

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MINING INDUSTRY



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What are Occupational Standards(OS)?

OS describe what individuals need to do, know and understand in order to carry out a particular job role or function

- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualifications Pack – Wire saw Operator

SECTOR: MINING

SUB-SECTOR: Mining Operation

OCCUPATION: Drilling / Cutting

REFERENCE ID: MIN/Q 0203

ALIGNED TO: NCO-2004/8111.90

Brief Job Description: A 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.

Personal Attributes: This job requires the individual to concentrate on the job at hand and complete it effectively and efficiently without any accidents so diligence, attentiveness, quick reflexes and hard-working are some of the desired attributes for individuals performing this role. He must also demonstrate strong work ethics and an ability to communicate courteously with co-workers and the supervisor.

Job Details	Qualifications Pack Code	MIN/Q 0203		
	Job Role	Wire saw Operator This job role is applicable in both national and international scenarios		
	Credits(NSQF)	Level 4	Version number	1.0
	Sector	Mining	Drafted on	01/02/2014
	Sub-sector	Mining Operation	Last reviewed on	24/03/2014
	Occupation	Drilling / Cutting	Next review date	24/03/2017
	NSQC Clearance on	20/08/2015		

Job Role	Wire saw Operator
Role Description	Drives and operates a Wire saw machine which is a large machine used to cut large blocks of stone out from the marble
NSQF level	4
Minimum Educational Qualification	Preferably class XII
Maximum Educational Qualification	Not applicable
Training (suggested but not mandatory)	<ol style="list-style-type: none"> 1. Technical and gallery training as per First schedule, Mining vocational training rules (MVTR 1966) 2. Operator training for Wire saw
Minimum Job Entry Age	18 years
Experience	N.A.
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> 1. MIN/N 0209 (Prepare Wire saw) 2. MIN/N 0210 (Perform Wire saw Operations) 3. MIN/N 0211 (Carry Out Reporting and Logging – Wire Saw Operator) 4. MIN/N 0204 (Health and Safety) <p>Optional: Not applicable</p>
Performance Criteria	As described in the relevant OS units

Definitions

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
OS	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills or Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS , these include communication related skills that are applicable to most job roles.

National Occupational Standard



Overview

This unit is about preparing the Wire saw for activities that need to be carried out during a shift

MIN/N 0209

Prepare Wire saw

National Occupational Standard

Unit Code MIN/N 0209	
Unit Title(Task) Prepare Wire saw	
Description	This unit is about preparing the Wire saw for activities that need to be carried out during a shift
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> • Conducting pre-operation checks to ensure the Wire saw is safe to use. • Recording details of daily checks
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Conducting pre-operation checks to ensure the Wire saw is safe to use.	To be competent, the user/individual on the job must be able to: PC1. Adhere to time limits given by supervisor PC2. Check the various controls, gauges, warning lamp and other safety devices PC3. Ensure that crown blocks are mounted securely PC4. Check all hose connections are in order, if using a compress air Wire saw PC5. Check that Wire sawing equipment is in safe operating condition. PC6. Apply grease to all greasing pins and pivot points PC7. The Wire sawing site is clear of other mine workers to avoid any accidents. PC8. Follow the manufacturer’s instructions which apply to the care and safe operation of the Wire saw.
	Recording details of daily checks.
Knowledge and Understanding (K)	
	The user/individual on the job needs to know and understand: KA1. Job specific documents e.g. daily maintenance checklist and importance of the same KA1. Risk and impact of not following defined procedures/work instructions KA2. Escalation matrix for reporting identified problems KA3. Cost of equipment and loss for the company that results from damage of equipment KA4. Implications of delays in process to the company

	<p>Safety guidelines specified by Directorate General of Mine Safety (DGMS):</p> <p>KA5. Different types of mines and detail of the mine he is working in</p> <p>KA6. Mine Organization, time keeping, need for discipline and punctuality</p> <p>KA7. Benching in quarries, Dressing of overhangs, undercuts, Fencing, First aid and Hygiene</p> <p>KA8. Code of traffic in specific areas of mine. Significance of fences</p> <p>KA9. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA10. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA11. Tramways and siding, Haulage rooms, Winding rooms, Boilers, Electrical Gears</p> <p>KA12. Duties of workmen under Mines act</p> <p>KA13. Provision of wages, working hours and accident compensation as per Mines act</p> <p>KA14. Knowledge of mining safety procedures</p> <p>KA15. Outcome of violation of safely procedures</p> <p>KA16. Precautions to be taken when handling heavy equipment</p> <p>KA17. Refresher training as per fourth schedule MVTR (1966) within one month of joining duties following absence from duties for a period exceeding one year.</p>
<p>C. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Different types of Wire saws and their specific use</p> <p>KB2. Specification and details of blast hole Wire saws used in open-cast mines</p> <p>KB3. Instrument panel, various controls their location and operation</p> <p>KB4. Lubrication of Wire saws</p> <p>KB5. Various levers and switches in order to operate the Wire saw properly</p> <p>KB6. Different types of Wire saw bits and their uses</p> <p>KB7. Common terminology vis-à-vis Wire sawing</p> <p>KB8. Routine checks essential before starting Wire saw operations</p> <p>KB9. Signage, mining area signs and other safety and emergency signals</p> <p>KB10. Response to emergencies such as fire, accident, major failure etc.</p>

MIN/N 0209

Prepare Wire saw

Skills	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill out check-list /activity logbooks detailing maintenance activities conducted</p> <p>SA2. Fill out administrative forms.</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Read operators' manual</p> <p>SA4. Read and understand pre-operation checklist/ activity logbook</p> <p>SA5. Read and comprehend banners /signage</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Communicate with supervisors and peers in a polite manner using respectable language.</p>
B. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. make decisions pertaining to the concerned area of work.</p>
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. plan and organize the work order and jobs</p> <p>SB3. organize all process manuals so that sorting/ accessing information is easy</p>
	Customer Centricity
	<p>NA</p>
	Problem Solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. detect problems in day to day tasks</p> <p>SB5. discuss possible solution with the supervisor for problem solving</p> <p>SB6. make decisions in emergency conditions</p>
Analytical Thinking	

MIN/N 0209

Prepare Wire saw

The user/individual on the job needs to know and understand how to:

- SB7. follow instructions and work on areas of improvement identified
- SB8. complete the assigned tasks with minimum supervision
- SB9. complete the job within timelines and quality norms

Critical Thinking

The user/individual on the job needs to know and understand how to:

- SB10. use common sense and make judgments during day to day basis
- SB11. use reasoning skills to identify and resolve basic problems
- SB12. use intuition to detect any potential problems which could arise



MIN/N 0209

Prepare Wire saw

NOS Version Control

NOS Code	MIN/N 0209		
Credits (NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	28/01/2014
Sub-sector	Mining Operation	Last reviewed on	24/03/2014
Occupation	Drilling / cutting	Next review date	24/03/2017

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National Occupational Standard



Overview

This unit is about performing Wire sawing operation using a rig mounted Wire saw machine

Unit Code	MIN/N 0210
Unit Title(Task)	Perform Wire saw Operations
Description	This unit is about performing Wire sawing operation using a rig mounted Wire saw machine.
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> • Travelling of the Wire saw by Trimming or Towing • Positioning and mounting the Wire saw • Perform Wire sawing operation.
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Travelling of the Wire saw by Trimming or Towing	To be competent, the user/individual on the job must be able to: <p>PC1. Plan and organize the job according to the site engineer instructions</p> <p>PC2. Organise daily consumables according to the day's plan</p> <p>PC3. Operate propelling motor control levers to smoothly move the Wire saw machine in all four directions.</p> <p>PC4. Ensure all necessary precautions are adhered to before towing the Wire saw to a distant site.</p> <p>PC5. Raise Wire saw guide to 1.5m above ground level and make it horizontal to prevent any damage in transit.</p>
Positioning and mounting the Wire saw	PC6. Ensure a stable base for mounting the Wire saw
	PC7. Adjust the tracks by methodically manipulating the positions of oscillation cylinder valve and hydraulic track valve.
	PC8. Have work area barricaded or banded and erect signage as required to make work area safe.
Perform Wire sawing operation.	PC9. Ensure that the highest level of quality is consistently maintained
	PC10. Ensure all associated products (couplings/rods etc.) are used to their maximum potential, while ensuring their sustainability
	PC11. Reduce downtime and wastage
	PC12. Demonstrate caution against hazards of Wire saw machine in operation.

Knowledge and Understanding (K)

A. Organizational

Context

(Knowledge of the organization and its processes)

The user/individual on the job needs to know and understand:

- KB1. Types of documentation in organization e.g. daily maintenance checklist and importance of the same
- KB2. Risk and impact of not following defined procedures/work instructions
- KB3. Rules and regulations of mine as per standard operating procedure (SOP)
- KB4. Risk and impact of not following company's SOP
- KB5. Escalation matrix for reporting identified problems
- KB6. Duties and responsibilities associated with his job role as per the employer

Safety guidelines specified by Directorate General of Mine Safety (DGMS)

- KA1. Different types of mines and detail of the mine he is working in
- KA2. Mine Organisation, time keeping, need for discipline and punctuality
- KA3. Benching in quarries, Dressing of overhangs, undercuts, Fencing, First aid and Hygiene
- KA4. Code of traffic in specific areas of mine. Significance of fences
- KA5. Standing orders in force at the mine. Safety in the vicinity of machinery
- KA6. Shot-firing and Safety regulations. How and where to take shelter
- KA7. Tramways and siding, Haulage rooms, Winding rooms, Boilers, Electrical Gears
- KA8. Duties of workmen under Mines act
- KA9. Provision of wages, working hours and accident compensation as per Mines act.
- KA10. Knowledge of mining safety procedures
- KA11. Outcome of violation of safety procedures
- KA12. Precautions to be taken when handling heavy equipment
- KA13. Refresher training as per fourth schedule MVTR (1966) within one month of joining duties following absence from duties for a period exceeding one year.

B. Technical

Knowledge

The user/individual on the job needs to know and understand:

- KB1. Different types of Wire saws and their specific use
- KB2. Operation of different sub-assemblies such as drive wheel, hydraulic system, power unit, water supply system, wire tensioning arm, wire length adjustment pulley etc.
- KB3. Specification and details of Diamond Wire saws used in open-cast mines
- KB4. Instrument panel, various controls their location and operation.

Perform Wire saw Operations

	<p>KB5. Different types of Wire saws and their specific use</p> <p>KB6. Operation of different sub-assemblies such as drive wheel, hydraulic system, power unit, water supply system, wire tensioning arm, wire length adjustment pulley etc.</p> <p>KB7. Specification and details of Diamond Wire saws used in open-cast mines</p> <p>KB8. Instrument panel, various controls their location and operation</p> <p>KB9. Setting up of the saw for various tasks - horizontal, vertical or flush cutting.</p> <p>KB10. Wire sawing pattern and sequence of operations.</p> <p>KB11. Method and significance of twisting the diamond wire before joining connectors.</p> <p>KB12. Mounting of the water supply nozzle for cooling of the wire while cutting</p> <p>KB13. Optimal speed of driving and cutting to ensure best results.</p> <p>KB14. Use of various systems in the remote control unit to control the hydraulic oil flow rate, wire tension control, longitudinal advance control for cutting direction, potentiometer for speed adjustment.</p> <p>KB15. Safety during Wire sawing, marching and other operations</p> <p>KB16. Working area must be cordoned off as flying pieces of rock can be dangerous.</p> <p>KB17. comply with all company Quality, Health, Safety and Environment policies and procedures</p> <p>KB18. Signage, mining area signs and other safety and emergency signals</p> <p>KB19. Response to emergencies such as fire, accident, major failure etc.</p> <p>KB20. Basic maintenance steps such as replacing rubber on the pulleys, cleaning the diamond wire guard and drive wheel guard, keeping grip points free from oil and grease.</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill out check-list /activity logbooks detailing maintenance activities conducted</p> <p>SA2. Fill out administrative forms</p>
	Reading Skills
<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Read operators' manual</p> <p>SA4. Read and understand pre-operation checklist/ activity logbook</p> <p>SA5. Read and comprehend banners /signage</p>	

MIN/N 0210

Perform Wire saw Operations

	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA6. Communicate with supervisors and peers in a polite manner using respectable language.
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. make decisions pertaining to the concerned area of work.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. plan and organize the work order and jobs SB3. organize all process manuals so that sorting/ accessing information is easy
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB4. detect problems in day to day tasks SB5. discuss possible solution with the supervisor for problem solving SB6. make decisions in emergency conditions
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. follow instructions and work on areas of improvement identified SB8. complete the assigned tasks with minimum supervision SB9. complete the job within timelines and quality norms
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB10. use common sense and make judgments during day to day basis SB11. use reasoning skills to identify and resolve basic problems SB12. use intuition to detect any potential problems which could arise

NOS Version Control

NOS Code	MIN/N0210		
Credits(NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/2014
Sub-sector	Mining Operation	Last reviewed on	24/03/2014
Occupation	Drilling / cutting	Next review date	24/03/2017

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National Occupational Standard



Overview

This unit is about reporting and documentation

National Occupational Standard	Unit Code	MIN/N 0211
	Unit ID (Task)	Carry out reporting and documentation
	Description	This unit is about carrying out reporting and documentation
	Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Reporting of problem/incidents etc. • Recording and Documentation
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Reporting of problem/incidents etc.	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. Report problems/incidents as applicable in a timely manner PC2. Report to the appropriate authority as laid down by the employer PC3. Follow reporting procedures as prescribed by the employer
	Recording and Documentation	<ul style="list-style-type: none"> PC4. Identify documentation to be completed relating to one's role PC5. Record details accurately using the appropriate format PC6. Complete all documentation within stipulated time. PC7. Make sure documents are available to all appropriate authorities to inspect
	Knowledge and Understanding (K)	
	A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KA1. Types of documentation in organization e.g. daily maintenance checklist and importance of the same KA2. Risk and impact of not following defined procedures/work instructions KA3. Rules and regulations of mine as per standard operating procedure (SOP) KA4. Risk and impact of not following company's SOP KA5. Escalation matrix for reporting identified problems KA6. The duties and responsibilities associated with his job role as per the employer <p>Safety guidelines specified by Directorate General of Mine Safety (DGMS)</p> <ul style="list-style-type: none"> KA7. Different types of mines and detail of the mine he is working in KA8. Mine Organisation, time keeping, need for discipline and punctuality

Documentation and Reporting – Wire saw Operator

	<p>KA9. Benching in quarries, Dressing of overhangs, undercuts, Fencing, First aid and Hygiene</p> <p>KA10. Code of traffic in specific areas of mine. Significance of fences</p> <p>KA11. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA12. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA13. Tramways and siding, Haulage rooms, Winding rooms, Boilers, Electrical Gears</p> <p>KA14. Duties of workmen under Mines act</p> <p>KA15. Provision of wages, working hours and accident compensation as per Mines act</p> <p>KA16. Knowledge of mining safety procedures</p> <p>KA17. Outcome of violation of safely procedures</p> <p>KA18. Precautions to be taken when handling heavy equipment</p> <p>KA19. Refresher training as per fourth schedule MVTR (1966) within one month of joining duties following absence from duties for a period exceeding one year.</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill up documentation applicable to one's role</p>
	Reading Skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. Read english and/or vernacular language with few pauses and a constant speed</p> <p>SA3. Read and understand manuals, health and safety instructions, memos etc</p> <p>SA4. Ability to read from different sources - books, screens in machines, signange etc.</p> <p>SA5. Understand the various color codes, as per standard mining nomenclature</p>
	Oral Communication (Listening and Speaking skills)

Documentation and Reporting – Wire saw Operator

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SA6. Express statements or information clearly so that others can hear and understand SA7. Participate in and understand the main points of simple discussions SA8. Respond appropriately to any queries SA9. Communicate with supervisor
B. Professional Skills	<p>Decision Making</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB1. make decisions pertaining to the concerned area of work. <p>Plan and Organize</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB2. plan and organize the work order and jobs SB3. organize all process manuals so that sorting/ accessing information is easy <p>Customer Centricity</p> <p>NA</p> <p>Problem Solving</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB4. detect problems in day to day tasks SB5. discuss possible solution with the supervisor for problem solving SB6. make decisions in emergency conditions <p>Analytical Thinking</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB7. follow instructions and work on areas of improvement identified SB8. complete the assigned tasks with minimum supervision SB9. complete the job within timelines and quality norms <p>Critical Thinking</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB10. use common sense and make judgments during day to day basis SB11. use reasoning skills to identify and resolve basic problems SB12. use intuition to detect any potential problems which could arise

NOS Version Control

NOS Code	MIN/N 0211		
Credits(NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/2014
Sub-sector	Mining Operation	Last reviewed on	24/03/2014
Occupation	Drilling / cutting	Next review date	24/03/2017

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National Occupation Standards



Overview

This unit is about health and safety measures critical in open-cast mines

MIN/N 0204

Health and Safety

National Occupational Standard

Unit Code	MIN/N 0204
Unit Title (Task)	Health and Safety
Description	This unit is about health and safety measures critical in open-cast mines
Scope	<p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> Health and safety measures critical for personnel working in open-cast mines
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Health and safety measures critical for personnel working in open-cast mines.	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Comply with occupational health and safety regulations adopted by the employer.</p> <p>PC2. Follow mining operations procedures with respect to materials handling and accidents</p> <p>PC3. Follow the correct safety steps in case of fire, accident, major failure</p> <p>PC4. Work responsibly and carefully so as not to put the health and safety of self or others at risk.</p> <p>PC5. Perform storage and transport of hazardous materials compliant with safety guidelines prescribed by DGMS.</p> <p>PC6. Comply with safety regulations and procedures in case of fire hazard.</p> <p>PC7. Operate various grades of fire extinguishers.</p> <p>PC8. Work responsibly and as safe and careful as possible so as not to put the health and safety of self or others at risk, including members of the public</p> <p>PC9. Demonstrate careful practices in handling explosives and heavy machinery.</p> <p>PC10. Identify characteristics of post-blast fumes and take necessary precautions.</p>

Knowledge and Understanding (K)	
<p>A . Organizational Context (Knowledge of the organization and its processes)</p>	<p>Knowledge of safety guidelines specified by Directorate General of Mine Safety (DGMS))</p> <p style="padding-left: 40px;">The user/individual on the job needs to know and understand:</p> <p>KA1. Benching in quarries, Dressing of overhangs, undercuts, fencing</p> <p>KA2. First aid and hygiene</p> <p>KA3. Code of practice in specific areas of mine. Significance of fences</p> <p>KA4. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA5. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA6. Knowledge of mining safety procedures</p> <p>KA7. Outcome of violation of safety procedures</p> <p>KA8. Locally prepared Emergency Preparedness / Disaster Management Plan.</p> <p>KA9. Environmental impact of mining</p> <p>KA10. Sources of dust, noise and vibration and measures to minimise</p> <p>KA11. Hazardous material safety and security rules and regulations as prescribed by DGMS.</p>

MIN/N 0204

Health and Safety

NOS Version Control

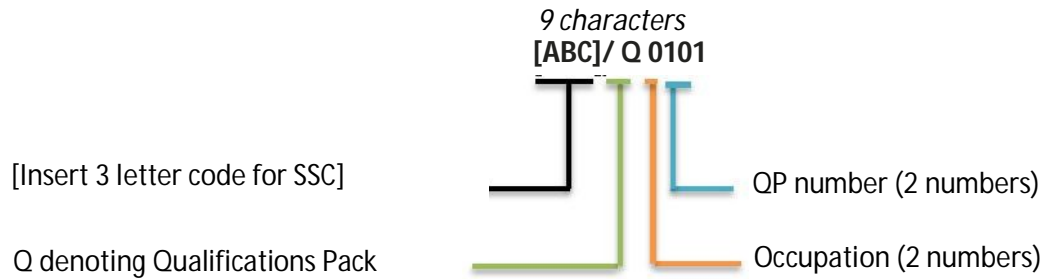
NOS Code	MIN / N 0204		
Credits(NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	01/02/2014
Sub-sector	Mining Operation	Last reviewed on	24/03/2014
Occupation	Drilling / cutting	Next review date	24/03/2017

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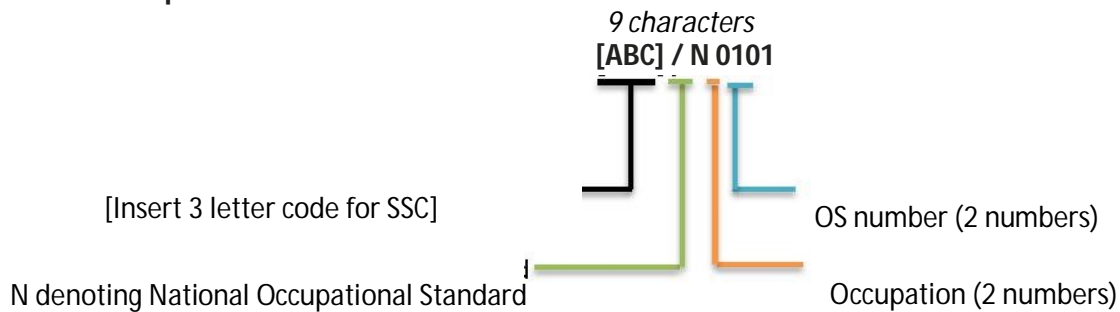
Nomenclature for QP and NOS units

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Nomenclature for QP and NOS units

The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Exploration & Resource Management	1 to 25
Mining Operation	26 to 65
Engineering Services	66 to 90
Mineral Beneficiation	91 to 99

Sequence	Description	Example
Three letters	Industry name	MIN
Slash	/	/
Next letter	Whether QP or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

List of Abbreviations

Term	Description
NOS	National occupation standards
QP	Qualification pack
NVEQF	National vocational education qualifications framework
NSQF	National skills qualifications framework
HEMM	Heavy earth moving machinery
NCVT	National council for vocational training
DGMS	Directorate general of mines safety
PC	Performance Criteria
FIMI	Federation of Indian mineral industries



CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Wire saw Operator

Qualification Pack MIN/Q 0203

Sector Skill Council Skill Council for Mining Sector

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessment Outcome	Assessment Criteria	Total Mark (100)	Out Of	Marks Allocation	
				Theory	Skills Practical
1. MIN/N 0209 (Prepare Wire saw)	PC1. Adhere to time limits given by supervisor	25	2	1	1
	PC2. Check the various controls, gauges, warning lamp and other safety devices		3	0	3
	PC3. Ensure that crown blocks are mounted securely		3	1	2
	PC4. Check all those connections are in order, if using a compress air Wire saw		3	1	2
	PC5. Check that Wire sawing equipment is in safe operating condition.		2	0	2
	PC6. Apply grease to all greasing pins and pivot points		2	0	2
	PC7. The Wire sawing site is clear of other mine workers to avoid any accidents.		2	0	2
	PC8. Follow the manufacturer's instructions which apply to the care and safe operation of the Wire saw.		2	1	1

	PC9. Maintain a checking/maintenance logbook to record all activities performed before starting the Wire saw		3	1	2
	PC10. Inform supervisor of problems that are beyond scope of his role		3	2	1
		Total	25	7	18
2. MIN/N 0210 (Perform Wire saw Operations)	PC1. Plan and organize the job according to the site engineer instructions	25	2	1	1
	PC2. Organize daily consumables according to the day's plan		3	1	2
	PC3. Operate propelling motor control levers to smoothly move the Wire saw machine in all four directions.		2	0	2
	PC4. Ensure all necessary precautions are adhered to before towing the Wire saw to a distant site.		2	1	1
	PC5. Raise Wire saw guide to 1.5m above ground level and make it horizontal to prevent any damage in transit.		2	1	1
	PC6. Ensure a stable base for mounting the Wire saw		2	0	2
	PC7. Adjust the tracks by methodically manipulating the positions of oscillation cylinder valve and hydraulic track valve.		2	0	2
	PC8. Have work area barricaded or banded and erect signage as required to make work area safe.		2	1	1
	PC9. Ensure that the highest level of quality is consistently maintained		2	1	1
	PC10. Ensure all associated products (couplings/rods etc) are used to their maximum potential, while ensuring their sustainability		2	0	2
	PC11. Reduce downtime and wastage		2	1	1
	PC12. Demonstrate caution against hazards of Wire saw machine in operation.		2	1	1
		Total	25	8	17
3. MIN/N 0211 (Carry Out Reporting and Logging- Wire saw Operator)	PC1. Report problems/incidents as applicable in a timely manner	25	4	2	2
	PC2. Report to the appropriate authority as laid down by the employer		4	2	2
	PC3. Follow reporting procedures as prescribed by the employer		4	1	3

	PC4. Identify documentation to be completed relating to one's role		4	1	3
	PC5. Record details accurately using the appropriate format		4	1	3
	PC6. Complete all documentation within stipulated time.		5	3	2
		Total	25	10	15
4. MIN/ N0204 (Health and Safety)	PC1. Comply with occupational health and safety regulations adopted by the employer.	25	2	1	1
	PC2. Follow mining operations procedures with respect to materials handling and accidents		3	0	2
	PC3. Follow the correct safety steps in case of fire, accident, major failure		2	0	2
	PC4. Work responsibly and carefully so as not to put the health and safety of self or others at risk.		2	0	2
	PC5. Perform storage and transport of hazardous materials compliant with safety guidelines prescribed by DGMS.		3	1	2
	PC6. Comply with safety regulations and procedures in case of fire hazard.		2	1	1
	PC7. Operate various grades of fire extinguishers.		3	1	2
	PC8. Work responsibly and as safe and careful as possible so as not to put the health and safety of self or others at risk, including members of the public		3	1	2
	PC9. Demonstrate careful practices in handling explosives and heavy machinery.		3	2	1
	PC10. Identify characteristics of post-blast fumes and take necessary precautions.		2	1	1
		Total	25	9	16