Wood Clipping Machine Operator, etc.

ISCO 08 Unit Group Details:

Code 8172

Title Wood Processing Plant Operators

Group 818

Other Stationary Plant and Machine Operators

This group includes Stationary Plant and Machine Operators not classified elsewhere in sub-major group 81, Stationary Plant and Machine Operators.

The group includes, for instance, operators of machines which make silicon chips and splice cables and ropes.

Occupations in this Group are classified into the following Families:

8181	Glass and Ceramics Plant Operators
8182	Steam-Engine and Boiler Operators
8183	Packing, Bottling and Labelling Machine Operators
8189	Gem and Jewellery Machine Operators

Family **8181** **Glass and Ceramics Plant Operators**

Glass and Ceramics Plant Operators operate and monitor kilns, furnaces and other machinery and equipment used in the manufacture of glass, ceramics, porcelain, tiles or bricks. They operate machines to anneal, harden or decorate glass and ceramics.

8181.0100 **Blowing Machine Operator (Glass)**

Blowing Machine Operator (Glass) operates machine which blows objects such as bottles, jars, glass shells, of bulbs and valves from molten glass. Places parison (intermediate shape in production of glass articles) in mould of machine, closes mould and adjusts flow of lubricant to prevent glass sticking to mould; regulates flow of compressed air and molten glass into shape of mould in machine; removes shaped articles from mould, feeds them into glass grinders to remove superfluous edges. Tests and checks samples of finished articles to ensure standardization of products. May be designated according to kind of glass

articles moulded such as BLOWING MACHINE OPERATOR, GLASS BULBS, etc.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant Operators

8181.0200 **Machine Man, Sheet Glass**

Machine Man, Sheet Glass sets and operates glass-drawing machine that produces continuous sheets of window and other flat glass. Switches on heating apparatus in machine to raise temperature to level of plastic glass to prevent breakage. Adjusts and sets in position asbestos rollers in machine through which plastic glass is to pass; starts machine so that plastic glass flows in from furnace end, passes through a series of asbestos rollers on machine which roll amorphous plastic glass into sheets of required thickness; adjusts and regulates speed and position of rollers to prevent warping and breakage of glass sheets, and to obtain glass sheets of desired thickness. Removes broken and defective portions of rolled sheets. Cleans and oils machine, and carries out running repairs. May operate machine to break glass sheet at appropriate places. May be designated as BOTTOM MACHINE MAN or TOP MACHINE MAN, SHEET GLASS according to position of duty on machine.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant Operators

8181.0300 **Pressman (Glass)**

Pressman; Press Operator (Glass) operates hand press to mould glass into required

shape. Sets mould in press according to size and shape of article to be produced. Shears off proper quantity of molten glass from iron rod, held by Gatherer into machine mould. Operates lever to close mould for compressing molten glass into required shape; manipulates lever to withdraw press head, takes out ware and sends it for annealing or further processing.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.0400

Pressman (Ceramics)

Pressman; Press Operator; Moulder Machine (Ceramics) sets and operates press machine to mould ceramic articles from moist clay. Selects and fixes appropriate die or mould in machine; oils surface of lump of kneaded moist clay to prevent its sticking to inside of mould; places clay lump in position on lower plate of mould box; turns handle and pulls lever to operate press which compresses clay mass into shape of mould, such as tile, brick or sagger (fire clay container in which pottery is placed for fixing in kiln or oven); presses pedal to lift form to remove adhering particles to meet specification; cleans and adjusts mould fitted to machine, if necessary. May be designated according to nature of articles moulded such as SAGGAR MAKER, MACHINE or BRICK MOULDER, MACHINE; DIE PRESSER CERAMICS.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.0500

Extruding Press Operator, Clay

Extruding Press Operator, Clay operates extruding press to extrude moist clay in strips for further processing. Feeds moist clay into machine. Moves lever to regulate speed of warm (part of machine) which forces clay through outlet form (die). Examines texture of clay periodically and it is extruded from machine and, if required, warns other workers to change moisture content of clay before it enters press. May operate ceramics moulding, jigger or jolly machine.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.0600

Roller Man (Glass)

Roller Man; Belanwala (Glass) rotates roller to wind glass wire into coil used for making bangles. Selects iron roller of size of bangles to be made; regulates furnace temperature at required level; fixes roller in furnace in position and draws glass wire over roller; turns handle to rotate at desired speed to wind glass wire into coils over roller; cuts glass when roller is full; removes roller, and takes out coil of glass wire with a hooked rod. May direct heating of furnace to desired temperature.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.0700

Pressman (Abrasive)

Pressman (Abrasive); Moulder, Hand (Abrasive wheel) operates hand press to press abrasive material into required mould for making grinding wheels, sharpening stones, sticks etc. Mixes abrasive powder and adhesive paste according to formula; sets required type of mould to machine; fills prescribed quantity of abrasive mixture into mould; rakes and levels mixture in mould using levelling devices; operates levers to start machine and press mould by closing top and bottom parts of mould with required pressure for pressing abrasive powder in mould to desired shape and size; releases lever and stops machine. Removes mould from machine and dismantles mould plates to remove moulded abrasive material; cleans mould and its parts and repeats process.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.0800

Tube and Rod Drawer (Glass)

Tube and Rod Drawer (Glass) draws glass into tubes and rods using solid iron rod or blowpipe. Collects from Bubble Maker iron rod with molten glass heated to proper temperature at its end. Sticks molten glass on iron post held by Helper, blows and transfers fibres of glass into rod of the Helper who walks with it; blows down tube to maintain air cavity to prepare tube of required thickness; continues operation until tube or rod is prepared.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.1000

Polisher (Glass Mfg.)

Polisher (Glass Manufacturing; Glass Products) polishes edges or surfaces of flat glass, using polishing wheels: Pours polishing compound into hopper of automatic feeder or applies compound to polishing wheel with brush. Holds and turns glass edge or engraved or beveled surface against white (cork) polishing wheel for rough polishing. Presses glass edge, or scratched, engraved, or beveled surface against felt polishing wheel for final polishing or to remove scratches. Wipes polished area and examines glass for smoothness.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.1100

Modeller, Pottery and Porcelain

Modeller, Pottery and Porcelain models pottery or porcelain ware, according to drawings, patterns, specifications or by creating own designs, for use in preparing moulds. Examines drawings or specifications; mixes plaster-of Paris or clay with water and kneads mixture to required consistency and texture; beats mixture with small flat wooden piece to make it plastic; makes models by carving plaster or clay, by shaping material on a potter's wheel or by other methods. May work from given designs or create his own designs. May specialize in modelling particular type of products such as toys, domestic or sanitary wares.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.1200

Furnaceman, Glass/Furnace Operator

Furnaceman, Glass; Melter, Glass operates gas, oil, coal, coke, or electric furnace to melt ingredients such as sand, soda, potash, borax and broken glass for making required type of glass articles. Feeds or directs feeding of premixed ingredients to furnace; heats furnace and maintains temperature at correct level with aid of instrument controls or by sight; checks and ensures that melting process of ingredient in furnace pot is proceeding correctly and to required consistency; collects sample of molten glass for laboratory analysis; maintains record of batches of mixture melted; cleans melting pot periodically and examines furnace walls for worn spots and leaks. May skim surface of molten glass to remove impurities, using rake. May specialize in operating particular type of furnace such as Melting Pot, Tank Regenerative or Recuperative tanks. May specialize in melting glass for different types of glass material such as ordinary, optical, sheet glass or for flasks.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.1400

Annealer (Glass Product)

Annealer (Glass Products) tends gas or electric kiln to affix paint on glass: Ignites and regulates gas burners to heat kiln to prescribed temperature, or regulates thermostat to control temperature of electric kiln. Spreads plaster of Paris on

metal trays with trowel, roller, or palette knife to form smooth, level bed for glass. Sets sections of glass on trays and positions trays in kilns, using tongs. Observes glass through peepholes in kilns to detect signs of warping, bubbling, cracking, or blistering. Removes trays after specified period of time, and stacks trays for gradual cooling and annealing in leer.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.1500

Kilnman, Pottery and Porcelain

Kilnman, Pottery and Porcelain operates kiln for baking pottery and porcelain ware to proper hardness or heating glazed or decorated articles to obtain requisite shining and hard surface. Lights or supervises lighting of fires in kiln, regulates feeding of fuel and adjusts draught to maintain proper temperature, observing temperature indicators and decides when baking is completed.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.1600

Kiln Loader, Pottery and Porcelain

Kiln Loader, Pottery and Porcelain loads pottery and porcelain ware in kiln for baking and hardening. Places green pottery and porcelain wares in saggars (fire clay boxes) or in kiln furniture (refractory slabs or trays with intervening posts) ensuring that glazed surfaces do not touch each other; carries saggars into kiln and stacks them around interior in prescribed manner giving support to

articles to prevent them from falling and utilising all available space inside kiln leaving enough space between individual piles of saggars for flame to circulate around them for proper and uniform heating or baking of material; closes and seals kiln doors to prevent escape of heat. May unload baked articles when kiln cools down to required temperature. May feed fuel (coal) and fire kiln.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.1700

Kilnman, Brick and Tile

Kilnman, Brick and Tile; Kiln Burner; Baker (Brick and Tile) controls periodic, field or retort kilns to bake clay products, such as brick, sewer pipe, clay refractories and roofing tile to proper hardness. Checks that articles for baking are sufficiently dried and hardened; directs Kiln Loaders, Brick and Tile to load articles in kiln by piling them one above other; seals kiln door with bricks and daubs brick with clay to prevent loss of heat, using trowel; opens full valves and lights gas or oil, fires using oil soaked stick or supervises its firing according to firing schedule depending upon articles to be baked. Observes thermometer and action of pyrometric cones through peepholes or removes objects from kiln with tongs and examines it to determine rate of burning; turns gas or oil valves and dampers to adjust rate of burning or baking of objects; closes fuel valves and fire-boxes, opens kiln-crown holes and installs fans to cool objects. Instructs Kiln Loaders to unload baked articles when kiln cools down to required temperature. May be designated according to type of kiln operated as DRY-

KILN BURNER; FIELD-KILN BURNER; RETORT KILN-MAN or according to product-burned BRICKKILN BURNER; ROOFING TILE BURNER. May operate continuous or intermittent firing kiln.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.1800

Kiln Loader, Brick and Tile

Kiln Loader, Brick and Tile loads green bricks, tiles and such other clay products in kiln for baking. Stacks products such as blocks, bricks, and roofing tile, in specified patterns in periodic kilns for burning; spaces and levels setting rings in kiln to facilitate circulation of air about products during burning; spreads sand on floor or setting rings to prevent cohesion of products during burning; lifts and positions products on setting rings, using hoist or manually with resistance of helpers; examines products for cracks and discards defective products; closes kiln door and seals it with clay to prevent escape of heat. May unload baked articles when kiln cools down to required temperature. May feed fuel and fire kiln. May assist Kilnman in regulating draught to kiln chamber.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant Operators

8181.1900

Bricklayer (Brick and Tile)

Bricklayer (Brick and Tile) repairs and rebuilds tunnel, periodic, and shuttle kilns used to burn tile, brick, and sewer pipe: Examines kilns after burning cycles to

determine need for repair. Lays firebrick to construct casing walls, flues, feather walls, and burner wickets, using mortar, trowels, plumbobs, hammers, and brick. Spreads plastic refractories over exposed brickwork to protect against deterioration by heat. Lays brick flooring in periodic kilns.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.2000

Graduating Machine Operator (Glass)

Graduating Machine Operator (Glass); Graduator, Glass sets and operates graduating machine to scratch measurements on wax-coated glass measuring appliances or apparatus. Places apparatus in position on machine; calculates gear combinations to obtain specified graduating intervals on apparatus, and sets machine accordingly; starts and operates machine to cut or scratch graduations on apparatus; stops machine and readjusts graduating intervals to ensure proper graduation.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.2100

Batch Mixer (Glass)

Batch Mixer; Mixingman (Glass) weighs ingredients such as sand, soda, potash, cullet (waste glass) in prescribed quantities and mixes them in revolving drum for melting into glass. Collects required ingredients such as sand, soda,

potash, cullet and mixes them in prescribed quantities according to formula; dumps ingredients in revolving drum of machine using hand shovel; adds colouring ingredients to Mixer where necessary; closes lid of drum, starts machine and allows machine to rotate drum for set period for uniform mixing; collects batch samples for laboratory tests; stops machine when mixing is complete; opens lid of drum and empties contents into receptacle placed below; places batch near furnace for melting; maintains record of number and nature of batches mixed during shift; keeps surroundings clean and tidy. May oil and clean machine. May feed furnace with batch mixer.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.2200

Abrasive Mixer

Abrasive Mixer tends mixing machine to make abrasive compounds for use in making, grinding, polishing and buffing wheels and hones. Calculates amount of grit, clay and adhesive required according to formulas. Weighs out ingredients, dumps them into mixing machine and starts mixing machine. Feels mixture and adds water and resins until specified consistency is attained. Scoops mixed compound into oscillating sieve to screen out lumps and oversized granules. Dumps compound into barrels for further processing. Records quantities of ingredients used in each mix. May operate mixing machine for making ceramics and like products.

ISCO 08 Unit Group Details:

Code 8181
 Title Glass and Ceramics Plant
 Operators

8181.2300
Mixing Machine Operator
(Abrasive)

Mixing Machine Operator (Abrasives) mixes various ingredients according to formula in mixing machine for making abrasive mixture. Collects required ingredients from nearby bins and fills mixing bowl of machine with prescribed quantities by opening and closing valves. Starts machine to turn paddles in mixing bowl; runs machine for specified period or until ingredients are thoroughly mixed. Stops machine and drains mixture from bowl. Cleans machine using compressed air at end of shift.

ISCO 08 Unit Group Details:

Code 8181
 Title Glass and Ceramics Plant
 Operators

8181.2400
Ball Mill Operator (Cement and
Ceramics)

Ball Mill Operator; Ball Mill Attendant; Miller (Cement and Ceramics) operates ball mill for finally grinding clay, rock, clinker etc. into slurry (thin paste or semi-fluid mixture), powder and cement; checks that pebbles or balls, are filled in cylinder; feeds cylinder with requisite amount of material and water through opening or regulates feed and flow of water by manipulating valves of mill; adjusts air-drift when grinding rock of clinker into powder or cement to avoid jamming or choking; closes opening, starts machine and runs it for specified time ensuring grinding of material to required

fineness; stops machine and tilts cylinder to remove ground material or watches delivery of slurry through delivery-end while machine is in operation. May be designated according to material ground or industry in which worked such as SLURRY MILLER (CERAMICS or CEMENT MILLER). May tend one or more grinding mills.

ISCO 08 Unit Group Details:

Code 8181
 Title Glass and Ceramics Plant
 Operators

8181.2500
Pug Mill Operator (Ceramics)

Pug Mill Operator; Pug Mill Attendant (Ceramics) operates a machine (Pug mill) that mixes clay with water to knead it into a suitable plastic condition for moulding clay or porcelain articles. Sets appropriate die to pug mill according to clay slab and round required; starts machine to regulate speed of shafts provided with helical knives to rotate in opposite direction thus press clay towards exit into granular condition which is subjected to further mixing in lower chamber; feeds cakes of filter pressed clay into mixing chamber of machine by hand or opens slide gate and valve to permit dry clay and water to flow into mixing chamber in specified proportion; examines clay for consistency as it leaves machine and regulates valves to change proportion of water to clay as required; collects pressed and cut clay slab as ejected by machine. Cleans and oils machine. May make minor repairs to machine.

ISCO 08 Unit Group Details:

Code 8181
 Title Glass and Ceramics Plant
 Operators

8181.2600 **Shaving Machine Operator** **(Abrasive)**

Shaving Machine Operator (Abrasive) dresses abrasive material to required shape and size using shaving machine and traversable cutter or shaver. Selects template according to article to be finished; places abrasive article on rotating platform of machine; selects required type and size of blade according to nature of dressing desired and fits it to tool holder of movable arm of machine; starts machine to rotate wheel; adjusts the centring of abrasive article pushing by hand to correct position; lowers arm of machine fitted with shaving blade and depresses it slowly on article to trim edges and other area to desired shape and size; removes shavings at frequent intervals by blowing compressed air; measures article with callipers, gauges, etc., to ensure conformity with specification; cleans machine with compressed air at end of shift. May work from blue prints.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant
Operators

8181.2700 **Slip Maker (Ceramics)**

Slip Maker (Ceramics) operates mixing machine (blunger) in which different kinds of clay is mixed into their semi-liquid form (slip) for making ceramic products. Regulates flow of materials into mixer; starts mixer and allows it to run for specified time, pumps slip over magnets to remove any iron or steel particles and through filter process to remove excess water, regulating flow by means of a valve; cleans filters and magnets with water as required; washes screens and

magnets to remove foreign particles and sludge using hose. May mix clays according to formula. May undertake minor repairs to machine. May operate Ball Mill to make slurry.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant
Operators

8181.2800 **Glaze Maker**

Glaze Maker mixes, grinds, fuses and regrinds ingredients such as borax, lead, sand and lime to make glaze. Weighs out materials, dumps these into grinding mill and grinds them for specified time. Drains out mixture, passes it through screens and heats it in kiln for prescribed period to fuse it. Regrinds fused material into fine powder and mixes it with water to form stop for use in dipping processes.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant
Operators

8181.2900 **Edge Operator (Abrasive)**

Edge Operator (Abrasive) trims and smoothens edges of abrasive wheels over grinding machine. Mounts abrasive wheel or article to spindle of machine either singly or in packs; aligns wheels and fastens article securely by tightening nuts and bolts. Selects required type of star dresser wheel; slides star dresser wheel to machine groove so that it faces emery wheel to be trimmed; starts machine by pressing electric button and sets speed of machine to rotate abrasive wheel at required speed; moves by hand dresser

wheel along groove, forward and backward to trim edges of wheels at set speed; trims and smoothens edges to required specifications by stopping machine at frequent intervals and checking size and shape of material with measuring instruments; cleans article and machine with compressed air to remove dust and powder.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.3000

Wet Disk Operator (Abrasive)

Wet Disc Operator (Abrasive); Disc Grinder grinds and polishes sharpening stones and sticks, by hand on power operated disc grinder. Presses switch button to start disc grinding machine fitted with rotating grinding iron table; opens water tap and regulates its flow to fine jet over rotating table of machine; fills hopper with fine sand and opens its bottom plate to allow slow and steady flow of sand over rotating table; places object (sharpening stone or stick) on rotating table and applies pressure as necessary to grind and polish it to required finish. Cleans article in water and frequently checks it with measuring instruments for size, smoothness and uniformity; repeats process by increasing supply of sand and water as necessary; cleans finished article in water; washes and cleans machine with water at end of shift.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.3100

Burner Cement

Burner, Cement; Kiln Man, Cement operates cylindrical leaning kiln rotating on an inclined axis to burn slurry, (thick mixture of lime stone and other raw materials) into clinkers for manufacture of cement. Lights kiln furnace and supplies pulverised coal mixed with compressed air or high pressure air through feed pipes to burn slurry at required temperature; operates switches and controls levers at panel board at Burners platform to rotate kiln at set speed and to open supply channel of slurry into kiln and regulate flow of slurry in rotating kiln to get it calcined and burnt into cement clinker (hard mass of burnt clay and stone); observes intensity of flame, its colour and progress of burning of moving clinker inside kiln to maintain required temperature by regulating coal and air supply; notes and records various control panel readings; regulates proper amount of feed, speed of kiln, coal blast and draught to ensure production of clinker of right quality; visits frequently different sections of rotary kiln and coal grinding mill for efficient performance; stops kiln, if any defect develops in any of its auxiliaries such as cooler, drag chain, clinker elevator, concentrator etc. May be in charge of one or more rotary kilns.

ISCO 08 Unit Group Details:

Code 8181

Title Glass and Ceramics Plant
Operators

8181.3200

Clay Modeller

Clay Modeller moulds full-sized or scale models of products, such as automobiles, automobile parts, television sets, radios, washers, refrigerators, caskets, or boats

from clay following artist's sketches or from verbal instructions: Builds rough lumber form to fit around model or centres preformed lath-covered wood frame on grid platform. Kneads clay into slots between laths so clay will adhere to frame. Moulds clay by hand to approximate shape. Pulls sheet aluminium forming tool over surface of clay to shape areas that have constant cross sections. Shapes sculptured surfaces, using various types of sculptor's tools and scrapers. Verifies uniformity and smoothness of curved surfaces with splines and sweeps. Scrapes clay from high areas and builds up and smooths low areas to attain desired shape. Cuts cardboard templates for use as guides to shape symmetrical sections. Takes measurements from completed half of model and duplicates them on unfinished half to make both sides symmetrical. Covers bumpers, lights, door handles, and other parts with aluminium foil to simulate chrome or coloured glass.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant Operators

8181.3300

Fibreglass-Machine Operator

Fibreglass-Machine Operator operates machine to spray melted glass fibres onto products, such as boat hulls and lawn furniture: Feeds strands of raw fibreglass into machine, monitors gauges, and moves controls to obtain specified temperature, pressure, and flow rate of molten glass through spray jets onto article to be coated. Cleans and adjusts machine, according to maintenance schedule or instructions from supervisor, using hand tools and prescribed cleaning agents.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant Operators

8181.3400

Furnace Helper

Furnace Helper assists the Furnace Operator by performing tasks like sealing the furnace using paddle and shovel and charging the furnace with material like scrap, ore, pellets or coke. Observes gauges and manipulates controls on panel. Signals Overhead Crane Operator, or uses electric hoist, to position ladles or buckets near furnace, and moves levers to tilt furnace into pouring position. Skims slag from molten metal, using bar, rabble or ladle. Also performs cleaning duties.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant Operators

8181.9900

Glass and Ceramics Plant Operators, Other

Glass, Ceramics and Related Plant Operators, Other include all other operators engaged in glass, ceramics and related plant operation activities not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8181
Title Glass and Ceramics Plant Operators

Family 8182

Steam-Engine and Boiler Operators

Steam Engine and Boiler Operators maintain and operate various types of steam engines, boilers, turbines and auxiliary equipment to provide power and other utility services for commercial, industrial and institutional buildings, at work sites and aboard ships or self-propelled vessels.

8182.0100

Boiler, Tindal

Boiler Tindal; Head Boiler Attendant sets automatic draught controls, guides feeding of fuel in hopper, pumping of water and all other operations in boiler house. Checks visually and by reading the meters regarding steam load and pressure, condition of combustion in furnace, quality of fire and water feed system etc. Ensures that water level indicators are in working condition. Ascertains draught (air supply to fuel) and exhaust requirements to boilers, making necessary manual and mechanical adjustments for control and regulation. Ensures that adequate fuel is stored, exhaust temperature of flue gas (the gaseous products of combustion from boiler furnace and water vapour) remains within specified limits, feeders are uniformly filled with fuel and that all fuel is completely burnt. Checks ash contents visually or by chemical analysis or by reading carbon dioxide recorder. Ensures continuous and proper working of ash disposal system and cleaning of boiler tube ways. Conducts general supervision of other operations in boiler house to meet load demand on plant. May handle equipment in emergency.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.0200

Boiler, Attendant

Boiler Attendant operates boilers to generate steam of required pressure by controlling and adjusting water feed, draught, evaporation, fire, etc., for heat or power. Opens water-pipe valve in tank through glass tube attached to it and closes water-pipe when boiler tank is filled with water to required level. Ensures that water level in indicator is always above minimum limit. Opens door of fire chamber of boiler, shovels fuel into fire box and rakes fire to obtain maximum heat or sets device which feeds gas, oil or other fuel automatically. Checks temperature and pressure of steam by reading gauges and feeds fuel or adjusts stoking accordingly. Operates different supply valves and ensures that steam is supplied to engine room at prescribed pressure. Controls air draught into boiler ensuring correct adjustment of air supply and preventing infiltration of extraneous air. Maintains water level and steam pressure as prescribed. Drains out excess water from drum by blowing down according to instructions or in presence of shift-in-charge. Undertakes cleaning of boiler tube ways and minor repairs, maintains general external cleanliness, lubricates mechanical parts of boiler and assists in commissioning, banking (reducing the rate of combustion in boiler furnace by covering fire with slack or fire coal) and shutting down boilers. Maintains prescribed records of readings in log book. May cut off automatic water feed and make direct connection to drum and blow off excess water in case of emergency. May remove ash from ash pan or slag from slag chamber. May clean boiler and flues. May operate boilers with different fuels such as gas, oils, coal and be designated accordingly.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.0300**Boiler, Fireman**

Boiler Fireman; Fireman, Steam shovels coal into boiler to generate steam of required pressure. Lights boiler by throwing lighted cotton waste into boiler furnace and supplying air into chamber for easy combustion of coal. Shovels coal into fire chamber of boiler and spreads it evenly on surface for maximum combustion and utilisation of heat to generate steam. Pokes or rakes burning coal with metal rod to drop burnt cinder and ash on floor and to break lumps of coal to ensure maximum use of coal in chamber and maintain uniform heat. Ensures that water supply to boiler is constant and at prescribed level. Checks temperature and pressure of steam by reading gauges and adjusts steam pressure by regulating feed of coal and water to boiler. Lubricates moving parts. Maintains record of supply of coal to boiler etc. May collect, carry and dump ash at control point. May use bagasse instead of coal specially in sugar factories. May clean water tubes and dismantle boiler for repairs.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.0400**Boiler House Operatives**

Boiler House Operatives perform number of routine and low skilled tasks in operating boilers such as breaking coal to required size by hand, picking out shells and stones from coal, looking after automatic disposal of ash from boiler

hopper and removing ash and cinder discharge from boiler, cleaning and scrapping off scales from boiler, operating and undertaking maintenance of boiler feed pumps, operating boiler draught fans, operating conveyors for supply of coal to storage bunkers of boilers, looking after performance of deaerator in order to remove dissolved gases from boiler feed water etc., and are designated as Coal Trimmer, Ash Mazdoor, Ash Khalasi, Boiler Khalasi, Coal Conveyor Attendant etc., according to nature of work performed.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.0500**Serang, Engine Room/Engine Bosun**

Serang, Engine Room controls and directs work of engine room crew on board ship. Allocates duties to engine room crew; and ensures that engine room, floor plates and paint work have been properly cleaned, and spares are properly greased and stored; supervises work of Tindal, Engine Room; Stoker, Ship; assists ships' engineers in maintenance work and supervises cleaning of boilers, washing of tank tops, chipping and scrapping in engine-room etc.; maintains discipline amongst engine room crew. May perform duties of Tindal or Stoker in emergency or when required.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.0600**Tindal, Engine Room**

Tindal, Engine Room supervises work of engine room crew under instructions from Serang, Engine-room. Assists ships' engineers in looking after satisfactory functioning of boilers; stands watch in engine-room, supervises firing of boilers and sees that water level of boilers is maintained correctly. May work with engine-room crew in cleaning boilers, paintings, chipping etc.; may assist engineers in overhauling and maintenance of machinery, engines and boilers; may perform duties of Serang in his absence.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.0800

Fireman, Locomotive

Fireman, Locomotive; Fireman, Railway Engine (Steam) fires and operates steam locomotive boiler by stocking coal into it to maintain required steam pressure. Checks safety plugs of fire-box, moving parts of engine and supply of water and coal before commencement of journey. Stokes coal judiciously into firebox of boiler to maintain constant fire for generating steam and keeps coal consumption within prescribed limits. Assists Engine Driver in observing signals and other instructions. Oils and cleans engine parts, fills water tank en route with water at water columns and maintains required water level in boiler. Ensures correct operation of Engine lubricator and raking of fire at waiting stations when engine takes water. Is designated as FIRST FIREMAN or SECOND FIREMAN according to degree of responsibilities and tasks performed and as FIREMAN LOCO SHED if engaged in storing prescribed quantity of coal, water etc., in engine and preparing it

for journey by firing boiler to required steam pressure.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

8182.9900

Ships' Engine Room Ratings, Other

Ships' Engine Room Ratings, Other include all other Ratings engaged in various operations in ship's engine room, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8182

Title Steam-Engine and Boiler Operators

Family 8183

Packing, Bottling and Labelling Machine Operators

Packing, Bottling and Labelling Machine Operators operate and monitor machines which weigh, pack and label various products, or fill different containers with products.

8183.0100

Building Insulator, Machine

Building Insulator, Machine blows and packs insulating material, such as mineral wool, shredded cork or asbestos with power driven machine into cavities between walls, floors and ceilings in buildings. Carries hose nozzle to working position. Inserts hose nozzle into openings in floors, walls or ceilings and gets blower started to release compressed air which blows insulation material through hose into them. Directs hose nozzle to distribute insulating material as specified. May insulate open spaces, such as cupboards, walls or attic, roofs by nailing

sheets of insulating material to studs or rafters.

ISCO 08 Unit Group Details:

Code 8183
Title Packing, Bottling and Labelling
Machine Operators

Family 8189

Gem and Jewellery Machine Operators

The Gem and Jewellery Machine Operators grind, cut, slice and polish gem stones to deliver perfect cut roughs. They operate machine such as CAM Machine, Laser Sawing Machine, Casting Machine, Symmetry Analyser and Pantograph Machine etc.

8189.0100

Gem Grinder, Machine

Gem Grinder, Machine grinds precious stones to required shape and size by machine. Fixes roughly shaped stone, after sawing or cleaning, in dop (metal device to hold stone) with shellac. Fixes dop in machine spindle and positions it in centre. Places other stone in another dop and fixes it in hand-rod. Starts machine and presses hand-rod with stone against revolving stone in spindle to rough out uneven surfaces. Checks stone frequently while grinding with magnifying glass and grinds it to required shape and size. Uses different types of dop according to shape required. Is designated as DIAMOND CUTTER or DIAMOND GRINDER if engaged in grinding diamond. May use electrically operated disc type grinding wheel for grinding stones.

ISCO 08 Unit Group Details:

Code 8189
Title Stationary Plant and Machine
Operators Not Elsewhere Classified

8189.0200

Gem Polisher, Machine

Gem Polisher, Machine polishes top portion and gives facets to stone. Fixes stone to be polished in dop with shellac. Sets dop in tank (wooden rectangular device to hold dop) or holds dop in special type of clamp. Starts machine, applies diamond powder to revolving steel disc and holds tank or clamp on it to press and polish stone to required finish. Checks stone frequently with magnifying glass while polishing to ensure required finish. May wash polished stone in caustic soda solution or keep it in lemon juice for prescribed period to brighten it.

ISCO 08 Unit Group Details:

Code 8189
Title Stationary Plant and Machine
Operators Not Elsewhere Classified

8189.0301

CAM Machine Operator

CAM Machine Operator interprets the three-dimensional (3D) jewellery design, feeds design parameters in the CAM machine and produces resin based prototypes. The model prototype serves as a sample for manufacturing jewellery or components.

Qualification Pack Details:

QP NOS Reference	G&J/Q2404
QP NOS Name	CAM Machine Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code 8189
 Title Stationary Plant and Machine
 Operators Not Elsewhere Classified

8189.0401**Laser Sawing Machine Operator**

Laser Sawing Machine Operator needs to cut the rough diamond along the marking by fixing it on a dop or cassette or holder, then slicing it using the laser machine. A Laser Sawing Operator is responsible for delivering perfect cut roughs in the stipulated time, while minimizing weight loss and breakage.

Qualification Pack Details:

QP NOS Reference G&J/Q4404
 QP NOS Name Laser Sawing
 Machine Operator
 NSQF Level 5

ISCO 08 Unit Group Details:

Code 8189
 Title Stationary Plant and Machine
 Operators Not Elsewhere Classified

8189.0405**Blade Sawyer**

Blade Sawyer needs to cut the rough diamond along the marking by fixing it on to a dop or pot, then slicing it using the blade sawing machine. A blade Sawing Operator is responsible for delivering perfect cut roughs in the stipulated time, while minimizing weight loss and breakage.

Qualification Pack Details:

QP NOS Reference G&J/Q4404
 QP NOS Name Blade Sawyer
 NSQF Level 5

ISCO 08 Unit Group Details:

Code 8189
 Title Stationary Plant and Machine
 Operators Not Elsewhere Classified

8189.0501**Casting Machine Operator**

Casting Machine Operator converts wax models to jewellery pieces through investment casting process. The individual invests the flask and then operates semi to fully-automated machines to pour and regulate the flow of molten precious metal into cavities created by melted wax, to produce cast jewellery pieces on mass scale.

Qualification Pack Details:

QP NOS Reference G&J/Q2808
 QP NOS Name Casting Machine
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8189
 Title Stationary Plant and Machine
 Operators Not Elsewhere Classified

8189.0601**Symmetry Analyser Machine Operator**

Symmetry Analyser Machine Operator uses the symmetry analyser machine (e.g. Helium Polish, Sarin Dimension), computer and a printer to generate a report containing all the details of a diamond's cut which include crown angles, table percentage, facet angles, crown height percentage, girdle thickness percentage, pavilion depth percentage, etc. which help a polisher to check the dimensions and repair.

Qualification Pack Details:

QP NOS Reference G&J/Q4707

QP NOS Name Symmetry Analyser
Machine Operator
NSQF Level 3

ISCO 08 Unit Group Details:

Code 8189
Title Stationary Plant and Machine
Operators Not Elsewhere Classified

8189.0701

Pantograph Machine Operator

Pantograph Machine Operator; Machine Engraver operates pantograph machine for engraving letters and designs on metal surfaces or object with rotary cutters by copying template (pattern). Cleans object to be engraved using soap water or other cleaning substance and clamps it in position under cutting tool of machine. Fastens required type of pattern or design in position under tracing arm of machine. Adjusts length of tracing arm of machine to scale, depending on size of engraving desired on object. Starts machine and manipulates tracing arm by hand in order of sequence to draw tracing point or styles over pattern or design for simultaneous reproduction of engraving or cutting by cutting tool on object according to set scale. Stops machine when pattern is traced and fully engraved. Removes engraved piece from table and cleans surface. May do minor repairs to machine.

Qualification Pack Details:

QP NOS Reference G&J/Q4202
QP NOS Name Pantograph
Machine Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 7313

Title Jewellery and Precision Metal
Workers

Sub Division 82

Assemblers

Assemblers assemble prefabricated parts or components to form subassemblies, products and equipment, according to strictly laid down procedures. The products worked on may be moved from one worker to the next along assembly lines.

Tasks performed by workers in this sub-major group usually include: assembling components into various types of products and equipment, according to strictly laid down procedures.

Occupations in this Sub Division are classified into the following Groups:

821	Assemblers
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Group 821

Assemblers

Assemblers assemble prefabricated parts or components to form subassemblies, products and equipment, according to strictly laid down procedures. The products worked on may be moved from one worker to the next along assembly lines.

Occupations in this Group are classified into the following Families:

8211	Mechanical Machinery Assemblers
8212	Electrical and Electronic Equipment Assemblers

8219 Assemblers, Not Elsewhere
Classified

Family **8211** **Mechanical Machinery Assemblers**

Mechanical Machinery Assemblers assemble, according to strictly laid down procedures, component parts of mechanical machinery such as engines, motor vehicles, turbines and aircraft.

8211.0100 **Assembler, Workshop Machine and Equipment**

Assembler, Workshop Machines and Equipment assembles finished mechanical components to form specific unit or machine such as lathe, grinder, milling machine, pump etc. using hand tools and machines. Studies drawing or sketch for fitting and assembly details. Places different finished metal components of machines like frames, cross members, bearings, bottom and top plates, etc. on floor and assembles them together in prescribed sequence, using nuts, bolts etc. Carries out further tooling, if necessary while assembling. Fits different parts together to form complete unit or part of unit. Checks during assembly stages for accuracy of fitting and to correspond to specifications. Finishes fitting and files off edges or ends of parts where necessary using hand files, chisels etc. Tests either finished main assembly or sub assembly parts for specified performance and makes necessary adjustment to parts using hand tools. May install assembled units at site or in factories for actual running. May repair and overhaul machines.

ISCO 08 Unit Group Details:

Code 8211
Title Mechanical Machinery Assemblers

8211.0101 **Mechanical Sub-Assembly Technician**

Mechanical Sub-Assembly Technician assembles together the mechanical sub-systems. The individual at work is responsible for assembling mechanical modules from moulded, welded or forged components to produce the final mechanical sub assembly of the product.

Qualification Pack Details:

QP NOS Reference	ELE/Q6304
QP NOS Name	Mechanical Sub-Assembly Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code 8211
Title Mechanical Machinery Assemblers

8211.0200 **Assembler Printing Machinery**

Assembler, Printing Machinery assembles and fits parts of printing machinery according to maker's specifications and erection manual. Studies drawings and other specifications and consults erection manual. Examines foundation as per drawing for correct assembly and erection and gets alterations done, if necessary. Makes arrangements for proper cleaning of different parts of machine and checks them for flaws and accuracy of fit, using gauges, micrometres and other measuring instruments. Assembles parts step by step according to instructions, if necessary by further tooling using power and hand tools and checks for rigidity, proper fit and required functions. Synchronises

movements of corresponding parts and adjusts them to ensure stipulated performance. Tests assembled unit for operational efficiency and makes adjustments where necessary. May drill holes, mark metal and perform other fitting operations, if necessary. May set necessary devices in assembled unit to suit customer's needs.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0300

Assembler, Textile Machinery

Assembler, Textile Machinery assembles textile machines from finished components as member of team. Studies drawings and collects details of assembly to be made. Collects or gathers frame, structure parts, sub-assemblies etc. from stores or nearby fixed points. Erects side frames and fits cross frames and other joints. Assembles various other machine parts of components to main frame, if necessary by further tooling, using nuts, bolts, rivets, etc. in order of sequence. Ensures that stage assembly is accurate and conforms to prescribed standards. Fits up assembly parts like gear wheels, bottom rails, shaft assembly etc. as detailed. Fastens or secures various parts and components like slide arm fitting, levers, slides, cams, springs, chain pulleys, brackets etc. to position using screws, nuts, bolts, rivets and other devices. Ensures that parts assembled are set to proper level. Finishes or smoothens surfaces by scraping, filing, chiselling or even welding. Makes punch marks or marks symbols on different assembled parts for assembly of machine at site of factory. Tests performance of assembled machine by manipulating levers, gears, etc. to ensure accurate and prescribed

performance. Dismantles assembled machine for packing according to markings. May erect machine at premises or factory. May overhaul and repair textile machinery. May give electrical or power supply to machine. May work on sub assembly line and assemble sub units or parts on work bench.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0400

Assembler, Refrigerator and Air Conditioning Unit

Assembler, Refrigerator and Air-Conditioning Unit assembles and installs refrigerator and air-conditioning units by connecting pipes, insulating, lagging, connecting compressor, etc. and ensures attainment of desired temperature. Assembles frame or body of refrigeration or air-conditioning equipment by tightening respective parts with nuts, bolts, rivets, hinges, etc. Insulates frame and tank with insulating material such as glass wool, cork, etc. fabricates evaporator coils to required size and shape depending on type and nature of air-conditioning unit handled. Fits various controls and accessories like expansion valve and refrigerant controls as detailed. Connects copper or iron pipes to different units of segments and charges refrigerator with gas or liquid as freezing medium. Ensures conformity with specifications and prescribed performance of assembled unit. Installs assembled unit at premises and gives power connection to unit by fitting necessary gadgets and adjusting various controls to suit required freezing or cooling temperature. May repair and overhaul air-conditioning and refrigerator equipment. May install commercial air-conditioning equipment to premises and

rooms and make necessary changes to buildings to ensure air tightness.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0500

Assembler, Stationary Petrol Engine

Assembler, Stationary Petrol Engine assembles stationary petrol engine with finished components, tunes engine and tests performance. Checks condition and cleaning of various engine parts such as crankshaft, camshaft, connecting rod, pistons, tappets, valves, valve guides, spring etc. and measures appropriate parts to assess serviceability, reconditioning or replacement as necessary. Scrapes bearings, grinds valves, files piston rings, assembles pistons with connecting rods and fits camshaft, crankshaft, fly wheel, cylinder block, piston assemblies, valves etc. according to design in order of sequence using hoisting device, stand, special tools and other implements ensuring necessary movement and clearances as specified. Sets valve timing, meshes timing wheels on cam and crankshafts and fastens cylinder head with gasket on cylinder block. Assembles and fits fuel pumps lubrication and fuel pipes, sparking plugs etc. Fits distributor according to ignition timing and makes electrical connections with battery, ignition coil, plugs cut out, etc. Fits radiator, fan pulleys, water pump, etc. Sets tappets and starts engine. Tunes engine and runs it for prescribed number of hours. May test engine horse power, solder nipples, anneal pipes etc. May suggest alterations in fittings.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0600

Assembler, Stationary Diesel Engine

Assembler, Stationary Diesel Engine assembles stationary diesel engine from finished components, makes adjustments, sets alignments, clearances etc. and ensures stipulated performance. Places diesel engine block on jig or other fixture using hoisting equipment. Fits or assembles various parts to engine block such as crank shaft, cam shaft, main bearing, connecting rods, timing gears pistons, fuel pump, atomiser, automatic timing mechanism, exhaust manifold suspension, etc. using spanners, wrenches, screw drivers and other special tools and devices. Collects various parts like nuts, bolts, washers etc. from nearby bins and fits or screws them to cylinder head. Checks assembled units or parts at every stage for prescribed accuracy, alignment, tolerance etc. using special tools. Records part number fitted or assembled to engine block and notes factual details or position regarding clearances, adjustments etc. made. Assembles other sub-assemblies like starter, alternator timing chain, heater assembly switch, radiator etc. Places assembled engine at central places for engine test. May conduct engine test on dynamo meter and note actual tuning conditions and make necessary adjustments. May overhaul and repair engines or other components.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0700

Assembler, Tractor

Assembler, Tractor assembles tractors and other earth moving equipment from finished components and parts. Collects or places at fixed points different component parts, sub-assemblies etc. required for assembling. Lifts by hand or by hoisting equipment different frames, (upper and lower) body and other parts. Fits parts together in set order using nuts, bolts, rivets etc. and with necessary wrenches, spanners and other special tools. Checks at every stage assembled parts for movement, performance etc. Attaches various mechanical parts such as brakes, steering assembly, fuel system, propulsion equipment, etc. Sets required parts in machine for proper seating and alignment. Sets alignments and adjusts required clearances. Mounts engine to vehicle giving necessary engine bed mountings and tightening with nuts and bolts. tests performance of engine and other mechanical equipment at stationary position. May drive vehicles outside and test performance. May repair and overhaul engines and other equipment. Is designated as ASSEMBLER AGRICULTURAL MACHINERY if engaged in assembling chaff cutter, husking, machine, ploughing machine and such other agricultural machines. May overhaul and set atomiser for fuel spray into engine combustion chamber.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0800

Assembler, Turbine and Steam Engine

Assembler, Turbine and Steam Engine assembles turbine and steam engine from

finished components by further tooling. Examines drawings and specifications. Checks parts and components to rectify faults if any and ensures accuracy. Checks alignments, scrapes bearing, examines and cleans parts, (openings) fits rotors blades, nozzles, injectors, super heaters valves, crankshaft, piston assemblies with connecting rods, steam chest covers etc. as appropriate for turbine or steam engine by further tooling as necessary. Sets glands and packing while fitting to prevent leakage of steam. Checks condenser and fits steam pipes according to drawing and insulates them by lagging to prevent loss of heat. Fits lubrication pipes and sets them to order. Adjusts valves, clearance etc. as prescribed. Sets timing and couples the turbine with alternator or steam engine with generator. Adjusts governor, starts turbine or steam engine as appropriate and balance them for power generation. May drill holes, check and adjust boiler fittings etc. if necessary.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.0900

Assembler Loco Engines

Assembler, Loco Engine; Erector, Locomotive; Fitter Loco Erection assembles tender and local engine from finished components by further tooling according to specifications. Sets frame of locomotive at level by manipulating jack and using spirit level for correct alignment. Aligns cylinder back cover, fits guide bearer to frame and marks alignment for necessary machining. Assembles and fits slide bars of locomotives by reaming, drilling, grinding, etc., ensuring specified measurements

using micrometres, callipers, etc. Aligns wheels, and gets engine and boiler lifted on frame. Fits wheels and expansion shoe according to alignment of boiler with frame. Fits ash-pan to boiler, drills saddle bolt and reams reversing screws stand of frame. Fits cab platform ejector, lubricator, injector etc. to boiler. Assemble cab with engine according to specifications. Fits side rods and other motion parts of locomotive and sends it for blow through. Couples motion parts, fits valves, front cover of cylinder and steam chest permanently. Fits operating and sanding gear and sends locomotive for testing. Rectifies erection defects according to test reports and assembles tender with locomotive.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.1000

Erector, Machine and Equipment

Erector, Machines and Equipment installs, erects and changes lay out of machines and equipment in mills, factories, workshops etc. according to instructions or specifications. Studies drawings and lay out sketches of machines or equipment to be erected. Calculates available floor area in relation to dimension of machines, working space required etc. and marks areas on floor for foundations of machines. Guides construction of foundations and setting of foundation bolts and fixtures according to type of machines to be installed and allows foundations to dry up and settle for required number of days. Places base or holding device of machines through foundation bolts or on fixture one by one, using lifting equipment and aligns and levels them with spirit level. Fastens or

secures machines tightly to foundation bolts or fixtures and rechecks alignment and levelling to ensure correctness. Makes adjustment if necessary and gets grouting of foundations done. Allows grouting to dry up and adjust position of different parts of machine for efficient operation. Gives necessary power supply to machine or connects machine to line shaft. May run machine and observe performance. May assemble, repair and overhaul machines. May specialize in erecting particular type of machine or equipment such as printing machine, lathe, pneumatic hammer, grinder, pumps, etc.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.1100

Assembler, Continuity

Assembler, Continuity assembles specific finished parts, needing no further tooling to form component or unit in proper sequence as member of team usually on mechanical conveyor. Sits as member of team on either side of moving conveyor or like arrangement carrying components or units for further assembly. Keeps tools and required components for assembly handy, close to conveyor line. Collects incoming part or unit from conveyor line, fits allotted component to it using hand or power tools as designed. Checks whether assembled and completed unit conforms to specified standards using simple tools, gauges, measuring instruments, etc. Places assembled unit, article or material on moving conveyor to be carried forward for further assembly or otherwise. May mark article with trademark or symbols using stampings. May keep account of work attended to or assembled. May back and label articles. May assemble domestic

appliances, office equipment, commercial goods, machine parts etc. and be designated accordingly.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.1200

Assembler, Automobile

Assembler (Automobile) assembles different parts and units of automobile, installs them on frame and makes necessary connections, adjustment, settings etc. according to specifications. Assembles engine, gear box, front and rear axles etc. individually according to specifications and ensures their stipulated performance. Places body frames, side members, supporting frames etc. in special jigs and secures them tightly by fixing bolts and nuts to different parts. Assists Spot Welder to spot weld body frame. Fits front and rear axle to body and tightens with nuts and bolts. Collects various components and parts from sub-assembly or from nearby bins and fits them to body or chassis as appropriate. Lifts assembled engine manually or using hoisting equipment carefully, places it over engine frame of chassis and secures it in position with bolts and nuts. Fits clutch, gear box propeller shaft, etc. and makes necessary settings and adjustments. Gathers such parts like radiator, alternator, water pump, hydraulic/vacuum brakes etc. from nearby sub-assembly line and fits them to vehicle. Makes necessary adjustments, connections and alterations to fittings as directed. Checks for wheel alignment using special equipment and makes necessary adjustments to brakes. Delivers assembled vehicle to trim line for fitting of upholstery, door and window glasses,

door locks and other fittings. Lubricates various moving parts of vehicle with grease or oil. May assemble only engine, gear boxes, axles, hydraulic brake system etc. in sub-assembly line and be designated accordingly.

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.1201

Vehicle Assembly Fitter

Vehicle Assembly Fitter operates a variety of machine tools to assemble mechanical and electrical components for two wheelers, four wheelers and large commercial vehicles. A Vehicle Assembly fitter is one who is skilled in operating machine tools for conducting assembly operations as per the required vehicle assembly norms. Assembly of components includes engines, transmission components, electrical and electronic circuits and components, dashboards, seating systems, wheels, doors etc. at the required locations and as per required vehicle type/batch

Qualification Pack Details:

QP NOS Reference ASC/Q3601

QP NOS Name Vehicle Assembly
Fitter

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8211

Title Mechanical Machinery Assemblers

8211.1202

Fitter-Mechanical Assembly

Fitter-Mechanical Assembly marks out the material for the features to be produced, and then use hand tools, portable power

tools, manually operated machine tools and shaping, fitting and assembly techniques appropriate to the operations being performed. The candidate will be expected to check the quality of the workpiece, using measuring equipment.

Qualification Pack Details:

QP NOS Reference	CSC/Q0304
QP NOS Name	Fitter-Mechanical Assembly
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8211
Title	Mechanical Machinery Assemblers

8211.1300

Assembler, Motor Cycle

Assembler (Motor Cycle); Assembler Fitter, (Motor Cycle) assembles motor cycle, auto-rickshaw, scooter, etc. from finished components, makes necessary settings and adjustment and ensures their correct performance. Keeps various assembly parts in convenient bins near work table. Assembles motor cycle or scooter engine from various parts such as piston, crank shaft, valves, tappets etc. by necessary tooling, settings and adjustments and fits it securely with bolts and nuts on machine frame ensuring correct balancing and alignment. Fits parts and components in prescribed order of sequence and assembles various units like gear mechanism, clutch, kick starter, etc. Makes necessary checks and adjustments to fittings and to assembled units at every stage using gauges, callipers and other devices and ensures that fittings conform to prescribed specifications. Gives various mechanical and electrical connections like driving chain, control cable, control levers, switches to handlebar, magneto cables, oil levels etc. to machine. Starts engine, runs

it on idle test and rectifies any defects to engine, clutch, gear box etc. noticed. Rejects defective parts and replaces them with new ones. Rectifies defects indicated on road test by further settings and adjustments as necessary. Lubricates all moving parts and points with grease gun. May work on batch or line assembly and assemble various units like frame building fork assembly, wheel building, brake assembly, clutch assembly, fuel tank fitting etc. May drive motor cycle on road to test for efficiency.

ISCO 08 Unit Group Details:

Code	8211
Title	Mechanical Machinery Assemblers

8211.1400

Assembler, Frame, Aircraft

Assembler Frame, Aircraft fits and assembles components of aircraft frame in jig. Studies drawings and selects parts according to specifications. Marks, trims, chamfers parts and assembles airframe components in jig, doing supplementary tooling where necessary. Checks alignment, assembly fits, clearance, etc. using appropriate devices and precision instruments and ensures correct setting, Secures members temporarily with fasteners or by tack holding and marks locations for rivet holes. Drills, reams and countersinks holes in members for subsequent riveting. May replace, repair and modify passenger galley and toilet structural parts. May check fuselage for structural weakness and make necessary repairs and modifications. May check pressure seal for sealing aircraft cabins from leaks. May operate drilling, grinding and other workshop machines and replace or repair airframe parts.

ISCO 08 Unit Group Details:

Code 8211
Title Mechanical Machinery Assemblers

Family 8212 Electrical and Electronic Equipment Assemblers

Electrical and Electronic Equipment Assemblers assemble or modify, according to strictly laid down procedures, components of electrical, electro-mechanical and electronic equipment.

8212.0100

Battery Assembler

Battery Assembler assembles various components to make complete storage batteries. Assembles negative and positive plates of cell with wood or fibre separators in between each pair of plates to form cell unit. Fits assembled cell-plates in cell and covers each cell with lid. Places cell units in position in battery casing and connects them by soldering their terminals with lead rod. Fits lead caps over terminals, marks terminals with respective polarity signs and seals top of assembled battery with molten pitch. May fill assembled battery.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.0200

Assembler Dry Cell (Battery Manufacturing)

Assembler Dry Cell (Battery
Manufacturing) assembles various

components to make dry cells used in flash lights, radios, telephones, etc., Obtains various components such as empty zinc containers, moulded carbon electrodes, chemical paste, card board washers, metal caps for carbon rods, etc. for making cells. Sets positive carbon rod centrally in zinc container and fills container with prescribed quantity of chemical paste with spoons. Allows paste to solidify and fits card board washer through sticking carbon rod on open end of container. Fits metal cap on carbon rod and seals container top with plaster. Slips paper covering over cell prepared. May pack dry cells in packets. May operate automatic machines to assemble dry cells.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.0300

Battery Repairer

Battery Repairer repairs used and defective storage batteries. Checks voltage, condition of container, sealing, terminals etc. of battery and determines specific gravity of electrolyte (battery solution) with hydrometer to ascertain further serviceability. Charges electrolyte solution or brings it up to required specific gravity by addition of acid or distilled water as necessary for further service by charging, if possible. Empties all acid from used up battery, melts and removes sealing pitch with gas torch, cuts off connecting rods of cells with hacksaw and removes battery plates from container. Examines condition of cell plates, separators etc. and replaces defective parts. Reassembles battery by fitting new cell plates in position and pours hot pitch to seal cells within case. Connections cell

with new lead rods and solders extreme ends with positive and negative terminals as designed. Pours appropriate quantity of requisite strength in cells to submerge battery plates and gets battery put on charge. May charge the battery on electric a charging equipment.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.0400

Assembler, Electrical Accessories

Assembler, Electrical Accessories assembles mechanical parts of electrical equipment, such as light sockets, switches, terminal boards, and plugging devices: Fits together parts, such as socket bases, shafts, contact fingers, and springs, in specified sequence, using fixtures, screwdrivers, and air nut runners. Tests actions of moving parts and listens for unusual sounds to detect defective parts for faulty operation. Verifies completed assembly against pictorial drawings.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.0401

Cutting, Crimping and Connector Assembly Operator

Cutting, Crimping and Connector Assembly Operator is responsible for cutting wire or manually or using machine, crimping wire and assembling wire into the housing. The individual at work operates the cutting machine, crimping machine and manually cuts wire and completes connector assembly. The

individual is also responsible for checking quality of connector assembly.

Qualification Pack Details:

QP NOS Reference ELE/Q0115
QP NOS Name Cutting, Crimping
and Connector
Assembly Operator
NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.0402

Electrical Assembly Operator

Electrical Assembly Operator is responsible for make electrical connections of control panel assembly. The individual at work mounts and installs and connects internal electronic modules devices and components on the control panel.

Qualification Pack Details:

QP NOS Reference ELE/Q7306
QP NOS Name Electrical Assembly
Operator
NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.0500

Electric-Motor Winder

Electric Motor Winder assembles and tests electric motor and generator stators, armatures, or rotors: Inspects cores for defects and aligns laminations, using hammer and drift. Files burrs from core slots, using hand file, portable power file,

and scraper. Lines slots with sheet insulation and inserts coils into slots. Cuts, strips, and bends wire leads at ends of coils, using pliers and wire scrapers. Twists leads together to connect coils. Taps coil and end windings to shape, using hammer and fibre block. Tests windings for motor-housing clearance, grounds, and short circuits, using clearance gauge, growler, spring-steel blade, telephone receiver, insulation tester, and resistance bridge. Winds new coils on armatures, stators, or rotors of used motors and generators. May rewind defective coils.

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

8212.0600

Calibrator, Electrical

Calibrator, Electrical assembles parts of electrical apparatus such as coils, condensers, etc., to determine capacity for passing current. Selects electrical wire of prescribed or required resistance and makes coils of specified number of turns of length in coil winding machine. Dries coils in annealing chamber for required period. Dips coil in paraffin wax bath to make it water proof. Solders specified length of copper wire to two terminals of coil using electric soldering iron. Measures resistance capacity of coil by connecting leads of coils to meter (galvanometer). Switches on and allows current to pass through. Notes reading on meter and ensures that it remains within permissible limits. Calibrates coils to prescribed scale by soldering copper wire of varied lengths and observing readings. Fits calibrated coil to switch boxes and gives connection to contact points. May fit and assemble precision instruments.

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

8212.0700

Assembler Precision Instrument

Assembler Precision Instrument fits and assembles finished mechanical parts of precision instruments such as binoculars, microscope level, cameras, gauges etc. according to drawings by further tooling, if necessary. Checks finished components with micrometre, Vernier, slip gauges and other precision measuring instruments and devices and assembles them step by step in proper sequences according to drawing using spanners, screw-driver, adopters and other hand tools. Fits lenses and metal or wooden accessories like stand (tripod), holders, boxes etc. as specified. Checks whether assembled units conform to specifications, replaces faulty units or components and ensures stipulated performance and sensitivity by standard tests. May repair precision instruments. May perform minor machine operations on instrument makers' lathe or drilling machine. May be designated according to type of instrument assembled.

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

8212.0800

Assembly Operator (Telephone Equipment Manufacturing)

Assembly Operator (Telephone and Telegraph Equipment Manufacturing.) assembles finished components of telephones, switches, relays, etc. in order

of sequence, usually working on conveyor belt system, into sub and final assemblies by soldering, screwing, painting and other minor machine operations to form complete unit. Feeds Bakelite case to conveyor belt, fixes cards to dial and puts cap line screws on key plate. Prepares, checks and fixes ringer coils, magnetizes magnet road, assembles bell hammer and base plate, fits butter fly bracket and cradle switch, inserts plunger pastes, diagram and performs other tests to make sub-assemblies by screwing, soldering, minor machine operations and setting parts together. Assembles and links terminals, fixes ringer assembly, induction coil, condenser and dial block to base plate and wires and solders tag block. Sets tag block to base plate. Connects induction coil, condenser, ringer and dial block, wires spring combination, fits gauges, adjusts bell hammer and performs other tasks as necessary. Fixes receiver, card, etc. and makes necessary fittings, adjustments and electrical connection to form complete unit. May work at different stages of assembly.

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

8212.0900

Assembly Operator (Radio Manufacturing)

Assembly Operator (Radio Manufacturing.) assembles various components of radio set by fitting and soldering parts together as designed to form sub-assemblies and fits them to printed circuit board following specifications and using hand tools to make complete wireless receiving set. Collects required components or parts

such as chassis, transistors, resistors, speaker, etc. and places them at convenient position on worktable. Cuts prescribed lengths of electric wires of different colours using, cutter, hand knife or blade. Solders ends of wires to marked points according to wiring diagram, using suitable electric soldering iron. Assembles various parts of wireless receiving set in proper order to make different sub-assemblies such as transformer switches, tuning controls etc., using pliers, spanners, screw driver and other hand tools. Fits sub-assemblies securely to chassis and ensures that all nuts and bolts are and terminals of wires are properly soldered to respective points. Selects appropriate types of electronic components and fits them to circuit board or plugs fitted to chassis. Gets assembled chassis checked for correctness. Fits chassis in appropriate Fibre or Bakelite cabinet and securely holds it in position by tightening chassis bolts. Fixes various control knobs to complete receiving set. May adjust and replace defective or improperly functioning circuitry and electronics components, using hand tools and soldering irons. May test for efficiency and performance. May be designated as METAL PARTS ASSEMBLER, CHASSIS ASSEMBLER, TRANSFORMER ASSEMBLER, CABINET ASSEMBLER etc., according to the stage and nature of work done.

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

8212.1000

Form Layer, Cable (Telephone Equipment Manufacturing)

Form Layer, Cables (Telephone and Telegraph Equipment Mfg.) marks

dimensions on cable board and fixes nails or jibs on it for making cables used in selector racks, relay sets, etc. Studies blue print and specifications of lay out of cables to be formed. Marks different lengths, bends etc. on plywood sheet cable board according to size and type of cable to be made. Drives nails or makes small holes and screws standard pins according to markings on cable board, following prescribed colour code and different cable connections. May assist in making cables.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.1100

Cable Maker, Rack Wiring (Telephone and Telegraph Equipment Manufacturing)

Cable Maker, Rack Wiring (Telephone Equipment Mfg.) forms insulated wire cable by hand used in telephone equipment. Studies specifications and collects insulated wires of required sizes, type and colour. Runs wires of appropriate colour through or over different points in form laid on cable board. Checks for dimension and cuts them at end points. Moulds and laces wires together with waxed twine to make cables. Puts correct tags on cable formed and passes them for inspection.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.1200

Operator, Rack Wiring (Telephone and Telegraph Equipment Manufacturing)

Operator, Rack Wiring; Wireman, Rack Wiring (Telephone and Telegraph Equipment Mfg.) assembles and wires selector racks, relay set racks etc., used in telephone exchange. Reads instruction card and specification sheets. Assembles on rack all components such as cable brackets, tag block bracket, shelf jacks, relays, fuse panels, buzz bars etc. Mounts cables on rack and connects wires to tag block according to specified colour code. Solders contacts, squared wiring formation and ties and laces cables with waxed card using pliers, screw drivers, soldering iron etc.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.1301

RAC Assembly Operator

RAC Assembly Operator assembles and connects together the various modules and parts of the refrigerator or air conditioner. The individual at work is responsible for assembling and wiring up of various components, modules or sub-assemblies and systems to make the complete product.

Qualification Pack Details:

QP NOS Reference	ELE/Q3501
QP NOS Name	RAC Assembly Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

QP NOS Name Mechanical
Assembly Operator
NSQF Level 4

8212.1401

Assembly Operator-TV

TV Assembly Operator assembles various parts of the television to produce the set. Key parts may vary depending on the type of television being manufactured, e.g., CRT, LCD, LED. The individual at work is responsible for fitting in the different modules of the television set into the frame using appropriate screws and connectors during the different stages of the assembly process. The individual is expected to minimise errors at every stage since the assembly line is continuously in motion

Qualification Pack Details:

QP NOS Reference ELE/Q3502
QP NOS Name Assembly Operator-
TV
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.1501

Mechanical Assembly Operator

Mechanical Assembly Operator assembles all parts of LED luminary to complete the product. The individual at work fits together different electronic, electrical and mechanical parts and connects them to make the final LED luminary as per product design.

Qualification Pack Details:

QP NOS Reference ELE/Q9201

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.1601

Manual Insertion Operator

Manual Insertion Operator inserts components on printed circuit board (PCB) as per the design. The individual on the job is responsible for manually fixing different electronic components, especially, in through-hole assembly of components that cannot be inserted using pick-and-place machine because of reasons such as inconsistent shape or size or hand-soldering requirement.

Qualification Pack Details:

QP NOS Reference ELE/Q5305
QP NOS Name Manual Insertion
Operation
NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.1602

Through Hole Assembly Operator

Through hole assembly operator inserts electronic components for assembling the printed circuit board (PCB), as per the design, either manually or through automated machine. The individual on the job is responsible for manually fixing components using hand tools, operating and maintaining the automated insertion

machine used for placing different types of components on the through-hole PCBs.

Qualification Pack Details:

QP NOS Reference ELE/Q5101
 QP NOS Name Through Hole
 Assembly Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1603

Pick and Place Assembly Operator

Pick and Place Operator operates the automated pick-and-place machine for assembling components on the printed circuit board (PCB). The individual on the job, programs, operates and maintains the automated pick-and-place machine for placing different types of components on the surface of PCBs for soldering.

Qualification Pack Details:

QP NOS Reference ELE/Q5102
 QP NOS Name Pick and Place
 Assembly Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1604

Reflow-oven Soldering Operator

Reflow-oven Soldering Operator operates the reflow-oven soldering machine to solder the components on printed circuit boards after pick-and-place assembly. The individual at work is responsible for

loading, operating and maintaining the reflow-oven soldering machine.

Qualification Pack Details:

QP NOS Reference ELE/Q5304
 QP NOS Name Reflow-oven
 Soldering Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1605

Stencil Printing Operator

Also called 'Stencil Masking Operator' or 'Screen Printer', the Stencil Printing Operator uses a manual or automated stencil printer to apply solder paste on printed circuit boards (PCB). The individual at work is responsible for applying solder paste on PCBs to be assembled with SMT components for even soldering at the wave soldering or reflow oven stage.

Qualification Pack Details:

QP NOS Reference ELE/Q5201
 QP NOS Name Stencil Printing
 Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1606

Component Preparation Operator

Component Preparation Operator forms, bends and cuts the components to make them suitable for insertion on printed circuit board (PCB). The individual on the

job is responsible for forming, bending and cutting the components' extra leads, by using hand tools or machines to make them suitable for the through-hole assembly.

Qualification Pack Details:

QP NOS Reference ELE/Q5202
 QP NOS Name Component
 Preparation
 Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1607

Box-building Assembly Technician

Box-building Assembly Technician assembles the electronics and electro-mechanical modules and sub-assemblies in an outer box or casing to complete the products. The individual at work is responsible for completing the product assembly by fixing sub-assemblies and modules, and connecting through routing of cabling or wire harnesses.

Qualification Pack Details:

QP NOS Reference ELE/Q5306
 QP NOS Name Box-building
 Assembly
 Technician
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1701

Wire Bonding Operator

Wire Bonding Operator is responsible for attaching the gold or metal wire to silicon die or micro-chip to lead frame or PCB. The individual at work operates the automated or semi-automated wire bonding machine to connect the die or chip to the lead frame or PCB through a micro length metal wire.

Qualification Pack Details:

QP NOS Reference ELE/Q1702
 QP NOS Name Wire Bonding
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1702

Die Bonding Operator

Die Bonding Operator is responsible for attaching the silicon die or micro-chip on a lead frame or PCB, respectively. The individual at work operates the automated pick-and-place machine to attach the silicon die or chip on a lead frame or PCB to either glue or solder them. The silicon dies, lead frames and solder are used for active components. The chip, conductive adhesive and PCB are used for LEDs.

Qualification Pack Details:

QP NOS Reference ELE/Q1701
 QP NOS Name Die Bonding
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1801 Assembly Operator Capacitor

Assembly Operator operates various machines during the different steps of capacitor production and manufactures the final product. The individual at work is responsible for various processes such as winding, flattening, protective taping, metal spraying, welding, resin filling and baking at various stages of capacitor manufacture.

Qualification Pack Details:

QP NOS Reference	ELE/Q0113
QP NOS Name	Assembly Operator Capacitor
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.1802 Winding Operator

Winding Operator winds film or wire on core using automated or semi-automated winding machines for manufacturing capacitors or resistors. The individual at work operates the semi-automated or programmed winding machine to wind metal-alloy wire or metalized film on to a core in the process of manufacturing a resistor or capacitor. The individual also sample checks the resistance or capacitance of the winding.

Qualification Pack Details:

QP NOS Reference	ELE/Q0101
QP NOS Name	Winding Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
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Title	Electrical and Electronic Equipment Assemblers
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8212.1803 Vacuum Plant Operator

Vacuum Plant Operator is responsible for operating the vacuum plant for metalizing film and evacuating moisture from the wound capacitor. The individual at work operates the vacuum plant to create vacuum for metalizing loaded films. The individual also runs the vacuum plant for removing moisture from wound capacitors.

Qualification Pack Details:

QP NOS Reference	ELE/Q0104
QP NOS Name	Vacuum Plant Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.1804 Coating, Curing and Marking Operator

Coating, Curing and Marking Operator is responsible for spraying the capacitor with zinc or aluminium oxide or dip-coating the resistor, stabilising the capacitor or resistor through curing and marking the finished capacitor or resistor. The individual at work operates the spraying machine, curing furnace as well as stamping machine or inkjet printer.

Qualification Pack Details:

QP NOS Reference	ELE/Q0110
QP NOS Name	Coating, Curing and Marking Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1805**Masking Machine Operator**

Masking Machine Operator is responsible for wrapping capacitors in Kraft-paper-tape for further processing. The individual at work sets up and operate masking machine for covering capacitors with craft paper tape for further processing.

Qualification Pack Details:

QP NOS Reference ELE/Q0116
 QP NOS Name Masking Machine
 Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1806**Pressing Machine Operator**

Pressing Machine Operator is responsible for making round capacitor flat, using pressing machine. The individual at work sets up and operates pressing machines to make round capacitors flat.

Qualification Pack Details:

QP NOS Reference ELE/Q0106
 QP NOS Name Pressing Machine
 Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1807**Manual Soldering Technician**

Manual Soldering Technician solders connecting leads and components on the capacitor coil or metal-top-assembly as per capacitor specifications. The individual at work is responsible for soldering leads and components in the process of manufacturing capacitor.

Qualification Pack Details:

QP NOS Reference ELE/Q0105
 QP NOS Name Manual Soldering
 Technician
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1808**Wave Soldering Machine Operator**

Wave Soldering Machine Operator operates the wave soldering machine to solder the assembled components on printed circuit board (PCB). The individual at work is responsible for setting up, operating and maintaining the wave soldering machine in order to solder the different lots of assembled PCBs as per prescribed quality standards.

Qualification Pack Details:

QP NOS Reference ELE/Q5303
 QP NOS Name Wave Soldering
 Machine Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.1901**Welding Operator**

Welding Operator welds the copper lead wire to the resistor using welding machine. The individual is responsible for welding the electro-tinned copper lead wire to the centre of steel and cap, bonding to the resistor by welding machine.

Qualification Pack Details:

QP NOS Reference	ELE/Q0102
QP NOS Name	Welding Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.1902**Silicone Painting Operator**

Silicone Painting Operator applies the silicone paint to the resistor for colour coding. The individual at work is responsible for applying the silicone paint to the resistor by either automated or manual method, drying it for few hours and baking in oven to make it permanent.

Qualification Pack Details:

QP NOS Reference	ELE/Q0108
QP NOS Name	Silicone Painting Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.1903**Sorting Operator**

Sorting Operator sorts the resistors after production according to the ohm value and tolerance. The individual is responsible for sorting the produced resistors using automatic or semi-automatic methods according to their ohm value and tolerance into separate bins or boxes assigned with value range marked

Qualification Pack Details:

QP NOS Reference	ELE/Q0109
QP NOS Name	Sorting Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.1904**Capping Machine Operator**

Capping Operator fixes the welded caps to ceramic substrate by semi-automatic or manual methods using toggle press machine or hand tools. The individual at work is responsible for cap punching by press fitting the welded caps to the ceramic rod for providing end terminals on either side for winding, which is done either manually or by semi-automated methods using toggle press machine or hand tools.

Qualification Pack Details:

QP NOS Reference	ELE/Q0107
QP NOS Name	Capping Machine Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2001

Energy Meter Assembly Operator

Energy Meter Assembly Operator is responsible for checking if the sensor is functional and enclosing the PCB in the outer case. The individual at work verifies the functioning of the sensor of the meter and attaches the assembled PCB to outer case.

Qualification Pack Details:

QP NOS Reference	ELE/Q7304
QP NOS Name	Energy Meter Assembly Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2002

PLC Assembly Operator

PLC Assembly Operator is responsible for completing the printed circuit board (PCB) and box assembly of the PLC components. The individual at work assembles the power supply and micro-controller PCBs, sends them for programming and completes the box assembly thereafter.

Qualification Pack Details:

QP NOS Reference	ELE/Q7305
QP NOS Name	PLC Assembly Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2003

UPS Assembly Operator

UPS Assembly Operator is responsible for assembling and wiring up of various components, modules or sub-assemblies and systems to make the complete product. The individual at work assembles and connects together the various modules and parts of the UPS unit.

Qualification Pack Details:

QP NOS Reference	ELE/Q7301
QP NOS Name	UPS Assembly Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2101

Final Assembly Operator-Magnetics

Final Assembly Operator-Magnetics is responsible for completing the assembly of wound coils on lamination for SMPS transformer, lighting coil or chokes. The individual at work fills the core, tapes and tests the assembly, applies varnish, marks and packs.

Qualification Pack Details:

QP NOS Reference	ELE/Q0114
QP NOS Name	Final Assembly Operator-Magnetics
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2201

Assembly Operator-PMD and X-Ray

Assembly Operator assembles all parts and modules of a patient monitoring device (PMD) or X-Ray machine to complete the product. The individual at work fits together different electronics and electro-mechanical parts and modules and connects them to manufacture the PMD or X-Ray machine as per product design.

Qualification Pack Details:

QP NOS Reference ELE/Q7801
 QP NOS Name Assembly Operator
 – PMD and X-Ray
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.2202

Box Assembly Operator

Box Assembly Operator assembles all the assembled modules into the box, mould or chassis to complete the medical device. The individual at work fits and connects together all modules and sub-assemblies of the device in an outer casing or box of metal or plastic moulding to produce the final product.

Qualification Pack Details:

QP NOS Reference ELE/Q7802
 QP NOS Name Box Assembly
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.2301

Module Assembly Technician

Module Assembly Technician is responsible for fixing frames and junction box in the solar module. The individual at work prepares the solar module for final assembly, frames the module and fixes the junction box with cables on the rear side of the module. The individual is also responsible for connecting the tabbing wire from the module to the junction box and soldering them.

Qualification Pack Details:

QP NOS Reference ELE/Q5802
 QP NOS Name Module Soldering
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
 Title Electrical and Electronic
 Equipment Assemblers

8212.2302

Module Soldering Operator

Module Soldering Operator is responsible for connecting solar cells by soldering to form a solar module. The individual at work connects the positive end of a solar cell to a negative end of another solar cell by soldering and repeats the process to interconnect all the required number of solar cells in an array to form the solar module.

Qualification Pack Details:

QP NOS Reference ELE/Q5801
 QP NOS Name Module Assembly
 Technician
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212

Title Electrical and Electronic
Equipment Assemblers

8212.2401

Electrical Technician

Electrical Technician is also called 'Electrical Sub-System Integrator', the Electrical Technician integrates multiple PCBs and power supply and other electrical module into the product. The individual at work integrates together modules and sub parts that form the electronic system of the product.

Qualification Pack Details:

QP NOS Reference ELE/Q6301
QP NOS Name Electrical Technician
NSQF Level 3

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.2501

Inner Layer and Pressing Operator

Inner Layer and Pressing Operator cuts the panels according to requirement, forms the inner layers of multi-layer boards pressing together to the outer layers. The individual at work shears the panels according to the desired size and thickness for all board types, and forms the inner layer of the panel by cutting, laminating, performing oxide coating and finally pressing the laminates together to form multi-layer boards.

Qualification Pack Details:

QP NOS Reference ELE/Q2101
QP NOS Name Inner Layer and
Pressing Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.2502

Drilling Operator

Drilling Operator: Also called 'Punching Operator', the Drilling Operator drills the printed circuit boards (PCB) to make holes for inserting leaded components as per the drilling specification. The individual at work is responsible for drilling the boards using machines and conducting X-Ray quality checking of the PCBs to ensure that drilling has been done according to the program, before passing it to panel plating or stores.

Qualification Pack Details:

QP NOS Reference ELE/Q2102
QP NOS Name Drilling Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

8212.2503

Routing Operator

Routing Operator is also called 'Punching Operator', the Drilling Operator drills the printed circuit boards (PCB) to make holes for inserting leaded components as per the drilling specification. The individual at work is responsible for drilling the boards using machines and conducting X-Ray quality checking of the PCBs to ensure that drilling has been done according to the program, before passing it to panel plating or stores.

Qualification Pack Details:

QP NOS Reference	ELE/Q2103
QP NOS Name	Routing Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2504**Solder Masking and Legend
Printing Operator**

Solder Masking and Legend Printing Operator is also called 'Silk Screen Operator', the Solder Masking and Legend Printing Operator is responsible for applying solder mask and printing of artwork on the printed circuit board (PCB). The individual in this job prints an epoxy-ink based solder mask using hand tools or coating machines and apply a white letter marking to indicate component placing on each side of PCB.

Qualification Pack Details:

QP NOS Reference	ELE/Q2301
QP NOS Name	Solder Masking & Legend Printing Operator
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2601**Electronic Sub-Assembly Technician**

Electronic Sub-Assembly Technician inserts various components into bare PCBs to obtain electronic sub assembly for

use in strategic products. The individual at work is responsible for inserting electronic components into a PCB and soldering the components on to the board, which is then passed on to the sub assembly integration team.

Qualification Pack Details:

QP NOS Reference	ELE/Q6303
QP NOS Name	Electronic Sub- Assembly Technician
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.2701**PCB Assembly Operator**

PCB Assembly Operator manually inserts electronic components for assembling on printed circuit board (PCB) as per the design. The individual on the job is responsible for manually placing different types of components on the PCB as per the design requirements and then soldering them.

Qualification Pack Details:

QP NOS Reference	ELE/Q7804
QP NOS Name	PCB Assembly Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8212
Title	Electrical and Electronic Equipment Assemblers

8212.9900**Electrical and Electronic Equipment
Assemblers, Other**

Electronic Equipment Assemblers, Other include workers who assemble the components or parts of electronic equipment, according to strictly laid down procedures not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8212
Title Electrical and Electronic
Equipment Assemblers

Family 8219 Assemblers, Not Elsewhere Classified

Assemblers not elsewhere classified assemble, according to strictly laid down procedures various products that do not include electronic, electrical, or mechanical components.

8219.0100 Assembler, Bicycle

Assembler Bicycle assembles different cycle components and parts to make complete bicycle. Keeps or stocks different components and parts such as frames, handles, pedals, mudguards, wheels, washers, nuts and bolts at convenient position near work table. Fits different parts together to form units such as handle bars with brake attachment, front fork, rear and front wheel, etc. Places cycle frame in special jigs and fixtures and assembles different units like handle bar, fork, wheel, driving chain, mud-guards etc. using washers, nuts and bolts to form complete cycle. Examines and tests assembled units and cycle for correct alignment. Adjusts wheel nuts and screws for proper tension of driving chain, free movement of wheels, proper functioning of brakes, etc. as necessary. Tests performance of assembled cycle and makes necessary adjustments. Oils and

greases important friction point. May perform duties in sub-assembly of free wheel mechanism, building and truing of cycle rims, fitting of tyres and tubes, mounting of pedal, etc. May assemble tricycles, perambulators, etc.

ISCO 08 Unit Group Details:

Code 8219
Title Assemblers Not Elsewhere
Classified

8219.0200 Assembler, Sewing Machine

Assembler, Sewing Machine assembles sewing machine from finished components using jigs, fixtures, hand tools, gauges etc. Collects finished components from stores and sets them in order of fitting. Assembles different units according to drawing or instructions using jigs, fixtures etc. as necessary. Fits assembled units and other components such as Crankshaft, Oscillating rock shaft, feed rockers, needle bar, lifter, bobbing housing driving wheel, handle etc. on body frame with bolts, nuts, screws etc. in order of sequence using hand tools, jigs, fixtures and other devices by further tolling if necessary. Checks alignments and makes necessary adjustments to ensure free and easy working of each part. Fixes shuttle race, needle plate, slide plate bobbing winder, etc. and gives finishing touches. Mounts completed unit on wooden base or stand according to type of machine assembled. Sets wound bobbin, fixes needle and threads it. Tests assembled machine by trial stitching and ensure desired performance by further adjustments if required. Cleans machine and oils moving parts. May assemble specific parts in order of sequence and be designated accordingly if engaged in mass production establishments.

ISCO 08 Unit Group Details:

Code 8219

Title Assemblers Not Elsewhere
Classified**8219.0300****Assembler (Plastic Product)**

Assembler (Plastic Product) performs any combination of tasks involved in assembly of plastic articles, such as bags, baby pants, coolers, fibreglass chairs, containers, trays and inflatable toys. Marks cutting lines on plastic sheet of sections to be assembled, following template. Cuts sections from sheet, using knife, scissors, or power cutting machine. Positions sections on jig and aligns seams and air valves. Brushes glue along edges of section, seals edges with hot iron or electric-sealing machine, and trims edges with scissors. Examines articles for defects, such as smeared paint, cuts, and wrinkled seams. Fills inflatable article with air and submerges it in water to detect leaks. Positions plastic patch over leak and fuses it to article, using electric sealing machine. Cleans markings and dirt from article with solvent, folds article, and places it in bag for shipment. Heats cooler brackets, using hot plate, and secures cooler, using bench fixture. Presses bracket into depressed section of cooler to attach bracket. May record number of articles packed. May sort plastic sheets in bins. May seal decorative pieces of adhesive-backed cloth on garment parts, using automatic heat sealer.

ISCO 08 Unit Group Details:

Code 8219

Title Assemblers Not Elsewhere
Classified**8219.0400****Assembler, Metal Furniture**

Assembler, Metal Furniture performs any combination of the following tasks to assemble metal furniture. Drills holes in parts, such as backrests, covers, and seats, using power drill and template. Fits parts together and fastens them temporarily with clamps and presses. Bolts, staples, or screws parts together, using hand tools, such as pliers, wrenches, pneumatic screwdrivers, and staplers. Rivets parts together, using hand or pneumatic hammer. Inserts such parts as casters and scuff plates into holes or slots. Bends fastening devices and fits interlocking parts together with hammer or rubber mallet or by striking parts against floor or workbench. Applies cement to cushions and covers, using brush or spray gun, and joins parts by hand. Pulls and fastens drawstrings, wires, or springs to join pre-cut upholstery covers to arm-rests, seats, and other parts, using hand tools. Inserts drawers into slides and adjusts slides to fit drawer surfaces. Packs furniture for shipment. May bend metal parts, using bending machines.

ISCO 08 Unit Group Details:

Code 8219

Title Assemblers Not Elsewhere
Classified**8219.9900****Paper Board, Textile and Related Products Assemblers, Other**

Paperboard, Textile and Related Products Assemblers, Other include workers who assemble the components or parts made from paperboard, textile, leather and related materials, of various types of products, according to strictly laid down procedures not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8219

Title Assemblers Not Elsewhere
Classified**Sub Division 83
Drivers and Mobile Plant Operators**

Drivers and Mobile Plant Operators drive and tend trains and motor vehicles, or drive, operate and monitor industrial and agricultural machinery and equipment, or execute deck duties on board ship and other water-borne craft.

Tasks performed by workers in this sub-major group usually include: driving and tending trains and motor vehicles; driving, operating and monitoring mobile industrial and agricultural machinery and equipment; carrying out deck duties on board ship and other water-borne craft.

Occupations in this Sub Division are classified into the following Groups:

831	Locomotive Engine Drivers and Related Workers
832	Car, Van and Motorcycle Drivers
833	Heavy Truck and Bus Drivers
834	Mobile Plant Operators
835	Ships' Deck Crews and Related Workers

**Group 831
Locomotive Engine Drivers and Related Workers**

Locomotive engine Drivers and Related Workers drive, or assist in driving, locomotive engines to transport passengers and freight, take charge of and safeguard railway freight trains during runs, control the movement of railway traffic by operating signals, switch rolling stock and clean trains in railway yards,

prepare trains for hauling in mines and control their movement.

Occupations in this Group are classified into the following Families:

8311	Locomotive Engine Drivers
8312	Railway Braker, Signal and Switch Operators

**Family 8311
Locomotive Engine Drivers**

Locomotive-Engine Drivers drive, or assist in driving, locomotive engines to transport passengers and freight.

**8311.0100
Loco Driver, Mines**

Loco Driver, Mines operates electric or diesel loco-engine to haul empty and loaded cars or tubs in mines on narrow and winding tracks. Receives instructions on haulage destination of material. Checks engine equipment, audible signals, head lights, warning bell or whistle, accumulator charge, etc. and ensures that adequate quantity of sand is stored in sand chamber for releasing on track to have adequate grip. Ensures that cars or tubs are coupled up together and linked securely to engine to prevent tipping. Manipulates control levers and pedals to start, operates and stops loco engine as needed. Lubricates and makes minor repairs to locomotive. May operate track switch and couple and uncouple cars and locomotive.

ISCO 08 Unit Group Details:

Code 8311

Title Locomotive Engine Drivers

8311.0200**Driver, Railway Engine (Steam)**

Driver, Railway Engine (Steam) drives steam engine of railway train on rail routes for transporting passengers and goods. Takes charge of engine from Loco Shunter. Examines various parts of engine for operational efficiency, drives engine from loco-shed to station yard and attaches it to train. Ensures that first coupling is properly fitted and all gauges and meters are working properly. Opens steam cock of vacuum ejector to create vacuum and receives token or line clear from Station Master. Whistles when station signals become green or lowered to indicate readiness of engine to start. Starts train on receiving signal from Railway Guard. Drives engine along scheduled route at scheduled timings regulating speed according to restrictions and cautions on railway. Exchanges signals with Guard at each station after start to ensure his presence in train. Supervises and checks work of Fireman. Checks essential parts of engine, oils them after along runs, ensures that engine contains sufficient coal and water and recoups deficiency at working. Drives engine to loco-shed on completion of journey. Fills up necessary forms, detailing major defects or required repairs and hands over engine to Loco Shunter.

ISCO 08 Unit Group Details:

Code	8311
Title	Locomotive Engine Drivers

8311.0300**Driver, Railway Engine, (Diesel)**

Driver, Railway Engine (Diesel) drives diesel engine of railway train transporting passengers and goods. Takes charge of engine from Loco Shunter after examining

various parts of engine for operational efficiency. Ensures that engine contains sufficient diesel and drives engine from loco-shed to traffic yard or station for attaching it to train with which booked. Receives token for movement from Station Master and starts train on receiving signal from Train Guard. Drives engine along scheduled route, regulating speed according to restrictions and clearance of track and keeps to scheduled timings. Exchanges signals with Train Guard en-route to maintain mutual contact. Supervises work of Cleaner and checks operation of engine by observing readings of different gauges and instruments. Drives engine to loco-shed on completion of journey, fills up necessary forms detailing required repairs and hands over engine to Loco Foreman or Loco-Shunter. Conducts running repairs in emergent cases. May also drive loco engine (steam), or petrol driven rail car.

ISCO 08 Unit Group Details:

Code	8311
Title	Locomotive Engine Drivers

8311.0400**Driver, Railway Engine (Electrical)**

Driver, Railway Engine (Electric) drives electrically propelled railway engine on scheduled rail routes for transporting passengers and goods. Takes charge of engine from Loco Shunter after examining various parts of engine for operational efficiency. Drives engine from loco-shed to railway station and ensures proper coupling. Receives line clear token and signal from Station Master and switches on engine on receiving green signal from Guard of train. Drives engine along scheduled routes, regulating speed according to restrictions and cautions on railway track. Maintains arrival and

departure of train at stations to scheduled timings. Exchanges signals with Guard after every start of train to ensure his presence in train and supervises work of assistants in engine. Drives engine to loco-shed on completion of journey, fills up necessary forms, detailing required repairs and hands over charge to Loco Shunter. May attend to running repairs of mechanical and electrical defects in engine, en-route.

ISCO 08 Unit Group Details:

Code 8311
Title Locomotive Engine Drivers

8311.0500

Driver, Shunting (Loco)

Driver, Shunting (Loco); Loco Shunter drives loco engine on rail tracks within traffic yard for formation of and breaking up of passenger and goods trains under direction of Yard Master. Takes charge of engine after checking up various parts of engine for operational efficiency. Obtains instructions from Yard Master for breaking up and formation of trains. Drives engine according to hand or yard signals from Signaller, Rly. Points Worker, Railway and Pointsman, Railway, and couples it to coaches, goods or empty waggons for placing them at required places and formation of trains. May work light train in case of emergency. May attend to minor repairs of engine and supervise work of crews in engine. May drive diesel railway engine or electric railway engine for shunting.

ISCO 08 Unit Group Details:

Code 8311
Title Locomotive Engine Drivers

8311.0601

Locomotive Driver

Locomotive Driver operates the locomotive to ensure movement of raw materials, intermediates, finished products within the plant. It includes maintaining log book for performance parameters and working condition of locomotive.

Qualification Pack Details:

QP NOS Reference ISC/Q0006
QP NOS Name Locomotive Driver
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8311
Title Locomotive Engine Drivers

Family 8312

Railway Braker, Signal and Switch Operators

Railway Brakers, Signallers and Shunters take charge of and safeguard railway freight trains during runs, control the movement of railway traffic by operating signals, switch rolling stock and clean trains in railway yards, prepare trains for hauling in mines and control their movement.

8312.0100

Signalman, Railway

Signalman, Railway; Cabinman controls flow of railway traffic over section of line within his jurisdiction by operating signals recorded on the control graph and setting of points from control tower or cabin under instructions from Station Master. Receives and transmits information about train's movement by bell signal or telephone after exchanging secret numbers from train dispatcher or station

master at Railway Station. Operates lever on which slot is transferred by train dispatcher. Controls movement of shunting traffic within railway yards by setting points and lowering signals when signalled by shunting worker and Pilot Worker. Adjusts distant signals by slackening signals wires at night and tightening them in morning by adjusting screws and reports defects to senior officers. Signals trains at night when visibility is poor using hand lamp, fixing fog signals on railway line at fixed distances to restrict speed or to stop train in emergency during day or night when signals are off or to allow train to proceed further. Maintains contact with station master through telephone and provides information about traffic movement on lines within his jurisdiction. Keeps contact with shunting worker through hand signals for proper shunting operations. Cleans and oils levers to keep them in perfect, order. May control opening and closing of gates at level crossings; may light signal lights at night at small railway stations.

ISCO 08 Unit Group Details:

Code 8312

Title Railway Braker, Signal and Switch Operators

8312.0200

Shunting Worker

Shunting Worker; Pilot Worker; Points Worker (Railway) supervises work of Pointsmen Railway operation of points and setting of railway lines in non-interlock yard and guides movement of shunting engine in railway yard for attaching to or detaching waggons and carriages from trains. Receives directions from Station Master or Yard Master regarding shunting of trains in yard or

movement of waggons, carriages in yard from one place to another. Informs cabinman and pointsman concerned about shunting plan; directs shunting engine driver using hand flag lamp etc. for movements of engine when points are set to form trains. Supervises setting of lines and completes coupling and uncoupling of carriages and waggons within prescribed time. May couple or uncouple waggons and carriages in absence of Pointsmen.

ISCO 08 Unit Group Details:

Code 8312

Title Railway Braker, Signal and Switch Operators

8312.0300

Points Man, Railway

Pointsmen, Railway operates hand points for setting railway lines under instructions of Points Worker or Station Master in non-interlock and non-signal lines for shunting and arrival and departure of trains. Sets points under instructions from Station Master or Points Worker. Locks facing-points in non-interlock yards or non-signal lines for safeguard against derailment of train; signals trains using hand flag or light to proceed in right direction. Ensures that other connected lines are clear of obstruction and brake of stationery train is away from fowling mark (a mark indicating the minimum distance required between two lines). May couple and uncouple waggons and coaches during shunting of trains.

ISCO 08 Unit Group Details:

Code 8312

Title Railway Braker, Signal and Switch Operators

8312.0400

Traffic Shunter, Railway

Traffic-Shunter, Railway marshals goods and passenger trains in station yard according to instructions received. Receives instructions from Yard Foreman regarding formation of train, attaching or detaching coaches and waggons to and from trains, shifting empty or through coaches and waggons on sidings etc. Sets lines according to plan and signals Loco Shunter to proceed towards directions indicated. Attaches coaches or waggons by screwing hooks for tightness or unscrews hooks for breaking or re-arranging train or detaching engine, as required.

ISCO 08 Unit Group Details:

Code 8312

Title Railway Braker, Signal and Switch Operators

8312.0500

Braker, Passenger Train

Braker, Passenger Train performs any combination of following duties on passenger train: Inspects equipment, such as couplings, air hose, journal boxes, and handbrakes, to ensure that they function properly. Assists passengers to board and leave train. Places passengers' baggage in rack above seats on train. Answers questions from passengers concerning train rules, station, and timetable information. Turns knobs and pushes switches on control panel to regulate air-conditioning, heating, and lighting on train for comfort of passengers. Sets warning signals, such as flares, flags, lanterns, or torpedoes, in front of and at rear of train during emergency stops to warn oncoming trains. Makes minor repairs to couplings, air hoses, and journal boxes, using hand tools. Reports to Guard,

Passenger Train if any equipment requiring major repair.

ISCO 08 Unit Group Details:

Code 8312

Title Railway Braker, Signal and Switch Operators

8312.9900

Pointsmen, Signalmen and Shunters, Railways, Other

Pointsmen, Signalmen and Shunters Railways, Other include all other workers engaged in setting lines, signalling and shutting railway coaches, engines etc., not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8312

Title Railway Braker, Signal and Switch Operators

Group 832

Car, Van and Motorcycle Drivers

Car, Van and Motorcycle Drivers drive and tend motor cycles, motorized tricycles, cars or vans to transport passengers, materials or goods.

Occupations in this Group are classified into the following Families:

8321	Motorcycle Drivers
8322	Car, Taxi and Van Drivers

Family 8321 Motorcycle Drivers

Motor-Cycle Drivers drive and tend motor cycles or motorised tricycles equipped to transport materials, goods or passengers.

8321.0101**Driver Auto Rickshaw**

Driver, Auto Rickshaw; Driver, Motor Cycle Rickshaw drives auto rickshaw on hire or as paid employee for transporting men and material, observing traffic rules and signals. Cleans and washes vehicle and does running repairs. May maintain book of journey.

Qualification Pack Details:

QP NOS Reference	ASC/Q9713
QP NOS Name	Auto Rickshaw Driver
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8321
Title	Motorcycle Drivers

8321.0200**Despatch Rider**

Despatch Rider delivers urgent messages, telegrams and important communications to addressees, riding auto or motor cycle, bicycle, etc. Receives urgent official messages, telegraphic or otherwise, from authorities for quick delivery to addressees. Keeps messages, telegrams for records in bag for security and carries them riding motor cycle, auto cycle, etc. according to road condition for delivery. Obtains receipt of delivery on peon book. May deliver dak in villages, riding on cycle or horse.

ISCO 08 Unit Group Details:

Code	8321
Title	Motorcycle Drivers

8321.0201**Delivery Associate/Two Wheeler
Delivery Associate**

Delivery Associate; Two wheeler delivery associate also is called as pizza boy/courier boy based on the goods he delivers or a dispatch rider. Individuals at this job need to safely and quickly deliver the goods to the intended customers using two wheelers as mode of transport

Qualification Pack Details:

QP NOS Reference	ASC/Q9710
QP NOS Name	Two Wheeler Delivery Associate
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8321
Title	Motorcycle Drivers

8321.9900**Motorcycle Drivers, Other**

Motorcycle Drivers, Other include drivers who drive and tend motor cycles or motorised tricycles equipped to transport materials, goods and passengers not elsewhere classified.

ISCO 08 Unit Group Details:

Code	8321
Title	Motorcycle Drivers

Family 8322**Car, Taxi and Van Drivers**

Car, taxi and van drivers drive and tend motor cars and vans to transport passengers, mail or goods.

8322.0100**Driver, Car**

Driver, Car, Chauffeur drives motor car according to owner's requirement as paid employee. Observes road signals and

traffic rules. Attends to minor repairs. May wash and polish car and maintain log book for journey. May also do odd jobs and run office or house-hold errands.

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

8322.0101

Chauffer, Driver Personal

Chauffeur, Driver, Personal driver attached to an owner for driving their transport vehicle for commuting from one destination to another within the city/out station trips. Essentially at this level the individual is expected to drive high end vehicles and deal with senior members of the society, tourists, and foreigners.

Qualification Pack Details:

QP NOS Reference ASC/Q9711
QP NOS Name Chauffer Level 5
NSQF Level 5

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

8322.0102

Chauffer, Cab Driver

Chauffer needs to drive for long and awkward hours and unpredictable schedules. Individual must be polite and dependable with the ability to remain calm and composed under stressful conditions of traffic and demanding customers.

Qualification Pack Details:

QP NOS Reference ASC/Q9712
QP NOS Name Chauffer Level 4
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

8322.0201

Driver, Taxi

Driver, Taxi Car drives motor car, observing road signals and traffic rules, to transport passengers from one place to another on hire, based on length of travel or as recorded in meter. Loads and unloads baggage when necessary and attends to minor repairs. Maintains account and renders it to owner, if necessary.

Qualification Pack Details:

QP NOS Reference ASC/Q9705
QP NOS Name Taxi Driver
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

8322.0301

Driver, Ambulance

Driver, Ambulance drives ambulance to transport sick, injured, or convalescent persons. Assists in placing patient on stretcher in ambulance; adjusts stretcher in secure position; takes sick or injured persons to hospital or to destination; exercises care in driving ambulance to avoid sudden motions, detrimental to patients; changes soiled linen on stretcher; administers first aid; maintains log-book of journeys performed. May shackle violent patients.

Qualification Pack Details:

QP NOS Reference ASC/Q9706
QP NOS Name Ambulance Driver
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

8322.0501**Light Motor Vehicle Driver**

Light Motor Vehicle Driver or simply Driver. needs to drive safely on the assigned route with or without Company of a senior driver and will be in employment/or hired for a duration. This is also applicable to drivers commercially working in the employment of a car owner or commercial drivers' pool. Individual needs to have a valid LMV Learners driving Licence or LMV driving licence.

Qualification Pack Details:

QP NOS Reference ASC/Q9702
QP NOS Name Light Motor Vehicle Driver Level 3
NSQF Level 3

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

8322.9900**Car, Taxi and Van Drivers, Other**

Car, Taxi and Van Drivers, Other include drivers who drive and tend motor cars and vans to transport passengers, mail or goods not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8322
Title Car, Taxi and Van Drivers

Group 833**Heavy Truck and Bus Drivers**

Heavy Truck and Bus Drivers drive and tend heavy trucks, Lorries, buses or street

tramcars to transport goods, liquids, heavy materials, mail or passengers.

Occupations in this Group are classified into the following Families:

8331	Bus and Tram Drivers
8332	Heavy Truck and Lorry Drivers

**Family 8331
Bus and Tram Drivers**

Bus and tram drivers drive and tend buses or street tramcars to transport passengers, mail or goods.

8331.0100**Tram Car Driver**

Tram Car Driver drives electric tram cars on scheduled routes in cities for transporting passengers to different localities. Checks before start that tram is in perfect running condition and all requisite material such as sidelights, tail lamp, gong, first aid box, etc. are provided in it; starts tram at scheduled time under directions or signal from Depot Starter, Tram; controls movement of tram in response to traffic signals, and signals given by Tram Conductor; studies running time schedules and adjusts movement of tram i.e. arrival and departure at specific places, accordingly, or acts under instructions from Traffic Regulator, Tram assists passengers in emergency; directs Poleman, Tram to connect tram car pole with overhead electric line in required direction, keeps simple record of defects noticed in tram or in track. May collect fares and issue tickets in small tram or in absence of Tram Conductor.

ISCO 08 Unit Group Details:

Code 8331
Title Bus and Tram Drivers

8331.0200**Trolley Driver**

Trolley Driver drives electrically or mechanically operated trolleys on rails for carrying material within or outside mills, factories or industrial areas; operates electrically or mechanically driven trolley to haul raw material, finished products, fuel and other material from one place to another within mills, factory, etc.; takes necessary precaution and restricts speed while driving within production centre as safeguard against hazards.

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0300**Driver, Bus**

Driver, Bus drives bus to transport passengers from one place to another either over long distance or in urban area. Checks fuel, oil, water, lights, brakes, destination board, etc. Ensures that vehicle is provided with tools and documents required under Motor Vehicle Act, such as registration book, road permit, complaint book, first aid box etc., before commencing run. Drives bus according to time schedule on prescribed route observing road signals and traffic rules. Starts and stops according to signals from Bus Conductor to pick up and drop passengers at recognised stops or on request.

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0301**Commercial Vehicle Driver**

Commercial Vehicle Driver needs to drive safely on the assigned route. Individual needs to have a valid HMV driving Licence and PSV badge. Individual is expected to Drive a commercial vehicle including LCV, pickup trucks, bus, maxi cab, school van, transport vehicles and ensuring safety of passengers/goods as well as public on the road. This role requires the individual to possess relevant technical skills to handle most of the routine break downs that could likely be encountered while driving long distances and through difficult terrains. The individual is also expected to achieve other key performance parameters like fuel efficiency and on time delivery etc.

Qualification Pack Details:

QP NOS Reference	ASC/Q9703
QP NOS Name	Commercial Vehicle Driver-Level 4
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0302**Commercial Vehicle Driver-Assistant**

Commercial Vehicle Driver-Assistant, Tempo Driver, Bus Driver or simply Driver. Individuals at this job need to drive safely on the assigned route with or without company of a senior driver. Individual needs to have a valid HMV driving Licence and PSV badge. Individual is expected to drive a commercial vehicle including LCV, pick-up trucks, bus, maxi cab, school van, heavy commercial vehicles (within city limits or in company of senior driver on long routes) and ensuring safety of passengers/goods as well as public on the road. The individual is also expected to

achieve other key performance parameters like fuel efficiency, on time delivery etc.

Qualification Pack Details:

QP NOS Reference	ASC/Q9702
QP NOS Name	Commercial Vehicle Driver-Level 3
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0400

Driver, Fire Brigade Vehicles

Driver, Fire Brigade Vehicle drives heavy motor vehicle equipped with firefighting material for fighting fires or other rescue operations. Keeps fire brigade vehicle ready, duly equipped with material, to proceed to requisite site instantly; drives speedily, on receipt of instructions from Control Room to affected site following shortest route and sounding alarm; assists fire fighters in fixing ladders, connecting hoses etc. May ignore traffic signals to save time.

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0500

Driver Road Test

Driver, Road Test; Test Driver; Vehicle Tester (Automobile) drives completed or experimental automotive vehicles under test conditions to detect mechanical and structural defects and to determine repairs required. Examines automobile, truck or bus before road testing to ensure that all equipment, such as electrical wiring, hydraulic lines and fan belt are

installed as specified, and verifies that vehicle has been serviced with oil, gas and water; starts engine and listens for sounds indicative of malfunctions of part or parts; drives vehicles over test tracks, city streets or highways, noting performance of clutch, gears, brakes and other parts of vehicle; tests motor tuning, cylinder compression, fuel consumption, wheel alignments, steering, horns, heater, wiper and power windows using testing devices; reports finding to supervisor or customer and recommends repair required. May examine disassembled engine, differential, or other parts during repair.

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0501

Test Driver

Test Driver is responsible for conducting various types of outdoor tests on automobile prototype in a simulated on road test environment and actual conditions to ensure proper measurement of the performance of the running proto vehicle and documenting all observations during the tests.

Qualification Pack Details:

QP NOS Reference	ASC/Q8402
QP NOS Name	Test Driver
NSQF Level	5

ISCO 08 Unit Group Details:

Code	8331
Title	Bus and Tram Drivers

8331.0600

Signalman, Tram

Signalman, Tram guides operation of tram cars on single track by signalling with flag

or light. Gets acquainted with traffic rules, busy hours of work and any other special instructions issued by traffic authorities, ensures that traffic, control lights are in order, operates switches at control points for directing trams to their various destinations. May signal tram to stop or to proceed by waving red or green flags. May be designated as POINTSMAN TRAM, if engaged only in setting control points for directing trains to respective directions.

ISCO 08 Unit Group Details:

Code 8331
Title Bus and Tram Drivers

8331.9900

Bus and Tram Drivers, Other

Bus and Tram Drivers, Other include drivers who drive and tend buses or street tramcars to transport passengers, mail or goods not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8331
Title Bus and Tram Drivers

Family 8332

Heavy Truck and Lorry Drivers

Heavy-truck and lorry drivers drive and tend heavy motor vehicles to transport goods, liquids and heavy materials over short or long distances.

8332.0100

Driver Truck

Driver, Truck drives motor truck for transporting goods from one place to

another, observing road signals and traffic rules. Checks fuel, oil, water, lights, brakes etc., and ensures that vehicle is provided with tools, tarpaulin and all documents required under Motor Vehicles Act such as registration book, fitness certificate, route permit, etc., before commencing run. Attends to running repairs and keeps truck in working order. May make deliveries, collect payments and obtain and issue receipts.

ISCO 08 Unit Group Details:

Code 8332
Title Heavy Truck and Lorry Drivers

8332.0200

Tram Car Driver (Mines)

Tram Driver, Mines drives electric cars for transporting mining material on surface or underground in small waggons, tubs etc. Inspects engine, electric connections, gasoline etc. provided in tram-car; attaches empty small waggons or tubs to tram car and positions them for loading mining material; shunts and detaches loaded waggons on surface or underground for transportation of material to other places through trolley or other vehicles; attaches empty waggons for repeating process; inspects engine or power line at end of shift. May manipulate levers to open or tilt cars to dump material; may fuel and lubricate the engine.

ISCO 08 Unit Group Details:

Code 8332
Title Heavy Truck and Lorry Drivers

8332.9900

Heavy Truck and Lorry Drivers, Other

Heavy Truck and Lorry Drivers, Other include drivers who drive and tend heavy

motor vehicles to transport goods, liquids and heavy materials over short or long distances not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8332

Title Heavy Truck and Lorry Drivers

Group 834

Mobile Plant Operators

Mobile Plant Operators drive, tend, operate and monitor special-purpose motorised, machinery or equipment used for clearing or preparing land; digging, moving, and spreading earth, rock and similar materials; and lifting or moving heavy objects.

Occupations in this Group are classified into the following Families:

8341	Mobile Farm and Forestry Plant Operators
8342	Earth Moving and Related Plant Operators
8343	Crane, Hoist and Related Plant Operators
8344	Lifting Truck Operators

Family 8341

Mobile Farm and Forestry Plant Operators

Mobile Farm and Forestry Plant Operators drive, tend, operate and monitor one or more types of special-purpose motorised, mobile machinery or equipment used in agricultural, horticultural and forestry operations.

8341.0101

Tractor Operator, Farm

Tractor Operator, Farm; Tractor Driver, Farm operates and services farm tractor having different attachments for ploughing, harrowing, harvesting and other agricultural operations. Checks different parts of tractor to ensure that it is in proper working order. Collects, attaches and adjusts special equipment, required for different operations of tractor. Feeds tractor with fuel and demarcates land for ploughing. Starts tractor and drives it through fields at regulated speed depending on nature of soil and work. Controls operation of different attachments including turning of wheels by operating levers and pedals as required. Tows trailers laden with crops and other materials when required. Cleans and oils machine. Maintains tractor and other implements in good working order and keeps record of fuel consumption. May supervise work of Helpers. May detect mechanical defects and undertake minor repairs.

Qualification Pack Details:

QP NOS Reference AGR/Q0401

QP NOS Name Tractor Operator

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8341

Title Mobile Farm and Forestry Plant Operators

8341.0200

Operator, Farm Machines

Operator, Farm Machines operates and maintains various kinds of power, animal or hand driven farm machines used in agricultural, dairy, poultry and other farms. Fits and adjusts special equipment intended to be used in different power, hand or animal driven farm machine. Outlines area for operation. Harnesses

animals to machine or implement and adjusts it if necessary. Drives power or animal driven machine through fields at regulated speed. Controls movements and operations of machine and attachments by operating levers or paddles as necessary. Checks performance, ensures efficient running, and refuels and lubricates machine when needed. Keeps machines and other implements cleaned, lubricated and in good working order. Maintains record of food and fuel consumption. May supervise work of helpers. May do minor repairs to machines and attend to minor ailments of animals used. May be designated according to machine handled.

ISCO 08 Unit Group Details:

Code 8341

Title Mobile Farm and Forestry Plant Operators

8341.0201

Harvesting Machine Operator

Harvesting Machine Operator, also known as Combine Harvester Operator, is responsible for safe operation and day-to-day maintenance of harvesting machine. The individual at work sets up the harvesting machine for day's work by conducting pre-start procedures, operate the machine to harvest the crop, perform machine shut down procedure, does its day-to-day maintenance and takes up basic repair of the harvesting machine to keep it operational during critical harvest time.

Qualification Pack Details:

QP NOS Reference	AGR/Q1002
QP NOS Name	Harvesting Machine Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code 8341

Title Mobile Farm and Forestry Plant Operators

8341.0300

Tractor Driver, Construction

Tractor Driver, Construction operates petrol or diesel powered tractor to haul vehicles or implements such as trailers, waggon, graders, etc. for pushing, pulling or moving goods and material or dumping earth. Checks engine oil, radiator water, diesel or petrol supply and other important greasing points of vehicles. Checks that brakes and pedals of vehicle are in good condition. Fastens attachments, such as graders, trailers, ploughs, and rollers to tractor with hitch pins; releases brakes, shifts gears, and depresses, accelerator or moves throttle to control forward and backward movement of machine; steers tractor by turning steering wheel and depressing brake pedals. May couple and uncouple loads to and from tractor. May lubricate and repair tractor and attachments. May be designated according to type of power utilised as DIESEL TRACTOR OPERATOR OR GASOLINE-TRACTOR OPERATOR.

ISCO 08 Unit Group Details:

Code 8341

Title Mobile Farm and Forestry Plant Operators

8341.9900

Farm Machinery Operators, Other

Farm Machinery Operators, Other include all other workers engaged in operating farm machinery for agricultural purposes, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8341
 Title Mobile Farm and Forestry Plant
 Operators

Family 8342

Earth Moving and Related Plant Operators

Earth Moving and Related Plant Operators operate machines to excavate, grade, level, smooth and compact earth or similar materials.

8342.0101 Bulldozer Operator

Bulldozer Operator operates bulldozer (caterpillar tractor with concave steel scrapper blade mounted in front of chassis) to move, distribute and level earth. Starts motor and adjusts hand lever to regulate height of scrapper blade from ground; engages clutch and releases brake to drive machine to push earth; operates levers to level and distribute it; lubricates, fuels and makes minor repairs to machine. May push and pull other equipment with bulldozer.

Qualification Pack Details:

QP NOS Reference	MIN/Q 0401
QP NOS Name	Bulldozer Operator
NSQF Level	4

ISCO 08 Unit Group Details:

Code	8342
Title	Earth Moving and Related Plant Operators

8342.0200 Scrapper Operator

Scrapper Operator operates scrapper (power-driven machine fitted with mechanical scrapping device) to scrape and level earth. Checks engine for fuel and oil supply, and water in radiator; starts engine and checks for proper functioning of various levers and controls; attaches double or four-wheeled scrapper attachment to tractor; drives tractor to place of work; operates levers to release scrapping device (adjustable cutting blade and scoop); runs tractor over desired area to dig up earth, level and load it automatically into container; drives tractor to dumping location to unload earth from container. Repeats process until area scrapped to desired depth and levelled; lubricates, fuels and makes minor repairs to machine. May attend to minor repairs. May drive tractor for handling heavy goods and equipment. May operate special types of scrapping machines.

ISCO 08 Unit Group Details:

Code	8342
Title	Earth Moving and Related Plant Operators

8342.0301 Scrapper Loader Operator/Loader Operator

Scrapper Loader Operator operates mechanical scrapper loader fitted to tractor to cut, remove and convey earth or other material and load it in dumper. Adjusts toe (cutting device) fitted to scrapper to cut into earth at desired angle and position; manipulates lever on control panel of tractor to start machine to cut, remove, convey material and load into dumper placed nearby. May make repairs to equipment.

Qualification Pack Details:

QP NOS Reference	MIN/Q 0407
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QP NOS Name Loader Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8342
Title Earth Moving and Related Plant
Operators

8342.0400

Grader Operator

Grader Operator; Road Grader operates power-driven machine fitted with adjustable steel blades to level ground by pushing earth to sides. Checks fuel supply, radiator water and oil level in engine; fixes, at required angle, appropriate steel blade to arm of machine, depending on type of grading; rides in control cab, starts motor, moves levers and adjusts hand-wheels, and regulates height of scrapper blade over area of work; drives machine over centre of roadway, scrapping earth and pushing ridges of earth to edge for removal; continues the process repeatedly to level ground to required condition; tilts or changes position of blades for ground to be prepared; cleans, oils and greases machine parts. May attend to minor repairs. May operate special types of grading machines.

ISCO 08 Unit Group Details:

Code 8342
Title Earth Moving and Related Plant
Operators

8342.0501

Power Shovel Operator/Excavator Operator

Power Shovel Operator; Excavating Shovel Operator operates power-driven shovel to excavate, move and load earth, rock, sand, gravel and other material for earth removing and construction work. Checks

fuel and oil level in engine and water in radiator; starts and runs engine to ensure that various levers and controls are in good working order; drives vehicle to work site; operates hand and foot levers to lower and move shovel, fill it with material and swing it over conveyance or dumping location; pulls rope to allow bottom of shovel to open and release material; moves machine forward or backward to facilitate work; makes minor repairs to machine. May maintain power unit. May be designated as GRAB-BUCKET OPERATOR, if operates power-driven machine, equipped with hinge-type bucket attachment, for excavating and moving earth, rock or similar materials.

Qualification Pack Details:

QP NOS Reference MIN/Q 0404
QP NOS Name Excavator Operator
NSQF Level 4

ISCO 08 Unit Group Details:

Code 8342
Title Earth Moving and Related Plant
Operators

8342.0600

Bucket Wheel Excavator Operator

Bucket Wheel Excavator Operator operates power-driven machine equipped with loading and cutting boom bearing rotating bucket wheel with teeth for excavating and moving earth, rock or similar materials and to discharge contents on to conveyor system. Moves machine under its own power to location of work. Moves hand and foot levers to place jib (boom) with bucket directly above excavating point; manipulates levers and switches on operating panel of machine to start or stop excavator; operates lever to raise, dip or swing boom in required direction and position;

observes meters and gauges to regulate cutting of earth, to drop open bucket into material, to close and lift filled bucket, to swing jib and place bucket, and to release material on conveyor belt for transporting to processing point. Makes minor repairs to machine.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.0700

Trench Digging Machine Operator

Trench Digging Machine Operator operates power-driven machine mounted on wheels or chains and equipped with devices for digging trenches, such as those for sewer, water, drainage, oil and gas pipelines. Starts engine and pulls levers to control movement of caterpillar treads to move machine into position; engages excavating mechanism and moves hand levers to start or stop digging equipment, and to raise or lower it for correct depth of trench; makes minor repairs to machine. May set up line along which machine is guided.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.0800

Dragline Operator

Dragline Operator operates power-driven machine equipped with dragline bucket for excavating and moving earth, rock, gravel or similar materials. Checks fuel and oil level in engine and water in radiator; starts and runs engine to test and ensure good performance of all

components, moves machine under its own power to location of work; moves hand and foot levers to place jib (boom) with bucket above excavation point, lower bucket on desired spot, drag it towards machine and fill it with material, place bucket over unloading point, tilt bucket, and release material. Makes necessary repairs to machine, and follows proper operating and safety conditions.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.0900

Dredger Operator

Dredger Operator operates power-driven equipment mounted on dredge for excavating rock or removing silt from navigation channel to enable seagoing vessels to enter and leave harbour. Directs and supervises crew in placing dredge in position for excavating; starts and stops engines for operating excavating equipment; watches tide gauge and adjusts excavating mechanism to work uniformly; operates ladder excavating equipment, by manipulating levers and hand-wheels to raise or lower jib (boom) equipped with endless chain of steel buckets, and observing contents of buckets to ascertain type of material being excavated; operates hydraulic excavating equipment by pushing or pulling levers to raise or lower frame on which suction pipe and cutter head are mounted, and by starting and stopping rotation of cutter head; observes vacuum and pressure gauges to determine whether sand or water is being raised; operates dipper or hinged bucket excavating equipment by manipulating hand and foot levers to raise or lower

dipper or buckets into water, and by adjusting position of jib for loading or unloading dipper or bucket. May change position of dredge by drawing in or letting out anchor cables. May make repairs to equipment. May be designated according to type of excavating equipment on dredge.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1000

Boom Driver

Boom Driver signals and assists Dredger Operator for correct lowering and raising of dredger dipper arm to remove silt or rocks from navigation channel and port mouth. Operates hand and foot levers to raise or lower dipper or buckets into and out of water, and to adjust position of jib for loading or unloading dipper or bucket; ensures firm pushing of dipper arm in seabed by observing gauges; operates controls to open bucket for dumping dredged material at proper place, signalling Dredger Operator to move dredge.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1100

Pile Driver

Pile Driver; Jack Hammer Operator operates power-driven or manually operated machine equipped with pneumatic, steam or drop-hammer for driving wooden, concrete or steel piles into dry ground, or water-bed for construction work. Moves hand and foot

levers to move machine into position for driving piles; hoists pile and lowers it into position for driving; ensures that all drag lines and cables are in good condition, and that power or drop-hammer tied to lift pile tube securely, manipulates controls to operate hammer; makes adjustment on hoisting engine, repairs and maintaining machine. May operate air-compressor when using pneumatic power hammer. May direct or assist other workers in setting up pile-driver leads and machinery. May be designated according to equipment used, as COMPRESSED-AIR PILE DRIVER; DIESEL-PILE-DRIVER/OPERATOR; ELECTRIC-PILE-DRIVER/OPERATOR; POWER HAMMER-PILE DRIVER OPERATOR; STEAM-PILE-DRIVER OPERATOR, or according to kind of piles driven as SHEET-PILE-DRIVER OPERATOR; WOOD-PILE-DRIVER OPERATOR.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1201

Dumper Operator/Dumper/Tipper Operator

Dumper Operator; Dump Truck Driver operates power-driven motor truck, dumping unit vehicle, or caterpillar vehicle with dumper at its rear for transporting loose material, such as sand, gravel, crushed rock, or coal. Drives loaded truck to dumping site and manipulates levers inside cab which control dumping mechanism, or turns hand crank on side of truck to raise truck body to dump load. Moves truck forward and backward to loosen and dump material adhering to side and floor of body. May operate mechanical loading equipment. May clean

and lubricate vehicle and conduct running repairs.

Qualification Pack Details:

QP NOS Reference MIN/Q 0403
 QP NOS Name Dumper/Tipper
 Operator
 NSQF Level 4

ISCO 08 Unit Group Details:

Code 8342
 Title Earth Moving and Related Plant
 Operators

8342.1202

Dumper Operator

Dumper Operator drives a heavy specialized truck used to haul large volumes of over burden, rock or ore over short distances. The Dumper Operator then uses the body hoist control lever to tip the rear part of the truck in order to discharge its load to rear, bottom or one side of the truck. Dumper Operators are responsible to check that their safety systems are working properly and for performing basic maintenance on the Dumper.

Qualification Pack Details:

QP NOS Reference ISC/Q0003
 QP NOS Name Dumper Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8342
 Title Earth Moving and Related Plant
 Operators

8342.1300

Scoop Truck Operator

Scoop Truck Operator operates truck equipped with tilting scoop attachment to

load and move loose materials, such as sand, fertilizer, etc., in warehouse or other establishment. Starts truck and moves lever to lower scoop; drives truck forward to push scoop into heap of material to be moved; fills scoop, raises it, and drives truck forward until scoop is over storage bin or dumping location; moves lever to tilt scoop forward and empty its contents; repeats operation to move required quantity of material. May operate truck with drop-bottom scoop to load, remove and discharge loose material by opening and closing bottom. May clean and lubricate vehicle. May conduct running repairs to vehicle.

ISCO 08 Unit Group Details:

Code 8342
 Title Earth Moving and Related Plant
 Operators

8342.1400

Tripler Machine Operator

Tippler Machine Operator operates power-driven tipping machine to tip open waggon for unloading coal or other materials from it. Observes loaded waggon pushed into position to platform of tipping machine; ensures fastening of waggon securely to platform with chain or other contrivance to avoid derailment; manipulates levers and switches on tippler machine to tip waggon to empty contents or load conveyor or other tank and bring back waggon to position. Repeats process with other loaded waggons.

ISCO 08 Unit Group Details:

Code 8342
 Title Earth Moving and Related Plant
 Operators

8342.1500

Conveyor Operator

Conveyor Operator operates power-driven endless chain or conveyor belt at constant speed to transport material continuously to required place. Starts and stops conveyor by manipulating motor switches and clutch levers; adjusts movement of conveyor at required speed; regulates flow of material according to instructions or knowledge of process by switching conveyors at interjection points, opening and closing chute slide, and adjusting conveyor scales and cut-offs to deposit desired amounts of materials at process points; maintains constant surveillance of conveyor operations to prevent break-downs; ensures pulleys, rollers and other mechanism does not get jammed or heated. Oils and tightens conveyor parts and joints; makes repairs to conveyor belt and driving mechanism. May transfer material from one conveyor to another by manipulating levers. May be designated as BUCKET-CONVEYOR OPERATOR, if tends bucket-type conveyors used to convey crushed rock, lime or other loose materials.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1600

Spreader Operator

Spreader Operator operates power-driven machines equipped with receiver and spreader boom to receive earth or other material from main conveyor and spread it at specified site. Starts and stops machine; manipulates levers to raise, dip and swing spreader boom in desired position; moves machine under its own power to specified location and operates

lever to swing boom and spread material. Makes minor repairs to machine.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1700

Road Roller Driver

Road Roller Driver drives steam or diesel road roller to consolidate and level road, pavement or other surface to desired compact and smoothness. Checks fuel, oil and water supply in engine; starts engine and drives roller backward and forward over surface wheel; repeats operation over various layers of materials used in making roads or similar works of construction, until desired compactness or smoothness has been obtained. Oils and greases machine and makes minor repairs.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1800

Bitumen Mixing Machine Operator

Bitumen Mixing Machine Operator; Coal-Tar Mixing Machine Operator operates mobile power-driven bitumen or coal tar mixing machine to mix bitumen or coal tar with gravel for paving roadway, airstrip under construction or repair, or for coating roofs to make them water-proof. Starts and regulates fires under boiler or power unit, asphalt heating kettles, and aggregate drying drum; starts and stops various units by manipulating hand levers. Ensures aggregate and bitumen are at proper temperature, by observing heat recording device; manipulates levers on

pumps which supply asphalt to kettles or mixing box; obtains test reports or makes own tests to ensure that mixer conforms to specifications. Oils and greases machine. May make minor repairs to the machine.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.1900

Sand Blast Operator, Construction

Sand Blast Operator, Construction directs blast of sand compressed air from nozzle against stone, brick structure, or other hard surface to clean dirt, grease, etc. prior to laying of cement concrete, plastering, etc. Examines surface for sand blasting; fills sand container with sifted sand; connects compressed-air hose to sand container and nozzle and adjusts pressure valve; wears heavy gloves to protect hands, and helmet or hood as protection against breathing sand-laden air and to protect eyes; holds nozzle at proper distance from object and releases trigger finger of nozzle to blow sand against surface of object; cleans and prepares surface for further processing.

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.2001

Excavator Operator

Excavator Operator drives and controls an excavator which is a self-propelled machine used to dig and dump over the base level of the machine.

Qualification Pack Details:

QP NOS Reference ISC/Q0004

QP NOS Name Excavator Operator

NSQF Level 3

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.2101

Mobile Equipment Operator

Mobile Equipment Operator inspects mobile equipment like Fork Lift truck, Skid-loader/Bob Cat, Pay loader and JCB, as used in steel plant for proper working condition, loading and driving the vehicle for carrying materials from one place to another inside the plant. This job also involves carrying out basic maintenance of the equipment.

Qualification Pack Details:

QP NOS Reference ISC/Q0015

QP NOS Name Mobile Equipment Operator

NSQF Level 3

ISCO 08 Unit Group Details:

Code 8342

Title Earth Moving and Related Plant Operators

8342.2201

Stoking Car Operator Ferro Alloys

Stoking Car Operator Ferro Alloys inspects the stoking car is in proper condition ensuring run/drives on the shop floor for stoking the charge and to release the gases between the electrode without touching the electrodes. It involves covering the arc properly and distribute

the charge uniformly. It also involves carrying out basic maintenance of the stoking car.

Qualification Pack Details:

QP NOS Reference	ISC/Q1101
QP NOS Name	Stoking Car Operator Ferro Alloys
NSQF Level	3

ISCO 08 Unit Group Details:

Code	8342
Title	Earth Moving and Related Plant Operators

8342.9900 Earth Moving and Related Plant Operators, Other

Earth Moving and Related Plant Operators, Other include workers who operate and monitor machines to excavate, grade, level and compact earth or similar materials and lay surfaces of asphalt and concrete not elsewhere classified.

ISCO 08 Unit Group Details:

Code	8342
Title	Earth Moving and Related Plant Operators

Family 8343 Crane, Hoist and Related Plant Operators

Crane, Hoist and Related Plant Operators operate and monitor stationary and mobile cranes and other hoisting equipment.

8343.0100 Driver, Steam Crane

Driver, Steam Crane operates steam-driven crane for lifting and moving heavy objects. Operates crane mounted on rail car by engaging clutch, manipulating throttle and pressing brakes to move crane on track, and to stop it. Ensures proper firing of boiler and maintains required steam, pressure. Manipulates clutches, throttles, brakes and control valves to rotate crane on its car to raise and lower crane boom, or to raise or lower load line and anything attached to it. Follows signals of workers to hoist, slow, lower or unload heavy objects and materials in desired position. Ensures that lifting tackle and other parts of equipment are in perfect condition and maximum lifting capacity of load not exceeded. Cleans boilers periodically and attends to minor repairs or equipment. May operate steam-driven winches to lift heavy objects.

ISCO 08 Unit Group Details:

Code	8343
Title	Crane, Hoist and Related Plant Operators

8343.0200 Crane Operator, Diesel Electric

Crane Operator, Diesel/Electric operates diesel-electric powered (Tourna) crane mounted on pneumatic wheels to lift, carry and lower heavy loads from one place to another. Starts engine and drives vehicle to work site. Manipulates controls to position crane, crane job (boom) and lifting tackle so that load can be attached. Raises, moves and places load in required position following signals from slinger or helpers. Ensures proper operating and safety conditions as guided by signals from other workers. Lubricates moving parts, tightens nuts and bolts and

performs other servicing tasks to keep equipment in good working order. May attend to minor running repairs.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.0300

Crane Operator, Pneumatic

Crane Operator, Pneumatic; E.M.E. Operator, Cranes operates air lock system crane (Terra-Cobra, Lima) run by diesel power and mounted on pneumatic wheels, to lift, carry and lower heavy objects from one place to another. Checks oil, water, etc.; starts engine and drives crane to work site, using hand gears and levers. Starts crane motor and manipulates controls to open and close valves to maintain correct supply of air to equipment by observing pressure, temperature and other gauges and to position crane, crane jib (boom) and lifting tackle so that load can be attached; raises, moves, lowers and places heavy load in required position following signals from helpers, ensuring proper operating and safety conditions. Cleans and oils equipment and performs other servicing tasks to keep equipment in running order. May make minor repairs.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.0400

Crane Operator, Hydraulic

Crane Operator, Hydraulic operates (Zambo) crane mounted on pneumatic wheels and driven by hydraulic power to

lift, carry and lower heavy objects from one place to another. Checks jib and cables for security and serviceability; starts crane motor; operates levers controlling valves to raise or lower hook for loading or unloading of object. Ensures that load or object is hooked securely to lifting tackle by workers or slinger. Manipulates hand levers to raise and move load to required level and unload object in desired position. Operates crane in accordance with signals from other workers, observing safety conditions while loading and unloading.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.0500

Mobile Crane Operator

Mobile Crane Operator; Tractor Crane Operator; Crawler Crane Operator; Truck Crane Operator operates diesel or petrol-driven mobile crane, mounted on caterpillar tracks or truck chassis, to lift, carry and lower heavy objects in any direction. Starts engine and drives crane to work site; starts crane motor and manipulates controls to position crane, crane jib (boom) and lifting tackle to attach or detach load; raises, moves and places load in required position. May direct helper to drive crane into position. May operate a crane fitted with mechanical grab attached to lifting tackle.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.0501

EOT Crane Operator

EOT Crane Operator operates overhead cranes for safe transfer of raw material, intermediaries and finished products within the plant on receiving the signal.

Qualification Pack Details:

QP NOS Reference ISC/Q0007
 QP NOS Name EOT Crane Operator
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 8343
 Title Crane, Hoist and Related Plant Operators

8343.0600

Crane Operator, Gantry

Crane Operator Gantry; Gantry Crane Operator operates electrically-driven high capacity crane mounted on gantry steel tower structure, supported by wheels to run on track laid along ground, to lift, move and lower heavy objects from ground to heights and vice versa. Switches on power supply; moves electrical control levers and brake pedals to run towers along their tracks, to run hoisting trolley (rack) across bridge, and to raise or lower load line and anything attached to it following signals from slinger on ground, observing safety conditions. May be designated according to type of work performed or type of materials moved.

ISCO 08 Unit Group Details:

Code 8343
 Title Crane, Hoist and Related Plant Operators

8343.0700

Overhead Crane Operator

Overhead Crane Operator; Bridge Crane Operator operates electrically-driven crane running on overhead rails laid on

metal bridge to lift, move and lower heavy objects from one place to another. Switches on power supply; takes position in overhead cabin and signals ground crew to move away from crane; manipulates levers and controls to check and assure bridge hoist, lifting tackle etc., are free from mechanical jamming and in working order; operates controls to move bridge along rails and lifting equipment along bridge tackle for loads to be attached; follows signals from ground crew to raise, move and lower load in desired position observing proper operating and safety conditions. Shuts down power supply on completion of work. May undertake minor repairs to crane.

ISCO 08 Unit Group Details:

Code 8343
 Title Crane, Hoist and Related Plant Operators

8343.0800

Derrick Crane Operator

Derrick Crane Driver operates electrically-driven derrick crane consisting of movable jib (boom) which can be raised or lowered or turned full circle or moved forward and backwards to lift, move and lower heavy objects from one place to another. Checks jib and cables for security and serviceability; switches on power supply; takes position in overhead cabin and starts crane motor; operates controls to swing, raise or lower jib and to place lifting tackle for load to be attached. Manipulates controls to lift load attached to movable arm (jib) by ground crew; raises, moves and lowers load to desired position following signals from workers on ground and observing proper operating and safety conditions. Instructs and supervises cleaning, greasing and oiling of

machinery parts. May attend to minor repairs.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.0900

Derrick Crane Operator, Magnetic

Derrick Crane Operator, Magnetic operates electric-powered derrick crane to magnetically lift and move ingots or heavy iron balls and to break iron balls by dropping. Switches on power supply and starts crane motor; manipulates levers to position derrick jib, lower magnetised slings to touch cracker iron balls, lift and move jib with sling, lower load and cut off magnet to drop cracker at desired position; operates crane in accordance with signals from ground crew. Cleans, greases and oils moving parts of crane. May undertake minor repairs to machinery.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1000

Crane Driver, Hammer Head

Crane Driver, Hammer-Head operates power-driven hammer-head crane consisting of fixed jib, with lifting equipment attached to trolley that can be moved on rails along jib, forward or backward, as necessary; jib itself being capable of rotating full circle in horizontal plane. Switches on power supply; checks jib and cables for security and serviceability; operates controls to swing, raise or lower jib and to place lifting tackle

for load to be attached; raises, moves and lowers load to desired position; operates crane observing signals from workers on ground to obtain position of jib and lifting hook. Instructs and supervises helpers in cleaning, greasing and oiling machinery.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1100

Winchman

Winchman; Winch Operator operates power-driven winch (hauling or lifting device, consisting essentially of a cable, a hand or power-driven drum) to lift and lower load, bend pipes, etc. or to hoist and lower dredging pipes, grabs etc., on dredges. Ensures that cable, winch drum and winch brake are in good working order. Threads cable through pulley wheels and introduces additional pulley wheels in cable linkage, if necessary; connects end of cable to object to be moved, or directs helpers to do so; starts engine of winch, or turns winch handle, to raise or pull object into position, adjusting speed of pulling and applying brake as necessary. May control winch in accordance with signals by other workers. May attend to minor repairs and tend cable, ropes, pulley, and lifting tackle. May operate winches to draw heavy cargoes or boats to shore. May also work on manually operated winches. May be designated according to power used, such as WINCH DRIVER, PNEUMATIC; WINCH DRIVER, ELECTRICAL.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1200**Hoist Operator**

Hoist Operator; Hoist Operator, Construction operates hoisting equipment to raise or lower power-controlled cage, platform or truck carrying men and materials at construction site. Ensures that cables, drums, and other hoisting equipment are in perfect condition; loads or oversees loading of cage, platform or other lifting tackle connected to hoist, and starts motor; moves levers to raise or lower load to required point; moves lifting tackle to fresh position, when unloading completed. May raise or lower hoist in response to bell or other signals by workers. May work on surface or underground. May attend to minor repairs. May operate electric, steam or other types of hoist.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1300**Bridge Opening Operator**

Bridge Opening Operator operates steam, hydraulic or electric devices to control and closing of bridge for passage of water or road traffic. Watches passage of traffic and opens and closes bridge manually or by manipulating gears, levers, etc. as desired, ensuring safety of passing traffic by blowing horns or giving other signals, if necessary; operates light or semaphore signals to indicate whether bridge is open or closed. Keeps bridge equipment in good working order. May check gate pass for men and material. May make minor repairs to machinery.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1400**Winding Engineman**

Winding Engineman; Winding Engine Driver; Hoist Operator, Mine operates steam, diesel or electric-driven equipment to raise or lower cage or skip with men or materials through vertical or inclined mine shaft according to signal from surface or underground workers. Starts engine and undertakes trial run of equipment to check and ensure that component parts of engine, cable, etc. are in good working order; manipulates controls to raise or lower cage skip in response to bell or other signals given by workers at top of mine shaft or below surface; stops hoist when dial indicator shows that cage or skip has reached required level. May attend to minor repairs.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1500**Haulage Engine Driver**

Haulage Engine Driver; Haulage Attendant operates steam, diesel, electric or compressed air drive hauling device to lift or lower full or empty tubs in collieries or mines. Ensures that cable, winch brake etc. are in good working order; starts engine in response to signals to raise or lower cars or tubs along haulage track, as required, regulating speed; stops hauling device according to signals, readings, in indicator and drum marks. May attend to minor repairs.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1600**Crane and Hoist Operators, Other**

Crane and Hoist Operators, Other; include Crane and Hoist Operator, not elsewhere classified such as: Monocrane Operator, if operates electrically powered monocrane fitted with fixed jib, and which turns to full circle to lift, raise and lower heavy loads from one place to another. Crane Operator, Portable, if operates tractor equipped with hoist to move designated loads from point to point in shipyard. Skip-hoist Operator, if tends hoist to lift building materials to upper levels of structures undergoing construction.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1700**Aerial Ropeway Operator**

Aerial Ropeway Operator; Attendant Aerial Ropeway operates endless ropeway to transport passengers from one place to another such as from pithed or refinery across river, hill tops etc. Checks that buckets and cages are securely clamped to rope, pulley runs freely and rope is in working order; pulls levers to position cages/buckets on ground or platform for boarding or pushes button to off load, or observes signal panel and listens for malfunction of automatic offloading equipment; Communicates telephonically or signals by buzzer receiving point, readiness of load to be conveyed; pushes buttons to start reel and winding cable

causing cages/buckets to move between boarding and offloading area; maintains desired distance between each cage in ropeway by manipulating mechanical retarder to prevent collision with one another; observes movement of rope and operates machine to regulate it. Switches off ropeway and applies brakes on receiving signal from load receiving end. May maintain record of rounds of passengers transported. May attend to running repairs, lubrication etc. of plant and equipment.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.1800**Liftman**

Liftman; Lift Operator operates electric lift to raise or lower cage, carrying passengers and goods from one floor to another in residential, office, hotel, hospital, commercial or industrial building according to bell or buzzer signals. Opens outer gate of lift entrance and inner gate of lift cage by turning handle or by electric switches to permit men and goods inside carrier cage, closes both gates manually or by electrical switches; presses electric push button of desired floor number as indicated in panel to move cage carrying men or material upward or downward as required. Stops lift at required floor by operating switches, opens double gates of lift for passengers and goods to move out and move in. Observes bell or buzzer sound to operate lift to called floor to take men and material. Ensures that lift is not loaded over authorised capacity. Reports to superior malfunctioning of lift when detected. May operate automatic lifts which by push button action closes gates,

travels and stops at required floor, automatically.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

8343.9900

Crane, Hoist and Related Plant Operators, Other

Crane, Hoist and Related Plant Operators, Other include operators who operate and monitor cranes and other hoisting equipment not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8343

Title Crane, Hoist and Related Plant Operators

Family 8344

Lifting Truck Operators

Lifting-Truck Operators drive, operate and monitor lifting-truck or similar vehicle to transport, lift and stack pallets with goods.

8344.0100

Lift Truck Operator

Lift Truck Operator operates power-driven truck fitted with adjustable lifting platform to load, transport or stack merchandise and other material in warehouse, storage yard, factory, etc. Drives truck to location of load; positions truck near load; moves levers to place platform under load to raise it; manipulates levers to raise platform carrying load sufficiently above ground and drives truck to site of unloading or stacking; unloads and stacks material by operating truck platform. May tow hand

trucks. May operate manually operated vehicle. May attend to minor running repairs, and clean and lubricate parts of vehicle.

ISCO 08 Unit Group Details:

Code 8344

Title Lifting Truck Operators

8344.0201

Fork Lift Truck Operator

Fork Lift Truck Operator operates power-driven truck fitted with lifting fork to transport or stack merchandise and other material in warehouse, storage yard, factory, railway station or other similar establishments. Drives truck to location of load; positions truck near load and moves levers to place fork lift below load and raise; drives position; unloads and stacks material by operating lifting fork. May carry out routine servicing of truck.

Qualification Pack Details:

QP NOS Reference ASC/Q9707

QP NOS Name Fork Lift Operator/Driver

NSQF Level 4

ISCO 08 Unit Group Details:

Code 8344

Title Lifting Truck Operators

8344.9900

Lift Truck Operator, Other

Lifting Truck Operators, Other include operators who drive, operate and monitor lifting truck or similar vehicle to transport, lift and stack pallets with goods not elsewhere classified.

ISCO 08 Unit Group Details:

Code 8344

Title Lifting Truck Operators

Group 835**Ships' Deck Crews and Related Workers**

Ship's Deck Crews and Related workers carry out deck duties on board ship and similar duties on board other water-borne craft.

Occupations in this Group are classified into the following Families:

8350 Ships' Deck Crews and Related Workers

Family 8350**Ships' Deck Crews and Related Workers**

Ship's Deck Crews and Related Workers carry out deck duties on board ship and similar duties on board other water-borne craft.

8350.0100**Serang, Deck/Bosun**

Serang, Deck, Boatswin, Deck controls and supervises work of deck crew. Receives orders from Chief Officer, Ship, allocates work to Tindals and Lascars and supervises their iron and wood work overhauling, cargo and lifesaving gear, and other regular and emergency duties are carried out efficiently by crew. Prepares anchor to let go when vessel arrives in port, under order of Chief Officer, arranges cargo derricks and adjust ship's position on wharves. Maintains discipline among deck crew.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.0300**Seaconny/OS (Ordinary Seaman)**

Seaconny; Sukhani Quartermaster steers vessel following designated course under direction of officer on watch. Keeps watch on bridge during specified hours, taking over handling of helm to keep vessel on its course, and alters course as directed. Cleans bridge and wheel house and carries out such work as arranging signal equipment, hoisting flags and signals cleaning, lights etc. Guards ship's gangway in port to prevent entrance of unauthorised person.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.0400**Lascar/OS (Ordinary Seaman)**

Lascar; Khalasi; Seaman; Deck-hand cleans decks and deck equipment by washing decks, chipping points, painting wood and metal fixtures, and splicing wires and cables. Breaks out rigs, overhauls lifeboats, cargo-handling and life-saving gears lowers and raises lifeboats. Takes depth sounding in unfamiliar or shallow waters and shouts information to bridge. Makes ready derricks and winches for operation. May stow and remove cargo from hold.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.0500

Driver, Launch/Tug Master

Driver, Launch drives engines of launches and tugs. Checks different parts of engine to ensure that it is in proper working order. Cleans, greases and oils engine parts or gets this done by Oiler Cleaner. Feeds engine with fuel (oil) and ensures that sufficient quantity of oil is stored in canes for use on way. Starts engine by regulating levers or by cranking. Increases or decreases speed or stops engine or reverses direction of boat as per signal given by Serang. Checks and regulates feed of fuel and refills oil, greases etc., as and when needed. Checks temperature of engine and slows down or stops engine if temperature is high. Supervises work of Oilers and Cleaners and diagnoses mechanical defects and undertakes minor repairs. Maintains logbook.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.0600

Boatman

Boat Man piles boat to carry men and material across waterways, working alone or in groups. Checks boat for leakage or other damage. Moors boat in convenient place for enabling entry of persons or loading of cargo. Ensures that boats capacity is not exceeded and boats balance is maintained on water. Covers cargo if required to protect it from weather. Gets conversant with routes. Unmoors boat, propels and directs it by means of oars, rudder, pole, sails etc. Moors boat on reaching destination for persons to alight and for cargo to be unloaded. May load and unload cargo.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.0700

Rudderman

Rudderman steers course of boat, large or other water craft by manipulating rudder to desired angles. Examines before start of boat that rudder is in order and is equipped with rope, wire etc.; moves rudder from position in line with keel to change vessels' course. May assist Boatman and Oarsman in emergency.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.0800

Oarsman

Oarsman rows boats, barges and other water-crafts using oars, sweeps etc. singly or in groups. Fixes oars in braces on sides of boat; takes position in boat; pulls oars by hand to propel boat; stops pulling of oars at destination or when asked by Boatman; removes oars from braces. May repair broken oars, may assist Rudderman.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers

8350.9900

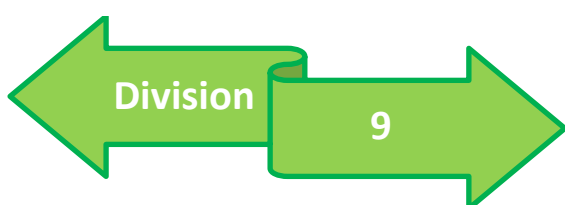
Ships' Deck Ratings, Barge Crews and Boatmen, Other

Ships' Deck Ratings, Barge Crews and Boatmen, Other include all other Deck Ratings, and workers engaged in operating ships, barges, boats and like water transports, not elsewhere classified. ELEMENTARY OCCUPATIONS Elementary occupations consist of simple and routine tasks which mainly require the use of hand-held tools and often some physical effort. Most occupations in this division require skill at the first skill level.

ISCO 08 Unit Group Details:

Code 8350

Title Ships' Deck Crews and Related Workers



Elementary Occupations

Elementary Occupations involve the performance of simple and routine tasks which may require the use of hand-held tools and considerable physical effort.

Tasks performed by workers in elementary occupations usually include: cleaning, restocking supplies and performing basic maintenance in apartments, houses, kitchens, hotels, offices and other buildings; washing cars and windows; helping in kitchens and performing simple tasks in food preparation; delivering messages or goods; carrying luggage and handling baggage and freight; stocking vending machines or reading and emptying meters; collecting and sorting refuse; sweeping streets and similar places; performing various simple farming, fishing, hunting or trapping tasks

performing simple tasks connected with mining, construction and manufacturing including product-sorting; packing and unpacking produce by hand and filling shelves; providing various street services; pedalling or hand-guiding vehicles to transport passengers and goods; driving animal-drawn vehicles or machinery. Supervision of other workers may be included.

Occupations in this Division are classified into the following Sub Divisions:

91	Cleaners and Helpers
92	Agricultural, Forestry and Fishery Labourers
93	Labourers in Mining, Construction, Manufacturing and Transport
94	Food Preparation Assistants
95	Street and Related Sales and Services Workers
96	Refuse Workers and Other Elementary Workers

Sub Division 91 Cleaners and Helpers

Cleaners and Helpers perform various tasks in private households, hotels, offices, hospitals and other establishments, as well as in aircraft, trains coaches, trams and similar vehicles, in order to keep the interiors and fixtures clean, and launder and press garments and textiles by hand.

Tasks performed by workers in this sub-major group usually include: sweeping or vacuum cleaning, washing and polishing floors, furniture and other objects; taking care of linen and bed-making; helping with preparation of meals and cleaning in kitchens; washing and cleaning cars and windows; pressing or laundering garments and textiles by hand.

Occupations in this Sub Division are classified into the following Groups:

911	Domestic, Hotel and Office Cleaners and Helpers
912	Vehicle, Window, Laundry and Other Hand Cleaning Workers

Group 911

Domestic, Hotel and Office Cleaners and Helpers

Domestic, Hotel and Office Cleaners and Helpers sweep, vacuum clean, wash, polish, take care of household linen, purchase household supplies; perform various tasks in order to keep clean and tidy the interiors and fixtures of hotels, offices and other establishments, as well as of aircraft, trains, buses and similar vehicles.

Occupations in this Group are classified into the following Families:

9111	Domestic Cleaners and Helpers
9112	Cleaners and Helpers in Offices, Hotels and Other Establishments

Family 9111

Domestic Cleaners and Helpers

Domestic Cleaners and Helpers sweep, vacuum clean, wash and polish, take care of household linen, purchase household supplies, prepare food, serve meals and perform various other domestic duties.

9111.0100

Domestic Servant

Domestic Servant performs general house-hold duties and attends to personal comforts of master or employer. Performs domestic work of routine nature such as sweeping and dusting of rooms and furniture, making beds, serving meals, purchasing vegetables, meat, fish etc. from market, storing water and doing odd jobs. Prepares tea, coffee and meals. Lays the table, cleans soiled and used plates and cooking utensils. May wash clothes and look after tamed animals such as cow, dog, etc. May look after children.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

9111.0200

Char-Dust Cleaner and Salvager

Char Dust Cleaner and Salvager cleans floors and equipment, and performs following duties in char-house: Cleans and collects char dust from floors, pump basins, pipelines, and tank tops. Observes operating machinery, such as char-draw mechanisms, spreaders, and char-collectors, for blockades or malfunctioning, and reports irregularities to superiors. Fills sacks with salvaged char dust and sews, weighs, and stores sacks. Obtains samples of char and takes them to laboratory for analysis. Delivers requisitions, runs errands, and supplies filter blankets and wedges to other workers.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

9111.0300

Cleaner, Home Restoration Service

Cleaner, Home Restoration Service cleans and restores interiors of homes damaged by fire, smoke, or water, using commercial cleaning equipment: Receives work orders and schedules from supervisor. Carries floor-mounted or portable commercial carpet, upholstery, and interior cleaning machines, tools, and supplies to work site. Cleans carpet, upholstery, floors, walls, ceilings, draperies, windows, and room accessories. Places fans and other equipment in rooms to remove moisture from carpet, upholstery, and air. Sprays or fogs carpet, upholstery, and accessories with fabric conditioners and protectors, deodorizers, and disinfectants, using hand and power sprayers, applying knowledge of types of fabrics, dyes, and chemical sprays. Inspects completed restoration to ensure conformance to standards. Collects payments and discusses results of work with customers.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

9111.9900

Domestic and Related Helpers, Cleaners and Launderers, Other

Domestic and Related Helpers, Cleaners and Launderers, Other include all other domestic Helpers and Cleaners not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

Family 9112 Cleaners and Helpers in Offices, Hotels and Other Establishments

Cleaners and Helpers in Offices, Hotels and Other Establishments perform various

cleaning tasks in order to keep clean and tidy the interiors and fixtures of hotels, offices and other establishments, as well as of aircraft, trains, buses and similar vehicles.

9112.0100

Dusting Man, Office; Farash, Office/House Keeping Attendant

Dusting Man, Office; Farash, Office performs routine unskilled duties in office or establishment such as dusting of rooms and furniture and opening and closing office. Gets rooms swept by Sweeper in his presence. Dusts office tables, chairs, doors, windows, etc. Sprays periodically DDT or other insecticides. May sweep office or institution. May work as watchman and guard office or institution during day or night.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

9112.0200

Cleaner Hospital

Cleaner, Hospital cleans hospital patient rooms, baths, laboratories, offices, halls, and other areas: Washes beds and mattresses, and remakes beds after discharge of patients. Keeps utility and storage rooms in clean and orderly condition. Distributes laundered articles and linens. Replaces soiled drapes and cubicle curtains. May disinfect and sterilize equipment and supplies, using germicides and sterilizing equipment.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

9112.9900 Helpers and Cleaners in Offices, Hotels and Other Establishments, Other

Helpers and Cleaners in Offices, Hotels and Other Establishments, Other include workers who perform various cleaning tasks in order to keep clean and tidy the interiors and fixtures of hotels, offices and other establishments, as well as of aircraft, trains, buses and similar vehicles not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9111

Title Domestic Cleaners and Helpers

Group 912 Vehicle, Window, Laundry and Other Hand Cleaning Workers

Vehicle, Window, Laundry and Other Hand Cleaning Workers clean windows, showcases or other surfaces of buildings or vehicles and press, launder or dry-clean linen and other textiles by hand.

Occupations in this Group are classified into the following Families:

9121	Hand Launderers and Pressers
9122	Vehicle Cleaners
9123	Window Cleaners
9129	Other Cleaning Workers

Family 9121 Hand Launderers and Pressers

Hand launderers and pressers launder, press or dry-clean garments, linen and other textiles by hand.

9121.0100 Dhobi

Dhobi; Washer man washes and cleans garments and other articles of washable fabrics and presses them. Collects soiled clothes and garments from clients, marks them with marking ink for identification. Sorts soiled articles according to type and treatment to be given. Fills tub with water and adds proper amount of soap, washing soda or other chemicals and dips coloured or delicate garments into soapy water or chemical solution and agitates it by hand. Spreads wet garments on flat surface, and scrubs with hand or brush and rinses garment in clear water till dirty water stops coming out. Treats excessively soiled garments of coarse cloth separately by applying chemicals on them, by hand, boiling them in tub or in closed oven, beating them with hand on stone or club on stone or wood and washing them in clear water in tanks, rivers and lakes. Dries garments in open air by hanging them on rope, wire or spreading them on ground. Irons dried garments using hand iron-press. May wash garments and other textile furnishings in machine. May treat white and delicate garments with chemicals (Blue and Starch) for shine and bleaching.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.0200 Laundry Workers (Marker, Sorter)

Laundry Workers, Other perform variety of routine and low skilled tasks in laundry and are designated according to nature of work performed such as MARKER marks customer-identifying symbols on soiled garments or other articles received for

cleaning, dyeing, pressing, etc., by writing code number on garment or on tag with pen and waterproof ink and sewing tag to garment. SORTER sorts garments or articles received from customers according to type and colour of material, and fastness of dye.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.0300

Dry Cleaner, Hand

Dry-Cleaner, Hand cleans by hand, woollen and silken garments, textile furnishings and similar articles using chemical solution or other dry cleaning solvents. Examines garments or articles to ascertain condition and type of material and decides on type of treatment to be given. Lays article on table, treats with chemical solution and rubs or brushes parts most soiled and immerses article in solution for required period. Rinses article in fresh solution and allows it to dry in open air. May clean upholstered furniture. May operate dry-cleaning machine.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.0400

Spot Remover

Spot-Remover removes with chemical solution spots and stains from clothing's, textile furnishings and similar articles, either before or after cleaning. Examines articles for condition and nature of spots or stains. Lays article on table and applies correct chemical solution to stains and rubs with brush or sponge till stain dissolves. May prepare chemical

solutions. May wash article before removing spot.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.0500

Rug Cleaner

Rug Cleaner operates in cooperation with one or more workers automatic rug cleaning machines which soaps, scrubs, rinses and partially dries floor coverings in one continuous operation. Inserts edge of rug between feed rollers and starts machine which carries rug under soap spray, revolving, scrubbing brushes and rinsing spray. Stops machine and drags rug to drying room and hangs it on racks or poles with help of other workers. May clean rug by hand, pouring soap solution on surface and scrubbing brush over it.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.0600

Presser, Hand

Presser, Hand; Ironer, Hand presses garments, textile furnishings and similar articles with heated hand-pressing-iron to remove wrinkles caused by washing, handling, etc. Spreads material on ironing board or table; moistens cotton material and presses flat with heated iron. Takes special care in pressing delicate articles such as silken, woollens, and similar other articles by spreading moist linen over them before pressing. Moves iron over material applying necessary heat and pressure to obtain desired effect and shape. May wash garment or other material by hand or dry-clean it. May

moisten material or any part during pressing.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.0700

Dry Cleaner, Spot

Dry Cleaner, Spot identifies stains in wool, synthetic, and silk garments and household fabrics and applies chemical solutions to remove stains, determining spotting through dry-cleaning procedures on the basis of type of fabric and nature of stain: Spreads article on worktable and positions stain over vacuum head or on marble slab. Sprinkles chemical solvents over stain and pats area with brush or sponge until stain is removed. Applies chemicals to neutralize effect of solvents. Sprays steam, water, or air over spot to flush out chemicals and dry garment. Applies bleaching powder to spot and sprays with steam to remove stains from certain fabrics which do not respond to other cleaning solvents. May mix bleaching agent with hot water in vats and soak material until bleached. May operate dry cleaning machine.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

9121.9900

Launderers, Dry Cleaners and Pressers, Other

Launderers, Dry Cleaners and Pressers, Other include all laundry and dry cleaning, service workers not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9121

Title Hand Launderers and Pressers

Family 9122

Vehicle Cleaners

Vehicle cleaners, wash, clean and polish vehicles.

9122.0100

Cleaner, Window

Cleaner, Window cleans windows, glass partitions, mirrors, and other glass surfaces of building interior or exterior, using pail of soapy water or other cleaner, sponge, and squeegee. Crawls through window from inside and hooks safety belt to brackets for support, sets and climbs ladder to reach second or third story, or uses swing stage, or other scaffolding lowered from roof to reach outside windows, or stands to reach first floor or inside windows.

ISCO 08 Unit Group Details:

Code 9122

Title Vehicle Cleaners

9122.0201

Washer

Washer washes, scrubs and polishes the interiors and exteriors of vehicles (including glass) in the vehicle to protect their appearance. The individual also uses the pressurised water to clean the exterior surface before the vehicle is made ready for delivery for the first time after PDI is done on the vehicle.

Qualification Pack Details:

QP NOS Reference ASC/Q1101

QP NOS Name Washer

NSQF Level 2

ISCO 08 Unit Group Details:

Code 9122
Title Vehicle Cleaners

9122.0301**Driving Assistant**

Driving Assistant is often called Cleaner or Helper. Individuals at this job need to assist the driver by doing the washing and cleaning of the external/internal structure of vehicle, maintaining up keep of tool box, assisting in minor repairs and running miscellaneous errands.

Qualification Pack Details:

QP NOS Reference ASC/Q9701
QP NOS Name Driving Assistant
NSQF Level 2

ISCO 08 Unit Group Details:

Code 9122
Title Vehicle Cleaners

9122.9900**Vehicle, Window and Related Cleaners, Other**

Vehicle, Window and Related Cleaners, Other include workers who clean windows, showcases or other glass surfaces of buildings or vehicles not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9122
Title Vehicle Cleaners

**Family 9123
Window Cleaners**

Window Cleaners wash and polish windows and other glass fittings.

Family 9129**Other Cleaning Workers**

Other Cleaning Workers clean surface, materials and objects, such as carpets, walls, swimming pools and cooling towers, using specialized cleaning equipment and chemicals.

Sub Division 92**Agricultural, Forestry and Fishery Labourers**

Agricultural, Forestry and Fishery Labourers perform simple and routine tasks in the production of crops and livestock, cultivation and maintenance of gardens and parks, exploitation and conservation of forests, and conduct of aquaculture and fisheries operations.

Tasks performed usually include: digging, raking and shovelling using hand tools; loading unloading and stacking supplies, produce and other materials; watering, thinning, weeding and tending crops by hand or using hand tools; planting, harvesting picking and collecting produce by hand; feeding, watering, and cleaning animals and keeping their quarters clean; monitoring livestock, reporting on their condition; preparing and operating nets, lines and other fishing tackle and deck equipment; grading, sorting, bunching and packing produce into containers; performing minor repairs on fixtures, buildings equipment, vessels and fences.

Occupations in this Sub Division are classified into the following Groups:

921	Agricultural, Forestry and Fishery Labourers
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Group 921 Agricultural, Forestry and Fishery Labourers

Agricultural, Forestry and Fishery Labourers perform simple and routine tasks in the production of crops and livestock, cultivation and maintenance of gardens and parks, exploitation and conservation of forests, and conduct aquaculture and fisheries operations.

Occupations in this Group are classified into the following Families:

9211	Crop Farm Labourers
9212	Livestock Farm Labourers
9213	Mixed Crop and Livestock Farm Labourers
9214	Garden and Horticultural Labourers
9215	Forestry Labourers
9216	Fishery and Aquaculture Labourers

Family 9211 Crop Farm Labourers

Crop farm labourers perform simple and routine tasks in the production of crops such as fruit, nuts, grains and vegetables on farms.

9211.0100 Ploughman

Ploughman ploughs fields to prepare soil for growing crops and feeds bullocks at scheduled hour. Collects plough and bullocks in morning and checks fittings, boltings, condition of plough, etc. Harnesses bullocks to plough and ploughs field using different types of plough according to necessity. Collects, mixes and

prepares feed for bullocks and feeds them at prescribed time. May repair or change shear of plough as and when required.

ISCO 08 Unit Group Details:

Code 9211
Title Crop Farm Labourers

9211.0200 Labourer, Agriculture

Labourer, Agriculture performs variety of tasks, mostly manual, connected with farm cultivation on remuneration. Settles wages and working hours. Receives allotment of work from Fieldman and collects seeds, equipment, etc. Attends to tasks in field in connection with planting, preparation of soil, sowing, weeding, hoeing, pruning, harvesting, plucking fruits or flowers, threshing, drying, winnowing, bagging, storing, etc. Consults Fieldman in different assignments as and when necessary. Hands over equipment at close of day.

ISCO 08 Unit Group Details:

Code 9211
Title Crop Farm Labourers

9211.0300 Picker (Tobacco)

Picker (Tobacco) removes stems, off-colour tobacco, and foreign material, such as strings, dirt, and paper from tobacco as it moves along conveyor to ensure clean and uniform product. May drop pickings into bags attached to conveyor frame, according to whether pickings are dark tobacco, green tobacco, tobacco with stems, or foreign material.

ISCO 08 Unit Group Details:

Code 9211
Title Crop Farm Labourers

9211.9900**Farm Hands and Labourers, Other**

Farm Hands and Labourers, Other include workers who help with farm work by performing a variety of simple farming tasks not elsewhere classified.

ISCO 08 Unit Group Details:

Code	9211
Title	Crop Farm Labourers

Family 9212**Livestock Farm Labourers**

Livestock Farm Labourers perform simple and routine tasks in farm production of animals, including poultry and insects.

Family 9213**Mixed Crop and Livestock Farm Labourers**

Mixed Crop and Livestock Farm Labourers perform simple and routine tasks in farm production of both crops and animals.

Family 9214**Garden and Horticultural Labourers**

Garden and Horticultural Labourers perform simple and routine tasks in operations to cultivate and maintain trees, shrubs, flowers and other plants in parks and private gardens, to produce saplings, bulbs and seeds, or grow vegetables and flowers by intensive cultivation techniques.

Family 9215**Forestry Labourers**

Forestry Labourers perform simple and routine tasks to cultivate and maintain natural and plantation forests, and logging, felling and sawing trees.

9215.0100**Labourer, Plantation**

Labourer, Plantation performs various low skilled tasks in connection with preparing land, planting, weeding, spraying of insecticide, picking tea leaves, plucking coffee seeds, etc. and may be designated according to nature of work performed such as: Nursery worker prepares beds in prescribed manner and germinates tea seeds, rubber seeds etc. Prunes such as sowing, shootings, weeds out wild growth and performs related tasks. Planting worker prepares land for cultivating tea plants, digs holes for planting germinated seeds and plants shade trees to protect tea and coffee plants from heat. Weeding worker weeds out wild growth around tea, rubber and coffee plants using spade, sickle, knife, etc. Spraying worker mixes pesticides such as cuprosona, fungi copper, and D.D.T. with water and sprays it on plants, using spraying machine. Picker; Plucker (Coffee, Tea) picks ripe coffee berries or tea leaves from plants by hand, cuts off protruding branches of bush using tipping knife and performs variety of low skilled tasks on tea or coffee estates.

ISCO 08 Unit Group Details:

Code	9215
Title	Forestry Labourers

9215.0200**Tappers**

Tappers, make cuts in trunk of trees using special knives for collecting saps, juices, resins, or gums, etc.

ISCO 08 Unit Group Details:

Code 9216

Title Fishery and Aquaculture
Laboratories

9215.9900

Plantation Labourers and Related Workers, Other

Plantation Labourers and Related Workers, other include all those plantation labourers and related workers not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9215

Title Forestry Labourers

Family 9216

Fishery and Aquaculture Labourers

Fishery and Aquaculture Labourers, perform simple and routine tasks to cultivate, catch and harvest fish and seafood in aquaculture and inland, coastal and deep sea fishing operations.

Sub Division 93

Labourers in Mining, Construction, Manufacturing and Transport

Labourers in Mining, Construction, Manufacturing and Transport perform simple and routine manual tasks in mining, quarrying, civil engineering, building, manufacturing, transport and

storage operations, and operate human powered and animal drawn vehicles and machinery.

Tasks performed by workers in this sub-major group usually include: digging holes and spreading excavated materials, sand, soil, and gravel using hand-held tools; sorting, loading, unloading, moving stacking and storing materials, equipment, products, supplies, baggage and cargo by hand; cleaning machinery, equipment, tools and work sites; packing and unpacking material and products and filling containers and shelves with products by hand; operating human powered and animal drawn vehicles and machinery.

Occupations in this Sub Division are classified into the following Groups:

931	Mining and Construction Labourers
932	Manufacturing Labourers
933	Transport and Storage Labourers

Group 931 Mining and Construction Labourers

Mining and construction labourers perform simple and routine manual tasks in mining, quarrying, civil engineering and building operations.

Occupations in this Group are classified into the following Families:

9311	Mining and Quarrying Labourers
9312	Civil Engineering Labourers
9313	Building Construction Labourers

Family 9311 Mining and Quarrying Labourers

Mining and Quarrying Labourers perform routine tasks in mining and quarrying operations.

9311.0100

Mines, Quarrymen, Related Workers

Miners, Quarrymen and Related Workers works in mining, quarrying, well drilling and other related activities. Dig, drill, excavate, load ore, coal or rocks in to cars. Perform work requiring simple and routine tasks connected with mining and quarrying.

ISCO 08 Unit Group Details:

Code 9311

Title Mining and Quarrying Labourers

9311.0101

Mazdoor/Helper

Mazdoor or Helpers in mines perform a variety of duties. A mining helper could be doing any of the following on a regular work day-transporting material and equipment within mine, cleaning the area to build temporary roads, loading and unloading, reject handling, spotting, erecting or dismantling scaffolding at a construction site on the mine, bricklaying, clean and maintain the mining premises, assist trained operators in installing, dismantling or dispatch of any machinery. In addition to this a mazdoor must be safety conscious ensuring everybody's safety and others around him in all tasks he is asked to perform.

Qualification Pack Details:

QP NOS Reference MIN/Q0408

QP NOS Name Mazdoor/Helper

NSQF Level 1

ISCO 08 Unit Group Details:

Code 9311

Title Mining and Quarrying Labourers

9311.0200

Digger (Mine and Quarry)

Digger works in underground or surface mine, pit, or quarry, or at tippel, mill, or preparation plant, performing any combination of following tasks: Cleans working areas and haulage tracks; digs and maintains drainage ditches; or shovels muck, ore, coal, or rock aside, into cars, or onto conveyors. Pushes loaded mine cars from working face to haulage road and attaches cars together for transportation to surface. Positions and adjusts bits on drill shaft and places cables, jacks, roof bolts, and related equipment in specified locations. Trims protrusions from walls and roofs of underground passageways and rooms. Strips (cleans) residue of rock and dirt from exposed coal, ore, or rock formations. Loads, separates, or sorts materials at working face, using shovel or wheelbarrow. Throws calcium or salt around interiors of railroad cars to prevent coal or ore from freezing to cars during winter.

ISCO 08 Unit Group Details:

Code 9311

Title Mining and Quarrying Labourers

9311.9900

Mining and Quarrying Labourers, Other

Mining and Quarrying Labourers, Other include workers who perform simple and routine tasks in connection with mining or quarrying not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9311

Title Mining and Quarrying Labourers

Family 9312

Civil Engineering Labourers

Civil Engineering Labourers perform routine tasks in connection with the building and maintenance of roads, railways, dams and other civil engineering projects.

9312.0100 Labourer, Other

Labourer performs simple manual tasks of routine nature requiring physical strength, and are engaged in lifting and carrying loads, civil construction works, cleaning and sweeping machine rooms, sprinkling water on khas tattis, etc. and include those not elsewhere classified: Labourers, Construction and Maintenance Workers Labourers, Road Construction and Maintenance Labourers, Telephone, Telegraph lines and Cables Waterman, Khas Tatti. Mazdoor, Textile

ISCO 08 Unit Group Details:

Code 9312

Title Civil Engineering Labourers

9312.0200

Track Repairer (Rail Transport)

Track Repairer (Rail Transport) installs and repairs railroad track on specified territory of railroad, using portable grinder, spike puller, spike driver, and tie adz, to grind ends of rails, remove old spikes, drive new spikes, cut ties to fit fishplates, and perform related maintenance, working as member of crew: Operates single-or multiple-head spike puller to pull old spikes from tie. Raises rail, using hydraulic jack, to facilitate removal of old tie and installation of new tie. Operates tie-adzing

machine to cut portion of tie so that tie plate can be inserted to hold rail. Drills holes through rails, tie plates, and fishplates for insertion of bolts and spike, using power drill. Operates single-or multiple-head spike driving machine to drive spike into tie and secure rail. Operates track-wrench machine to tighten or loosen bolts at joints that hold ends of rails together. Operates rail saw to cut rails to specified lengths. Operates portable grinder to grind worn ends of rails. Sprays ties, fishplates, and joints with oil to protect them from weather. May paint railroad signs, such as speed limits and gate-crossing warnings. May oversee workers and act as section leader.

ISCO 08 Unit Group Details:

Code 9312

Title Civil Engineering Labourers

9312.9900

Construction and Maintenance Labourers, Other

Construction and Maintenance Labourers, Other include workers who perform simple and routine tasks in connection with the building and maintenance of roads, dams and similar constructions not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9312

Title Civil Engineering Labourers

Family 9313

Building Construction Labourers

Building Construction Labourers perform routine tasks in connection with building construction and demolition work.

9313.0100

Well Digger Helper

Well Digger Helper assists Well Digger in digging well by hauling and emptying excavated material and performing other miscellaneous tasks. Carries bricks, lays them in order and soaks them with water before use. Digs well by spade and bails out mud in basket. Lays tripod structure and prepares mortar as directed. Assists in setting earthen or cement rings in creating pressure and lowering outer constructed wall into dug space of well. Keeps bullocks on move to pull mud, bucket out of well through string and attends to other tasks as directed.

ISCO 08 Unit Group Details:

Code 9313

Title Building Construction Labourers

9313.0201

Helper Bar Bender and Fixer

Helper Bar Bender and Fixer needs to support the Assistant Bar Bender and Steel Fixer and Bar Bender and Steel Fixer which are at level-2 and level-3 in semi-skilled and skilled category for carrying out the related works such as selecting, straightening, cutting, shifting of materials, handling tools, tackles and housekeeping with safety. The responsibilities include to identify types of bars and size, straighten, cut, tying steel cages/reinforcements using hand tools. Follow the Plan for storage, transportation and fixing the reinforcement in position. Should be able to understand the size and shape of simple rings and links dimension and make manually with guidance a few shapes, along with the knowledge about the environment, health, safety and general awareness of related trades.

Qualification Pack Details:

QP NOS Reference CON/Q0201

QP NOS Name Helper Bar Bender and Fixer

NSQF Level 1

ISCO 08 Unit Group Details:

Code 9313

Title Building Construction Labourers

9313.0301

Helper Mason

Helper Mason needs to support Assistant Mason and Mason which are at level-2 and level-3 in semi-skilled and skilled category for carrying out the related works such as shifting of materials, handling tools, tackles and housekeeping. The responsibilities include site development and clearance, provide support for laying of bricks and blocks, mortar and cement concrete mixing, rendering coat plastering, help in setting and layout, knowing importance of scaffolding and have the basic knowledge in the environment, health, safety pertaining to the trade.

Qualification Pack Details:

QP NOS Reference CON/Q0101

QP NOS Name Helper Mason

NSQF Level 1

ISCO 08 Unit Group Details:

Code 9313

Title Building Construction Labourers

9313.0401

Helper Carpenter-Shuttering and Scaffolding

Helper Carpenter-Shuttering and Scaffolding needs to support and help the Assistant Shuttering Carpenter (Level-2), Assistant Scaffolder (Level-2) in semi-skilled categories for carrying out the related works such as shifting of material,

handling of tools, preparation job site and housekeeping. A Helper Carpenter provide support in making, assembling, erecting and dismantling all types of conventional formwork and scaffolding arrangements and systems. The Helper is expected to know basics of carpentry and also about the system formwork and shuttering.

Qualification Pack Details:

QP NOS Reference	CON/Q0301
QP NOS Name	Helper Carpenter- Shuttering and Scaffolding
NSQF Level	1

ISCO 08 Unit Group Details:

Code	9313
Title	Building Construction Labourers

9313.0501

Helper Electrician

Helper Electrician needs to work as helper and perform task under continuous instruction and close supervision of Assistant Electrician level-2 and above. He is expected to shift and store materials, handle tools and tackles, preparatory works of materials and surfaces, assistance in wall chasing, conduit fixing, cable laying and other allied electrical works and relevant housekeeping. He should have the basic knowledge in the environment, health and safety aspects relevant to the trade.

Qualification Pack Details:

QP NOS Reference	CON/Q0601
QP NOS Name	Helper Electrician
NSQF Level	1

ISCO 08 Unit Group Details:

Code	
Title	

9313.0601

Helper Laboratory and Field Technician

Helper Laboratory and Field Technician provides support to the Assistant Lab Technician/Laboratory In Charge for organizing, selecting, sifting and carrying the materials, collection of samples and finally to maintain and upkeep the laboratory premises, equipment and instruments.

Qualification Pack Details:

QP NOS Reference	CON/Q0401
QP NOS Name	Helper Laboratory and Field Technician
NSQF Level	1

ISCO 08 Unit Group Details:

Code	9313
Title	Building Construction Labourers

9313.0701

Helper Painter and Decorator

Helper Painter and Decorator needs to work as helper category tradesman and perform tasks under continuous and close supervision of Assistant Painter and Decorator Level-2 is expected to handle shifting and storing of materials, handling tools and tackles relevant to painting including site development and clearance, support in identification and preparation of paints and surfaces, mixing of colours and paints and the housekeeping activities. Should ensure trade specific compliance to environment, health and safety aspects.

Qualification Pack Details:

QP NOS Reference	CON/Q0501
QP NOS Name	Helper Painter and Decorator
NSQF Level	1

ISCO 08 Unit Group Details:

Code

Title

9313.9900**Building Construction Labourers,
Other**

Building Construction Labourers, Other include those who perform simple and routine tasks in connection with various aspects of building construction work not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9313

Title Building Construction Labourers

Group 932**Manufacturing Labourers**

Manufacturing Labourers perform a variety of manual tasks in manufacturing, assist the work of Machine Operators and assemblers, and undertake product-sorting and hand-assembling of components.

Occupations in this Group are classified into the following Families:

9321	Hand Packers
9329	Manufacturing Labourers, Not Elsewhere Classified

Family 9321**Hand Packers**

Hand Packers weigh, pack and label materials and products by hand.

9321.0101**Packer, Hand**

Packer, Hand; Carton Filler; Boxer; Case Packer packs material and products by hand in bags, barrels, baskets, boxes, cartons, and crates for purpose of storage or transport performing any combination of following duties. Examines product for brittleness, fragility, moisture and other characteristics. Collects packaging containers and cleans them. Lines and pads crates. Assembles cartons from flattened state. Wraps protective material around product. Weighs containers and adjusts quantity. Places or pours product into containers or fills containers from spout or chute. Inserts excelsior, shredded paper, wood wool or paper trays on top of product. Sews bag, fits lids on container, nails, wires or otherwise closes containers. Stamps grade, brand, and date of packing on containers. Visually inspects materials, products and containers at each step of packaging process. May be designated according to whether high production or small lot packaging as PACKAGING-LINE ATTENDANT, FANCY PACKER or according to goods packed, machines handled or industry in which employed such as PACKER BAGS; PACKER BIDI; PACKER, BISCUITS; PACKER, CHEMICAL PRODUCTS; PACKER, CIGAR; PACKER, GRAIN; PACKER, MATCH BOXES; BOTTLING MACHINE OPERATOR; SEALING MACHINE OPERATOR, BALE PRESSER.

Qualification Pack Details:

QP NOS Reference ASC/Q 6102

QP NOS Name Packer/Packing
Assistant/Packing
Executive

NSQF Level 2

ISCO 08 Unit Group Details:

Code 9321

Title Hand Packers

9321.0102**Packager and Despatcher**

The individual at work uses computers, design or plant to pack the faceted and/or polished gemstones, ready for dispatch.

Qualification Pack Details:

QP NOS Reference	G&J/Q7010
QP NOS Name	Packager and Despatcher
NSQF Level	2

ISCO 08 Unit Group Details:

Code
Title

9321.0201**Labeller**

Labeller affixes labels indicating information such as size, colour grade or process code, on merchandise, material, products, containers or bottles by hand or machine. Collects appropriate labels markings, descriptions or designs to be affixed on container. Lines articles and containers to be labelled. Inspects items and affixes or pastes labels at appropriate places using hand. May use labelling machine. May be designated according to product, material or container labelled as LABELLER, CIGAR; LABELLER, BOTTLES; LABELLER, CARRIAGE; LABELLER, LUGGAGE; LABELLER, WAGGON.

Qualification Pack Details:

QP NOS Reference	G&J/Q8401
QP NOS Name	Labeller
NSQF Level	3

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

9321.0205**Tagger and Labeller**

Tagger and Labeller is also known as 'Dispatcher' or 'Packager', the Tagger and Labeller packages the manufactured jewellery, puts tag and label on the it and sends to sales for dispatch. The individual at work checks the products to be dispatched against design, tags the jewellery, packs it, labels the packet, records and sends for dispatch to customer.

Qualification Pack Details:

QP NOS Reference	G&J/Q1010
QP NOS Name	Tagger and Labeller
NSQF Level	5

ISCO 08 Unit Group Details:

Code
Title

9321.0300**Stenciler**

Stenciler marks size, lot number, contents, or other identifying information or symbols on containers or directly on article by placing stencil on container or article and rubbing ink or paint brush across open lettering, or by spraying paint on it. Lines and inspects containers or articles to be stencilled. Selects appropriate stencil and places stencil on container, package or box rubs ink using hand brush or sprays paint across cut-out letterings or design. May mix paints or lacquers. May be designated according to type of container stencilled as CARTON STENCILLER; DRUM STENCILLER; SACK STENCILLER.

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

9321.0400**Stamper, Hand**

Stamper, Hand impresses stamp on bales, bags, boxes or other containers to indicate nature of contents. Collects appropriate stamp-impression. Lines and inspects article; places stamp on ink or paint pad and presses stamp on article to leave mark or impression. May use stamping machine.

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

9321.1101**Weigher**

Weigher; Scaleman weighs materials and products to determine conformance to weight specifications for use in production processes or for purpose of trade and commerce using balance, platform or floor scales. Checks and adjusts scale for correct balance; places material on scale and adds or removes portions to obtain specified weight; weighs product to ascertain standard or measures out specified quantities for production processes or for commerce and trade. May record amount of weight or note weights on material or ticket. May perform, mixing and blending of ingredients. May be designated according to material and product weighed as COAL WEIGHER; COMMERCIAL GOODS WEIGHER; GRAIN WEIGHER; PARCEL WEIGHER; DYESTUFF WEIGHER; INGOT WEIGHER (Iron and steel) or scale used as BALANCE-TANK OPERATOR (Ore Dressing, Smelt and refining) or purpose of

weighing as CHARGE WEIGHER (Ore Dress; smelt and refining).

Qualification Pack Details:

QP NOS Reference G&J/Q4303
QP NOS Name Weigher
NSQF Level 2

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

9321.1102**Issuing and Return In charge**

Issue and Return In charge use the computer to note all the details of a diamond weight, shape, stage of processing, person issued to or returned from, before issuing it to a worker for processing. Bar-coding and scanning process may also be used.

Qualification Pack Details:

QP NOS Reference G&J/Q4303
QP NOS Name Issuing and Return
In Charge
NSQF Level 2

ISCO 08 Unit Group Details:

Code
Title

9321.1103**Diamond Bagger and Flueter**

Diamond bagger and flueter counts diamonds and gemstones and puts into a bag as per the product requirement for any given jewellery design.

Qualification Pack Details:

QP NOS Reference G&J/Q2505

QP NOS Name	Diamond Bagger and Flueter
NSQF Level	4

ISCO 08 Unit Group Details:

Code
Title

**9321.1200
Counter**

Counter counts number of units of raw materials, products or other articles received, transferred or produced. Observes and counts material using fingers to verify receipt or dispatch of items on requisition or invoice or make into unit of specified quantity and number. May mark identifying codes, figures or letters on articles. May weigh item. May pack produce. May record number and kind of defects on unsatisfactory units for quality control purposes. May issue receipts. May be designated according to item counted BIDI COUNTER, POST CARD COUNTER, CURRENCY COUNTER, COUNTER, PAPER SHEETS.

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

**9321.1300
Container Washer, Machine**

Container Washer, Machine tends machine that cleans and sterilizes containers, such as barrels, fruit juice bottles, milk cans, and baking pans: Moves controls to fill washing and sterilizing tanks with water and steam, and to regulate temperature in cleaning tank. Dumps specified amounts of chemicals into cleaning tank. Loads containers on conveyor that carries

containers through cleaning and sterilizing operations. Examines containers for cleanliness and defects, such as dents and cracks. Cleans and lubricates equipment. May manually clean containers prior to machine cleaning, using sponge or brush.

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

**9321.1401
Machining Assistant or Helper**

Machining Assistant or Helper is responsible for small time routine jobs like cleaning, washing, fetching and holding tool for the operators, loading and unloading of work pieces on the machine setup, bringing raw material and spare parts from the stores etc.

Qualification Pack Details:

QP NOS Reference ASC/Q 3502
QP NOS Name Machining Assistant
or Helper L 2
NSQF Level 2

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

**9321.9900
Hand Packers, Others**

Hand Packers and Other Manufacturing Labourers, Other include workers who pack materials or products by hand and perform a variety of simple routine tasks connected with manufacturing not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9321
Title Hand Packers

Family 9329**Manufacturing Labourers, Not Elsewhere Classified**

Manufacturing Labourers not elsewhere classified assist the work of Machine Operators and Assemblers and perform a variety of manual tasks in manufacturing, excluding packing and labelling finished products.

9329.0100**Khatedar, Salt Production**

Khatedar, Salt Production; Field Assistant controls raking operation in set of salt pans (called Khata) and ensures collection and stacking of salt. Patrols salt-bed reservoirs to check raking of scum off surface of brine. Directs Salt Pan/Reclamation Workers in removing of dirt, trash and other refuse from salt-beds and in scooping out of precipitated salt for bagging. May supervise work of bagging and transporting of salt bags to warehouse.

ISCO 08 Unit Group Details:

Code 9329

Title Manufacturing Labourers Not Elsewhere Classified

9329.0200**Mukadam, Salt Production**

Mukadam, Salt Production directs preparation of beds for collection of sea-water for salt production. Visits site and marks area for salt-beds. Directs assistants in levelling of ground, raising or repairing of bunds and cutting of trenches to let water into bed; cleans rock, clay and other refuse from bed surface. Lets in sea water to fill reservoir to determined level and

allows it to evaporate through solar heat. May supervise raking of salt crystals and other operations after salt crystals are formed.

ISCO 08 Unit Group Details:

Code 9329

Title Manufacturing Labourers Not Elsewhere Classified

9329.0300**Salt Reclamation Worker**

Salt Reclamation Workers; Salt Pan Worker, Agaria; Kharwa performs variety of manual tasks in production of salt. Digs and levels ground; raises bund around marked area to form beds of desired sizes; repairs bunds, ridges, crystallizers, plat forms, sifting ground, storage ground etc. Regulates and controls brine-feed into crystallizers; ensures formation of proper size of crystals by solar evaporation; removes rock and other refuse from beds; fills bed with sea-water; plugs breaches or holes in bund to prevent leakage of water. Rakes surface of salt-layers and scrapes and collects salt at ridges when ready; lifts salt to drying and sifting ground, and thence to storage grounds. Builds heaps of uniform size of specified dimensions and shape and covers them with grass leaves, etc. from protection against dust, rain, etc. May bag salt or transport salt bags to warehouse.

ISCO 08 Unit Group Details:

Code 9329

Title Manufacturing Labourers Not Elsewhere Classified

9329.0400**Checker**

Checker verifies quantity, quality, condition, value and type of material,

product, purchased, sold or produced against records, reports or specifications. Examines articles for defects in making or flows in material and returns defective work for correction or as rejects; checks packages, bottles etc., for proper markings and labels according to instructions; checks and examines incoming and outgoing goods and materials against lists and delivery notes for quality, quantity or number and reports or records defects or deficiencies. May sort data or items into predetermined sequence, groups, quantity. May record items verified. May be designated according to material handled, industry in which employed or type of establishment worked as CURRENCY CHECKER; CARGO CHECKER; WAREHOUSE CHECKER; CHECKER, POTTERY WARE; CHECKER, GARMENTS.

ISCO 08 Unit Group Details:

Code 9329

Title Manufacturing Labourers Not
Elsewhere Classified

9329.0500

Tester

Tester makes routine examination of material, goods and products for quality, shape, size or functioning, visually or by means of measuring aids or by simple operation with testing apparatus. Examines articles, products visually or by means of simple instruments or devices for defects and records reports or marks findings. Tests pipe connections and fittings for strength, gas and water tightness with pressure gauge or compressed air. Examines pottery wares for shape, size, functioning etc., by means of rule, gauges, or instruments or by simple operation with testing apparatus; compares test results with specifications,

reports and records defects to improve and control quality of products. May be designated according article, material or product tested as Tester, Gas Fittings; Tester, Pottery, Warehouse; Tester, Rubber Goods.

ISCO 08 Unit Group Details:

Code 9329

Title Manufacturing Labourers Not
Elsewhere Classified

9329.0600

Sorter

Sorter sorts material and products for quality, condition, grade, size or colour according to specification or standard by visual examination, measuring or simple mechanical aids. Picks up material or products by hand and examines them by sight and touch for defects such as discolouring, quality, cracks and sorts them according to class, grades, sizes, quality, colour and other characteristics. Discards inferior or defective items and foreign matter. Mats, counts, tags, bunches or places together lots of identical or similar products in racks, packing boxes, containers, baskets, crates for storages, shipment or other processes. Records numbers, sizes, quantities of sorted materials and products for identification. May affix identifying information on sorted material and products. May be designated according to product sorted as WOOL SORTER, HAIR SORTER, BRICK SORTER; ROOFING-TILE SORTER, SEWER PIPE SORTER, or according to work performed APPLE SORTER, POTATO GRADER; COCOON SORTER etc.

ISCO 08 Unit Group Details:

Code 9329

Title Manufacturing Labourers Not
Elsewhere Classified

9329.0701

Accessory Fitter

Accessory Fitter is responsible for installing and fitting vehicle accessories including vehicle exterior, interior, media and entertainment and security related accessories depending on vehicle type and model.

Qualification Pack Details:

QP NOS Reference ASC/Q1102
QP NOS Name Accessory Fitter
NSQF Level 4

ISCO 08 Unit Group Details:

Code 9329
Title Manufacturing Labourers Not
Elsewhere Classified

9329.0801

Parts Picker

Parts Picker needs to issue different parts and assemblies according to production and shipping schedules picking these up from Stores/warehouse.

Qualification Pack Details:

QP NOS Reference ASC/Q6103
QP NOS Name Parts Picker Level 3
NSQF Level 3

ISCO 08 Unit Group Details:

Code 9329
Title Manufacturing Labourers Not
Elsewhere Classified

Group 933

Transport and Storage Labourers

Transport and Storage Labourers propel cycles and similar vehicles and drive animal-drawn vehicles to transport passengers or goods, drive animal-drawn machinery, handle freight and baggage and stock shelves

Occupations in this Group are classified into the following Families:

9331	Hand and Pedal Vehicle Drivers
9332	Drivers of Animal-Drawn Vehicles and Machinery
9333	Freight Handlers
9334	Shelf Fillers

Family 9331 Hand and Pedal Vehicle Drivers

Hand or pedal vehicle drivers propel cycles and similar vehicles to transport passengers or goods.

9331.0100

Driver, Cycle Rickshaw

Driver, Cycle Rickshaw drives cycle rickshaw on hire or as paid by employee to transport passengers from one place to another, observing road signals and traffic rules. Drives passengers to destination and helps in loading and unloading luggage. Cleans and oils rickshaw and attends to minor repairs. Settles and collects fare if plying on hire.

ISCO 08 Unit Group Details:

Code 9331
Title Hand and Pedal Vehicle Drivers

9331.0300

Hand Cartman

Hand Cartman pulls or pushes hand cart to transport light goods and materials from one place to another. Loads and unloads goods. May also stack material, make deliveries, collect payments and obtain and issue receipts.

ISCO 08 Unit Group Details:

Code 9331

Title Hand and Pedal Vehicle Drivers

9331.0400

Traffic Hand, Gliding

Traffic Hand, Gliding performs miscellaneous manual tasks in connection with flight of glider at glider station. Pushes glider from hanger to landing or launching spot. Picks it using pegs or pointed stacks and attaches end of wire-rope (which is spread on ground and other end of which is attached to winch-engine) to glider. Removes picketing aids from ground when Pilot, Glider is seated and informs Signaller to signal Winch-engine Operator to operate machine when Pilot, Glider is ready. Pushes glider after landing, to launching spot. May signal Winch-engine Operator, attach glider with aeroplane and clean glider or runway.

ISCO 08 Unit Group Details:

Code 9331

Title Hand and Pedal Vehicle Drivers

9331.0600

Transport Equipment Operators and Drivers, Other

Transport Equipment Operators and Drivers, other include all other workers engaged in driving and operating transport equipment, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9331

Title Hand and Pedal Vehicle Drivers

9331.0700

Transport Service Operator

Transport Service Operator performs variety of routine and low skilled tasks in operating transport services such as examining bogie wheels and axle boxes, lighting signal lamps before sunset, washing and cleaning coaches at stations, closing and operating railway gates, waking up Train Guards and Engine Drivers at night for duty, fixing gangway for aircraft passengers setting control pole of trams with overhead electric line etc., and are designated according to nature of work performed such as WHEEL MAN; CALL BOY (RAILWAY); LAMP MAN (RAILWAY); CARRIAGE CLEANER; GATE MAN (RAILWAY); POLEMAN TRAM, etc.

ISCO 08 Unit Group Details:

Code 9331

Title Hand and Pedal Vehicle Drivers

9331.9900

Hand Pedal Vehicle Drivers, Other

Hand or Pedal Vehicle Drivers, Other include workers who propel cycles and similar vehicles to transport passengers or goods not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9331

Title Hand and Pedal Vehicle Drivers

Family 9332

Drivers of Animal-Drawn Vehicles and Machinery

Drivers of animal-drawn vehicles and machinery drive animal-drawn vehicles to transport passengers or goods, as well as animal-drawn machinery usually in connection with farming.

9332.0100

Horse Carriage Driver

Horse Carriage Driver drives two to four wheeled carriage pulled by one or more horses to transport passengers from one place to another, on hire or as paid employee. Harnesses and hitches horses to carriage. Drives carriage observing road signals and traffic rules. Loads and unloads baggage. Settles and collects fare from passengers when plying on hire. May be known as TONGA, EKKA, PHAETON, TAMTAM, BUGGY, OR VICTORIA DRIVER. May groom and feed horses and clean carriage and stable in absence of Stableman.

ISCO 08 Unit Group Details:

Code 9332

Title Drivers of Animal-Drawn Vehicles and Machinery

9332.0200

Cart Driver

Cart Driver drives cart drawn by one or two animals, on hire or as paid employee, to transport men and material from one place to another. Loads and unloads cart. Feeds animals and cleans stables. Settles and collects fares when plying on hire. May stack material, make deliveries, collect payments and obtain and issue receipts.

ISCO 08 Unit Group Details:

Code 9332

Title Drivers of Animal-Drawn Vehicles and Machinery

9332.0300

Mahout

Mahout rides and leads elephant to transport men and material from one place to another. May also train elephant for ceremonial occasions, processions and for specific work, e.g., log felling, lifting, stacking etc. May groom and feed elephant.

ISCO 08 Unit Group Details:

Code 9332

Title Drivers of Animal-Drawn Vehicles and Machinery

9332.0400

Pack Animal Driver

Pack Animal Driver drives animal laden with goods and material to be transported from one place to another. Loads and unloads animals. Drives them walking or riding. Feeds animals and cleans stables.

ISCO 08 Unit Group Details:

Code 9332

Title Drivers of Animal-Drawn Vehicles and Machinery

9332.0500

Supervisor, Animal-Drawn and Manually Operated Transport Equipment

Supervisors, Animal Drawn and Manually Operated Transport Equipment, Other include all other workers engaged in supervising, hiring and plying of horse carriages, carts, rickshaws, dolies and other animal drawn and manually operated vehicles and transport equipment, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9332
 Title Drivers of Animal-Drawn Vehicles
 and Machinery

9332.9900

Animal and Animal Drawn Vehicle Drivers, Other

Animal and Animal Drawn Vehicle Drivers, Other include all other workers engaged in driving other type of animals and animal drawn vehicles, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9332
 Title Drivers of Animal-Drawn Vehicles
 and Machinery

Family 9333

Freight Handlers

Freight handlers carry out tasks such as packing, carrying, loading and unloading furniture and other household items, or loading and unloading ship and aircraft cargoes and other freight, or carrying and stacking goods in various warehouses.

9333.0100

Loader and Unloader

Loaders and Unloaders load and unload cargo and freight in ships, railway waggons, boats, aircraft, motor transport, conveyers, cranes and other animal or hand drawn vehicles, performing such operation as shifting, stacking, counting loads or bundles, and may be designated according to type of freight handled or nature of transport in which engaged, such as: LOADER AIRCRAFT; LOADER

FRAGILE AND EXPLOSIVE MATERIALS. LOADER, BULK MATERIALS. LOADER, HEAVY MACHINERY. LOADER, RAILWAY WAGGONS. LOADER, SHIP. LOADER, INLAND WATERCRAFT. LOADER, ROAD TRANSPORT. LOADER, ANIMAL OR HAND DRAWN VEHICLES, etc.

ISCO 08 Unit Group Details:

Code 9333
 Title Freight Handlers

9333.0101

Loader/Loading and Unloading Operator

Loader/Loading and Unloading needs to safely load and unload different vehicles, parts, assemblies, components etc. internally to various departments of a manufacturing process and on to the vehicles for dispatch based on requirements.

Qualification Pack Details:

QP NOS Reference ASC/Q 6101
 QP NOS Name Loader/Loading and
 Unloading
 Operator
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 9333
 Title Freight Handlers

9333.0201

Warehouse Worker

Warehouse Worker stores the agriculture produce received and transports them to the end-customers on receiving the orders. The person is responsible for receiving, sorting, storing the agricultural produce, keeping records; assist in documenting and organizing for

transportation of goods stored to customer locations. Needs to ensure quality and safety of agricultural produce storage in the warehouse.

Qualification Pack Details:

QP NOS Reference AGR/Q7802
 QP NOS Name Warehouse Worker
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 9333
 Title Freight Handlers

9333.0202

Loader, Transport Associate/Loader/Unloader

Loader/Unloader in the Logistics industry is also known as Loader, Transport Associate. Individuals in this role need to identify goods based on the product code, unload them from the truck onto the inbound area and move them to the staging area. A similar sequence is done for loading. Their responsibilities include identifying damaged goods and moving goods safely.

Qualification Pack Details:

QP NOS Reference LSC/Q1110
 QP NOS Name Loader/Unloader
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 9333
 Title Freight Handlers

9333.9900

Freight Handlers, Other

Freight Handlers, Other include all other freight handlers who carry out tasks such as packing, carrying, loading and unloading furniture and other household items, or loading and unloading ship and

aircraft cargoes and other freight, or carrying and stacking goods in various warehouses not elsewhere classified. DO9-1 9 DO9-2 0 DOX-1 WORKERS NOT CLASSIFIED BY OCCUPATIONS Workers classified in this Division are those persons seeking employment who have not received any professional, technical or vocational training or work experience; persons reporting occupations that cannot be identified; persons reporting occupations not sufficiently described to permit classification and workers not reporting any occupation. Excluded are those persons seeking employment only in specific occupations.

ISCO 08 Unit Group Details:

Code 9333
 Title Freight Handlers

Family 9334 Shelf Fillers

Shelf Fillers stock shelves and display areas and keep stock clean and in order in supermarkets and other retail and wholesale shops.

Sub Division 94

Food Preparation Assistants

Food Preparation Assistants prepare and cook to order a small variety of pre-cooked food or beverages, clear tables, clean kitchen areas and wash dishes.

Tasks performed by workers in this sub major group usually include: preparing simple or pre-prepared foods and beverages such as sandwiches, pizzas, fish and chips, salads, and coffee; washing, cutting, measuring and mixing foods for cooking; operating cooking equipment such as grills, microwaves and deep-fat fryers; cleaning kitchens, food preparation

areas and service areas; cleaning cooking and general utensils used in kitchens and restaurants.

Occupations in this Sub Division are classified into the following Groups:

941	Food Preparation Assistants
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Group 941 Food Preparation Assistants

Food Preparation Assistants prepare and cook to order small variety of pre-cooked food or beverages, clear tables, clean kitchen areas and wash dishes.

Occupations in this Group are classified into the following Families:

9411	Fast Food Preparers
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9412	Kitchen Helpers
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Family 9411 Fast Food Preparers

Fast Food Preparers prepare and cook to order a limited range of foods or beverages that involve simple preparation processes and a small number of ingredients. They may take orders from customers and serve at counters or tables.

Family 9412 Kitchen Helpers

Kitchen Helpers clear tables, clean kitchen areas, wash dishes, preparing ingredients and perform other duties to assist workers who prepare or serve food and beverages.

9412.0100 Kitchen Helper

Kitchen Helper performs any combination of following duties to maintain kitchen work areas and restaurant equipment and utensils in clean and orderly condition: Sweeps and mops floors. Washes worktables, walls, refrigerators, and meat blocks. Segregates and removes trash and garbage and places it in designated containers. Steam-cleans or hoses-out garbage cans. Sorts bottles, and breaks disposable ones in bottle-crushing machine. Washes pots, pans, and trays by hand. Scrapes food from dirty dishes and washes them by hand or places them in racks or on conveyor to dishwashing machine. Polishes silver, using burnishing-machine tumbler, chemical dip, buffing wheel, and hand cloth. Transfers supplies and equipment between storage and work areas by hand or by use of hand pulled trolley. Sets up banquet tables. Washes and peels vegetables, using knife or peeling machine. Loads or unloads trucks picking up or delivering supplies and food

ISCO 08 Unit Group Details:

Code	9412
Title	Kitchen Helpers

Sub Division 95 Street and Related Sales and Services Workers

Street and Related Sales and Service Workers provide and sell goods, excluding food for immediate consumption, and provide a variety of services on streets and in other public places such as stations. Tasks include: buying or making various items for sale; loading and unloading items for sale and transporting them; obtaining the materials necessary to perform services; approaching people on the street to offer goods or services; cleaning and polishing shoes; cleaning and

polishing car windows; running errands; assisting drivers to find a parking place and ensuring car is not damaged during driver's absence; handing out leaflets and free newspapers; receiving immediate payment.

Occupations in this Sub Division are classified into the following Groups:

951	Street and Related Service Workers
952	Street Vendors (excluding Food)

Group **951** **Street and Related Service Workers**

Street and related service workers provide a variety of services on streets and in other public places, including cleaning shoes, washing car windows, running errands, looking after property, and providing other on-the-spot street services.

Occupations in this Group are classified into the following Families:

9510	Street and Related Service Workers
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Family **9510** **Street and Related Service Workers**

Street and Related Service Workers provide a variety of services on streets and in other public places, including cleaning shoes, washing car windows, running errands, handing out leaflets, looking after property, and providing other services on-the-spot.

9510.0100 **Boot Polisher**

Boot Polisher cleans and polishes shoes. Brushes shoes to remove dust; applies cleaning agents like soap or other chemical solution for removing dirt and spots from soiled shoes using sponge or cloth; applies polish, colour or chalk-powder (dry or mixed with liquid) with finger, brush or soft cloth on leather, canvas or other shoes; rubs surface of leather-shoes with soft brush to make them shine; applies chalk or solution on canvas or other non-leather shoes and allows them to dry; finishes leather shoes by further rubbing them with soft cloth or flannel piece; finishes non-leather shoes by retouching with appropriate cleaning matter and by removing superfluous coat and spots.

ISCO 08 Unit Group Details:

Code 9510

Title Street and Related Service Workers

9510.0200

Bill Poster

Billposter attaches advertising posters on surfaces, such as walls and billboards, using hand tools: Removes old poster, using scraping tool. Mixes paste-powder with water to form paste. Smears paste on wall or billboard surface, using brush. Aligns poster sections on billboard and smoothens sections, using long-handled brush. Staples or tacks posters on fences, walls, or poles. Climbs ladder to work from deck at bottom of elevated billboard. May work from scaffolding.

ISCO 08 Unit Group Details:

Code 9510

Title Street and Related Service Workers

9510.9900 Shoe Cleaning and Other Street Services Elementary Occupations, Other

Shoe Cleaning and Other Street Services Elementary Occupations, Other include workers engaged in activities such as cleaning shoe, washing car windows, or running errands and providing various on the spot street services, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9510

Title Street and Related Service
Workers

Group 952

Street Vendors (excluding Food)

Street vendors (excluding food) sell a usually limited range of goods (excluding food for immediate consumption) in streets and public places such as stations, cinemas or theatres.

Occupations in this Group are classified into the following Families:

9520 Street Vendors (excluding Food)

Family 9520 Street Vendors (excluding Food)

Street vendors (excluding food) sell a usually limited range of goods (excluding food for immediate consumption) in streets and public places such as stations, cinemas or theatres.

9520.0100

Hawker

Hawker; Peddler; Street Vendor; Pheriwala sells articles of daily utility and general merchandise such as vegetables, sweets, cloth, utensils, toys, etc. on footpaths or by going from door to door. Purchases goods from wholesale market according to his needs, and capital (money) available. Loads them in basket, or on pushcart, wheel-barrow or tricycle and moves in selected areas to effect sales. Announces loudly regarding the goods or articles on sale and their prices to attract customers. Attends to customers and effects sale by measuring, weighing or counting, as necessary. May also display goods or articles of sale on foot-path and effect sales. May purchase goods in lot, in auction or other sale. May prepare and sell his own products and may operate means of conveyance. May work on salary or commission basis or both.

ISCO 08 Unit Group Details:

Code 9520

Title Street Vendors (excluding Food)

9520.9900

Street Vendors, Non Food Products, Other

Street Vendors Non Food Products, Other include workers who sell various goods in streets and public places such as stations, cinemas or theatres not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9520

Title Street Vendors (excluding Food)

Sub Division 96 Refuse Workers and Other Elementary Workers

Refuse workers and other elementary workers collect garbage from buildings, yards, streets and other public places or keep streets and other public places or perform odd jobs for private households or establishments.

Tasks include-collecting, loading and unloading garbage; sweeping streets, parks and other public places; chopping firewood; carrying water; beating dust out of carpets and performing other odd-job tasks.

Occupations in this Sub Division are classified into the following Groups:

961	Refuse Workers
962	Other Elementary Workers

Group 961 Refuse Workers

Refuse workers collect, process and recycle garbage from buildings, yards, streets and other public places, or keep streets and other public places clean.

Occupations in this Group are classified into the following Families:

9611	Garbage and Recycling Collectors
9612	Refuse Sorters
9613	Sweepers and Related Labourers

Family 9611 Garbage and Recycling Collectors

Garbage collectors collect and remove rubbish and items for recycling from buildings, yards, streets and other places.

9611.0100 Garbage Collector (Motor Transport)

Garbage Collector (Motor Transport) collects garbage or refuse by manual scoop or mechanised scoop. Loads garbage on the truck and transports on designated route within municipality area to dump yard. Dumps garbage/refuse manually or through dumper truck in the dump yard. May ignite fire, spray pesticides or chemical solutions on the garbage to prevent bad odours.

ISCO 08 Unit Group Details:

Code 9611

Title Garbage and Recycling Collectors

9611.0201

E-Waste Collector

E-Waste Collector is responsible for collecting e-waste from retailers, repair shops and other unorganized stakeholders. Also responsible for promoting the importance of e-waste management and ill effects of improper handling of the e-waste and then collecting required information. The responsibility also encompasses the transportation of the collected e-waste to the central warehouse by packaging the e-waste, labelling and maintaining the log record.

Qualification Pack Details:

QP NOS Reference TEL/Q2400

QP NOS Name E Waste Collector

NSQF Level 3

ISCO 08 Unit Group Details:

Code 9611

Title Garbage and Recycling Collectors

9611.9900

Garbage Collectors, Other

Garbage Collectors, Other include workers who collect and remove garbage from

buildings, yards, streets and other public places not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9611

Title Garbage and Recycling Collectors

Family 9612

Refuse Sorters

Refuse Sorters identify, collect and sort discarded items suitable for recycling at dump sites and recycling enterprises or in buildings, streets and other public places.

Family 9613

Sweepers and Related Labourers

Sweepers and related labourers sweep and clean streets, parks, airports, stations and other public places.

9613.0300

Sweeper, Dry

Sweeper, Dry cleans, sweeps and scrubs buildings, streets, parks, etc. and removes garbage. Sweeps with broom or brush floors of buildings, roads, parks, etc. Removes dust and garbage in basket to dustbin. Scrubs floor with cloth, wet in phenyl and water to remove fine dust. May clean carpets and rugs with brush and dust furniture and fixtures. May prepare the broom. May dump garbage in cart and carry garbage in hand cart or in animal driven cart to the dumping ground.

ISCO 08 Unit Group Details:

Code 9613

Title Sweepers and Related Labourers

9613.0400

Sweeper, Wet

Sweeper, Wet; Scavenger cleans and washes bathrooms, lavatories drains etc. and removes night-soil. Sweeps and washes floor of bath-rooms, lavatories and operation theatre rooms in hospitals and removes garbage and other material in closed buckets to the dustbin. Scrubs floor with cloth, wet in phenyl and water. Removes night soil using spade and broom and carries it to dumping ground in hand-cart.

ISCO 08 Unit Group Details:

Code 9613

Title Sweepers and Related Labourers

9613.0500

Sweeper, Sewer

Sweeper Sewer; Sewer Cleaner cleans blocked underground drains and sewage system by various cleaning instruments. Removes iron-cover from manhole and descends in manhole with drainage equipment. Collects debris and refuse in bucket using spade and hands over bucket to helper outside manhole. Uses bamboo or iron rod to clean sewer by pushing it in and out and repeats process till sewer is cleaned. May remove debris and refuse in garbage carts to dumping ground. May flush sewer with hose connected with underground hydrant.

ISCO 08 Unit Group Details:

Code 9613

Title Sweepers and Related Labourers

9613.9900

Sweepers and Related Labourers, Other

Sweepers and Related Labourers, Other include all other workers engaged in sweeping, cleaning, and related work, not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9611

Title Garbage and Recycling Collectors

Group 962

Other Elementary Workers

Other Elementary Workers deliver and carry messages and packages, collect money and stock vending machines, read meters, collect water and firewood, collect and issue tickets for parking or events.

Occupations in this Group are classified into the following Families:

9621	Messengers, Package Deliverers and Luggage Porters
9622	Odd-job Persons
9623	Meter Readers and Vending Machine Collectors
9624	Water and Firewood Collectors
9629	Elementary Workers, Not Elsewhere Classified

Family 9621 Messengers, Package Deliverers and Luggage Porters

Messengers, Package Deliverers and Luggage Porters carry and deliver messages, packages and other items within an establishment or between establishments, to households and elsewhere, or carry luggage especially at hotels, stations and airports.

9621.0300

Caddie

Caddie carries bags of golf equipment around golf course, delivering clubs to players as requested. Keeps different types of golf clubs in leather bag; places golf ball over the small mound (on which golf-ball is placed for first stroke by player) and advises players, on request, in selection of proper club for particular stroke and/or on peculiarities of course; follows golf-ball after hit along with player and locates it, supplies required type of golf club for further stroke; collects golf clubs from player at close of play, cleans them and keeps kit in good condition. May inform player about type, condition and location of hole; may assist golf-professional (marker) in up-keep of golf course.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.0400 Bellhop (Hotel and Restaurant)

Bellhop (Hotel and Restaurants) performs any combination of following duties to serve hotel guests. Escorts incoming hotel guests to rooms, assists with hand luggage, and offers information pertaining to available services and facilities of hotel, points of interest, and entertainment attractions. Inspects guest's room to ensure furnishings are in order and supplies are adequate. Explains features of room, such as operation of radio, television, and night-lock, and how to place telephone calls. Pages guests in lobby, dining room, or other parts of hotel. Delivers messages and runs errands. Delivers room service orders. Picks up articles for laundry and valet

service. Calls taxi for guests. Transports guests about premises or local areas in car or motorized cart. Keeps record of calls for service. Delivers packages, suitcases, and trunks, and sets up sample rooms.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.0500

Porter, Baggage (Hotel and Restaurant)

Porter, Baggage (Hotel and Restaurant) delivers luggage to and from hotel rooms, sets up sample rooms for sales personnel and performs related services as requested by guest. Transfers trunks, packages, and other baggage to room or loading area, using hand pulled trolley. Arranges for outgoing freight, express or mail shipments, computes charges, tags article, and records information, such as addressee, addressor, carrier, and charges, on specified forms. Sets up display tables, racks, or shelves and assists sales personnel in unpacking and arranging merchandise display. May supply guests with travel information, such as transportation rates, routes, and schedules.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.0600

(Letter Box Peon) Post Man

Letter Box Peon collects letters from letter boxes installed within his areas at scheduled hours and delivers them to post office. Follows planned route to clear

letter boxes in his beat at fixed hours. Unlocks letter boxes and collects mail into mail bag. Removes plate indicating hour of clearance and replaces it with new plate indicating next clearance hour. Locks letter box and ensures proper fixation of hour plate and lock. Clears all letter boxes and delivers bags containing mail to post office. May sort incoming and outgoing mail at the post office. May stamp letters and covers, seal bags and load or unload them in the mail van.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.0700

Mail Carrier

Mail Carrier transports mail bags in van or cart to and from different post offices and railway station in his area. Collects mail bags from head post office or railway station. Counts and acknowledges their receipt. Loads mail bags in proper order in mail van or cart. Accompanies mail bags in van or cart for security, delivers them at railway station or post office and obtains receipt of delivery. Collects outgoing and local mail bags from post office, counts them and acknowledges their receipt. Delivers them at head post office against receipt. May assist in stamping, sorting and distributing letters. May carry mail bags manually. May work as Letter Box Peon.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.0800

Runner, Mail

Runner, Mail collects and delivers letters and other postal articles from and to different village post offices and postal agencies. Collects mail bags from head post office, counts them and acknowledges their receipt. Carries and delivers them to specified post offices or places and obtains delivery receipts. Collects outgoing mail bags, counts and acknowledges their receipt and delivers them at the main post office against acknowledgment. May work as Sorter and Mail Carrier. May carry with him spear-head stick fitted with small bells to ward off wild animals.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.0900

Sorter, Mail

Sorter, Mail sorts out incoming or outgoing mail, such as letters, parcels, registered articles, etc., for delivery to addressees or despatch to appropriate post offices. Collects mail to be sorted and reads addresses for sorting. Sorts mail, beat or area wise, according to addresses, in different bins or postal bags for distribution to Postmen for local delivery or despatch to appropriate post offices through Railway or Air Mail service. May work in post office or RAM'S. van and ensure despatch of mail bags to the correct destination.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.1200

Hotel Concierge

Hotel Concierge; Baggage Porter, Hotel delivers baggage to and from hotel rooms, sets up sample room for Salesmen and performs related services as requested by guests or directed by authorities. Transfers trunks, packages and other baggage to room or loading area manually or using hand truck. Arranges for outgoing freight, express or mail shipment, compute charges, tags articles, and records information such as addressee, addresser, carrier and charges on specified forms. (Sets up display tables, racks or shelves and assists Salesmen in unpacking and arranging merchandise display.) May supply guests with travel information such as transportation rates, routes, and schedules. May escort incoming guests to rooms.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.1300

Water Carrier

Water Carrier; Bhishtidraws water from wells, rivers ponds etc. for drinking, washing, cleaning and other purposes in house, building or institution. Collects water in big leather bags, buckets or other containers from taps, ponds or well and carries leather bag or containers filled with water and delivers at houses of clients for drinking, cleaning of drains, storage in tanks. Supplies water to work sites. May work whole-time or part-time in private houses for supplying drinking water.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

9621.9900

Messengers, Package Deliverers and Luggage Porters, Other

Messengers, Package Deliverers and Luggage Porters, Other include workers who carry and deliver messages, packages and other items within an establishment or between establishments, to households and elsewhere, or carry luggage especially at hotels, stations and airports not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9621

Title Messengers, Package Deliverers and Luggage Porters

Family 9622

Odd-job Persons

Odd job Persons clean, paint and maintain buildings, grounds and facilities, and undertake simple repairs.

Family 9623

Meter Readers and Vending Machine Collectors

Meter Readers and Vending-Machine Collectors stock vending machines and collect money from them or from parking meters and other coin-boxes, or read electricity, gas or water meters.

9623.0100

Vending Machine Attendant

Vending Machine Attendant stocks machines and assists customers in facility where food is dispensed from coin-operated machines. Places food or drink items on shelves of vending machines and

changes shelf labels as required to indicate selections. Makes change for customers and answers questions regarding selections. Adjusts temperature gauges to maintain food items at specified temperatures. Performs minor repairs or adjustments on machines to correct jams or similar malfunctions, using hand tools. Prepares requisitions for food and drink supplies. Cleans interior and exterior of machines, using damp cloth. Maintains eating area in orderly condition. May sell precooked foods from hot table. May remove money from vending machines and keep records of receipts.

ISCO 08 Unit Group Details:

Code 9623

Title Meter Readers and Vending Machine Collectors

9623.0200

Coin Collector

Coin Collector drives vehicle over established route to collect money from and refill coin-operated amusement-game machines and vending machines that dispense merchandise, such as coffee, food, beverages, candy and condoms. Loads transport vehicle with supplies according to instructions. Drives vehicle to establishment, collects coins, refills machine, cleans inside of machines that dispense food or beverages, and records amount of money collected. Turns in money to cashiering department at completion of route and unloads truck. Reports malfunctioning machines to maintenance department for repair. May perform minor repairs or adjustments on machines, using hand tools, to correct malfunctions. May promote installation of new or additional coin-operated machines at locations of customers or potential customers.

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

9623.0300**Meter Reader**

Meter Reader reads electric, gas or water consumption meters and records volume used by residential and commercial consumers: Walks or drives truck over established route and takes readings of meter dials. Inspects meters and connections for defects, damage, and unauthorised connections. Indicates irregularities on forms for necessary action by servicing department. Verifies readings to locate abnormal consumption and records reasons for fluctuations. Turns service off for non-payment of charges in vacant premises, or on for new occupants. Collects bills in arrears. Returns route book to commercial office for billing purposes.

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

9623.0301**Municipal Water and Sewage Assessor**

Municipal Water and Sewage Assessor is responsible for carrying out readings of water meter installed in housing, commercial and institutional setups and collection of water and waste water samples for carrying out quality checks.

Qualification Pack Details:

QP NOS Reference PSC/Q0203
 QP NOS Name Municipal Water
 and Sewage
 Assessor
 NSQF Level 3

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

9623.0401**PUC Attendant**

PUC Attendant needs to assist customers' in checking the vehicles and understanding the compliance pertaining to PUC.

Qualification Pack Details:

QP NOS Reference ASC/Q9601
 QP NOS Name PUC Attendant
 Level 2
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

9623.0501**Tyre Inflation Attendant**

Tyre Inflation Attendant needs to maintain the air check facility existing at fuel stations. The individual needs to check the air pressure in vehicles coming into the fuel station using digital/manual air facility.

Qualification Pack Details:

QP NOS Reference ASC/Q9603
 QP NOS Name Tyre Inflation
 Attendant
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

9623.0601**Quick Care Point Attendant**

Quick Care Point Attendant needs to assist customers in checking the vehicles and understanding the compliance pertaining to coolant, water and oil levels.

Qualification Pack Details:

QP NOS Reference ASC/Q9602
 QP NOS Name QCP Attendant
 NSQF Level 2

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

9623.9900**Vending Machine Money Collectors, Meter Readers and Related Workers, Other**

Vending Machine Money Collectors, Meter Readers and Related Workers, Other include workers who stock vending machines and collect money from them or from parking meters and other coin-boxes, or read electricity, gas or water meters not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9623
 Title Meter Readers and Vending
 Machine Collectors

Family 9624**Water and Firewood Collectors**

Water and firewood collectors collect water and firewood and transport them on foot or using hand or animal carts.

Family 9629**Elementary Workers, Not Elsewhere Classified**

This family covers Elementary Workers not classified elsewhere in Division 9, Elementary workers. For instance, the group includes those who issue and collect parking or admission tickets, provide personal items to patrons or customers in cloak.

9629.0100**Usher**

Usher guides patrons to their seats in cinema halls, theatres and other places of entertainment. Examines uncollected portions of tickets, held by patrons, at entrance or inside auditorium or enclosure of show, play, game or any other entertainment to find out allotted numbers of seats reserved; escorts patrons to their appropriate seats; guides patrons whose seats are not reserved to available unreserved seats; distributes programme or other publicity material and answers queries of patrons regarding location of bars, restaurants, public conveniences, telephone etc., assists patrons in searching lost articles; delivers left behind articles to manager for return to owners; examines collected portions of tickets at gate, arranges and renders account to manager; assists in displaying publicity posters, hoardings, or notices in or outside place of entertainment. May do odd jobs for superiors e.g. getting hand-bills printed, checking of tickets, etc.

ISCO 08 Unit Group Details:

Code 9629

Title Elementary Workers Not
Elsewhere Classified**9629.9900****Door Keepers, Watchpersons and
Related Workers, Other**

Door Keepers, Watchpersons and Related Workers, Other include workers who undertake door keeping duties in apartment houses and other buildings, attend parking places, watch houses and other properties to prevent illegal entry or theft and detect fire or other hazards, collect tickets, or perform ushering duties not elsewhere classified.

ISCO 08 Unit Group Details:

Code 9629

Title Elementary Workers Not
Elsewhere Classified

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Sr. No.	Division	Total Number of Job Roles
1.	6	118
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