

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GEMS & JEWELLERY 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-Gemstone Driller

SECTOR: GEMS & JEWELLERY

SUB-SECTOR: Gemstone Processing

OCCUPATION: Drilling

REFERENCE ID: G&J/Q6801

ALIGNED TO: NCO-2004/7313.68

Gemstone Driller: The gemstone driller makes holes through the gemstones for threading.

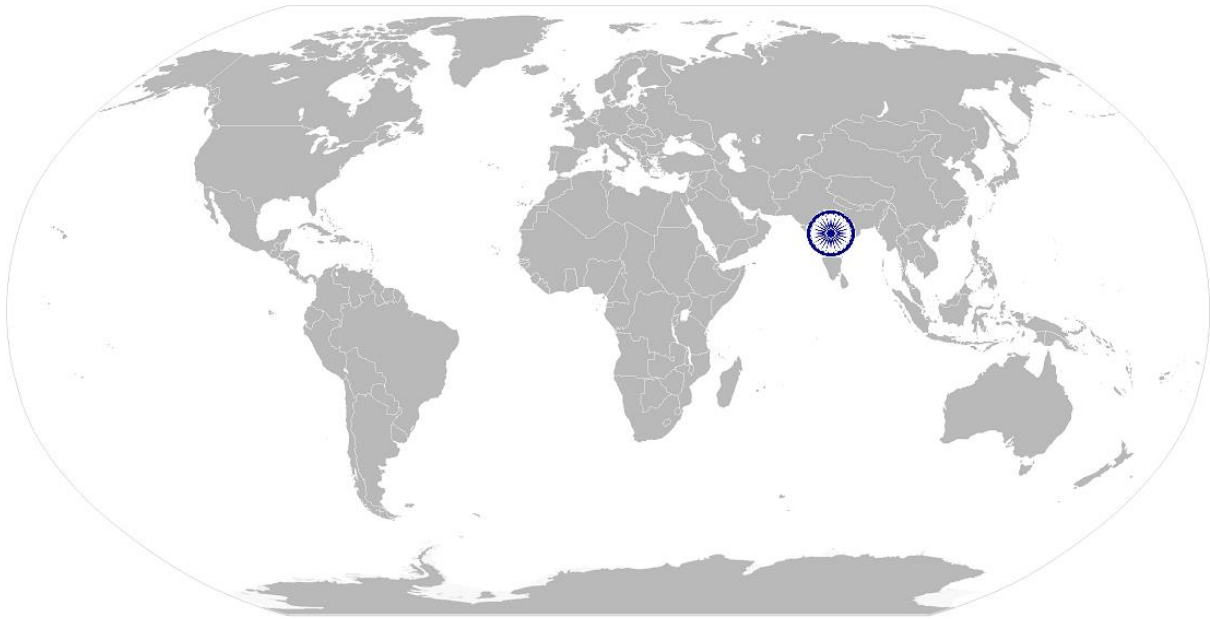
Brief Job Description: The individual at work uses drilling machine and different types of drill bits or needles to create even holes through the finished gemstone to make it ready for threading.

Personal Attributes: The job requires the individual to have: attention to details, good eyesight, steady hands, ability to work in a process driven team and for long hours in standing position and in a monotonous job. The individual must also be able to use problem solving skills in order to avert machine failures, errors and hazards.

Job Details	Qualifications Pack Code	G&J/Q6801		
	Job Role	Gemstone Driller		
	Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
	Sector	Gems & Jewellery	Drafted on	19/06/13
	Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
	Occupation	Drilling	Next review date	15/07/15

Job Role	Gemstone Driller
Role Description	Drilling holes through, usually, round gemstones in order to make them ready for threading
NVEQF/NVQF level	2
Minimum Educational Qualifications	Preferably 10 th standard passed
Maximum Educational Qualifications	
Training	Not applicable
Experience	Not applicable
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> G&J/N6801 Drill hole on gemstone G&J/N9920 Maintain IPR at work G&J/N9921 Coordinate with colleagues G&J/N9924 Maintain safety at work <p>Optional: Not applicable</p>
Performance Criteria	As described in the relevant OS units

National Occupational Standard



Overview

This unit is about drilling holes through gemstones in order to make them ready for threading into a necklace or earring. It is a high precision job, especially, when the size of the finished gemstone to be drilled is small.

G&J/N6801

Drill hole on gemstone

National Occupational Standard

Unit Code	G&J/N6801
Unit Title (Task)	Drill hole on the gemstone
Description	This OS unit is about drilling holes in a finished gemstone for threading in to a necklace or earring, while maintaining its shape, size, alignment of hole from both sides and acceptable stone loss level.
Scope	<p>This unit/task covers the following:</p> <p>Receive bag of gemstones from supervisor</p> <ul style="list-style-type: none"> • match the stone type, weight and number as mentioned on the bag • understand drilling requirement as per shape, finishing and plan • understand the permitted level of stone loss for the stone and product type <p>Drill hole in the stone</p> <ul style="list-style-type: none"> • select the drill bit or needle to be used as per the product such as beads and size • centre or align the product with drill bit or needle as per plan • drill hole from one side up to the centre and then from the other side • control the vibration of the drill bit to ensure that the mouths of the holes are not over drilled as compared to the inner hole • ensure that the centres of holes drilled from both sides meet • polish the inner side of the hole drilled using a thread with powder on it • use water jet to reduce adverse effect of overheating of stone, such as change of colour or breakage <p>Return drilled gemstones to supervisor</p> <ul style="list-style-type: none"> • return the drilled gemstone and counted stones for quality check • return damaged stones (if any) <p>Report problems related to:</p> <ul style="list-style-type: none"> • drill machine failure • shortage or damage of drill bits or needles • Reasons for anticipated delays that may adversely affect delivery <p>Interact with superior or polisher or QC department</p> <ul style="list-style-type: none"> • receive instructions and materials from reporting supervisor • give feedback to supervisor or polisher on any specific stone handling requirement • rework based on feedback from Quality Control department

G&J/N6801

Drill hole on gemstone

Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Drilling	To be competent, the user/individual on the job must be able to: PC1. accurately match or centre holes as drilled from both sides PC2. avoid over drilling at the mouths of holes on both sides PC3. maintain finish and colour of on outer side PC4. finish inner hole after drilling PC5. accurately calibrate after drilling PC6. deliver maximum number of QC okayed stones
Productivity	To be competent, the user/individual on the job must be able to: PC7. meet target for number and carats of stones faceted per day PC8. achieve scratch-less drilling PC9. maintain stone loss within prescribed limits, particularly, in precious stones
Handling problems	To be competent, the user/individual on the job must be able to: PC11. deliver drilled stones in time by reporting problems faced or anticipated well in advance
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: acceptable limits of stone loss, incentives, delivery standards, safety and hazards, integrity and IPR, and personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the workflow KA4. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. basic Gemmology and properties of different types of stones in terms of heat and scratch resistance KB2. different types of stones such as precious, semi-precious, synthetic KB3. market value of stone to understand the rationale for different acceptable levels of stone loss KB4. origin of the stone, i.e., which mine, particularly, precious stones to read the softness/ hardness as developed from precedence of use KB5. jewellery trends and their effect on drilling technique KB6. use of drill machine and aligning drill bit with marking for hole KB7. inner hole polishing techniques and powders to be used for different types of stones

G&J/N6801

Drill hole on gemstone

Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Basic reading and writing skills
	The user/ individual on the job needs to know and understand how to: SA1. read height, weight, dimensions of the stones facets as given on job sheets SA2. read company rules and compliance documents required to complete the work
	Calculation and geometry skills
	The user/individual on the job needs to know and understand how to: SA3. assess the accuracy of alignment SA4. achieve symmetry of holes drilled from both sides of the stone
	Teamwork and multi-tasking
	The user/individual on the job needs to know and understand how to: SA5. share work load when multiple deliverables are required SA6. deliver the drilled gemstone on time
B. Professional Skills	Reading the design or plan for the stone
	The user/individual on the job needs to know and understand how to: SB1. convert design on paper into final stone with a hole SB2. spot difficulties with respect to practicality of plan or holes to be drilled SB3. smooth any rough edges of loss of polish on inner side
	Using tools and machines
	The user/individual on the job needs to know and understand how: SB4. to drill gemstones using drill machine and different types of drill bits or needles SB5. to maintain the drill machine for optimum output SB6. to use water jet and keep the stone cool SB7. to make drill bits for different types of drilling requirements SB8. to work in a safe environment, i.e., without injuries
	Reducing stone loss
	The user/individual on the job needs to know and understand how: SB9. to report stone losses via documentation as per company policy SB10. to minimise stone loss below the prescribed limits SB11. to report any incidents of high stone loss SB12. to follow company's policies on stone fragments SB13. to suggest improvements in order to reduce stone loss limits
	Reflective thinking
	The user/individual on the job needs to know and understand how to: SB14. improve work processes for greater productivity SB15. work in standing position for long hours without health problems

G&J/N6801

Drill hole on gemstone

	Critical thinking
	The user/individual on the job needs to know and understand how to: SB16. spot process disruption and reasons for delay

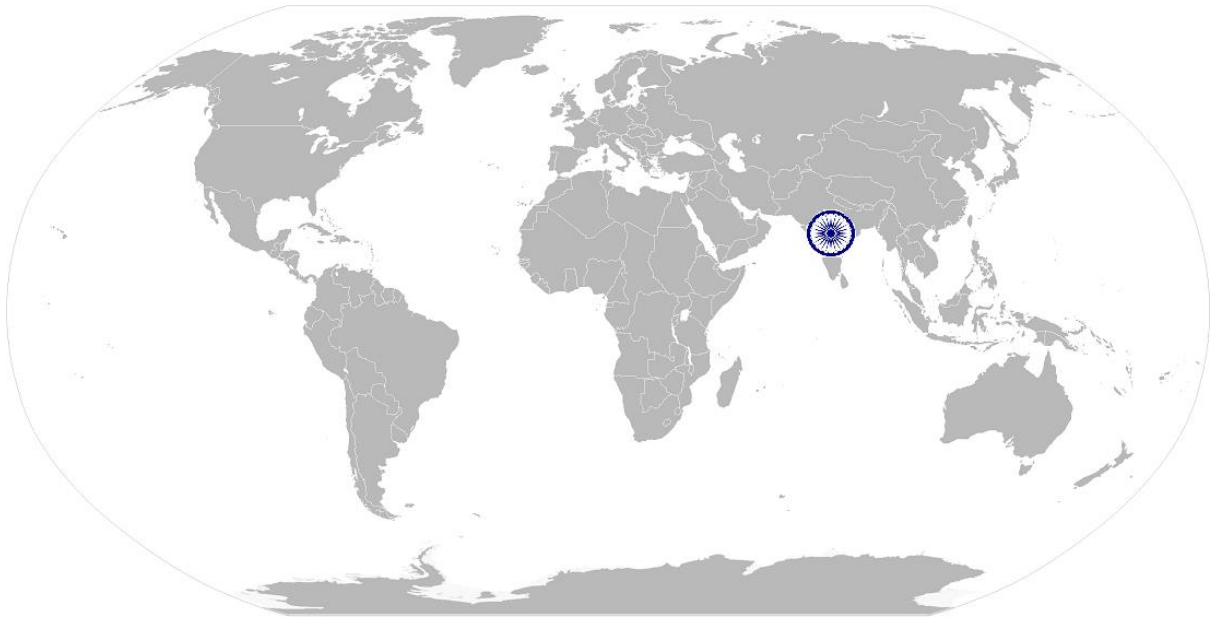
G&J/N6801

Drill hole on gemstone

NOS Version Control

NOS Code	G&J/N6801		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	19/06/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

National Occupational Standard



Overview

This unit is about respecting intellectual property rights of the company's products and designs.

G&J/N9920

Maintain IPR at work

National Occupational Standard

Unit Code	G&J/N9920
Unit Title (Task)	Maintain IPR of company
Description	This OS unit is about protecting company's Intellectual Property Rights
Scope	<p>This unit/task covers the following:</p> <p>Protect company's Intellectual Property Rights (IPR)</p> <ul style="list-style-type: none"> to prevent leak of new designs/ plans to competitors by reporting on time to be aware of any of company's product, process or design patents to report IPR violations observed in the market, to supervisor or company heads
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Reducing stone loss and maintaining IPR	<p>To be competent, the user/individual on the job must:</p> <p>PC1. be aware of patents and IPR</p> <p>PC2. not be involved in IPR violations</p>
Knowledge and Understanding (K)	
A. Organizational Context	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on: integrity, IPR and personnel management</p> <p>KA2. work flow involved in gemstone processing of company</p> <p>KA3. importance of the individual's role in the organisation</p> <p>KA4. reporting structure</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. patents and IPR laws</p> <p>KB2. how IPR protection is important for competitiveness of a company</p> <p>KB3. market trends</p>
Skills (S) [Optional]	
C. Core Skills/ Generic Skills	Communication skills
	The user/ individual on the job needs to know and understand how to:
	SA1. effectively communicate any observed IPR violations or order leaks
D. Professional Skills	Decision making
	The user/individual on the job needs to know and understand:
	SB1. when and how to report potential sources of violations
	Reflective thinking
	The user/individual on the job needs to know and understand how to:
	SB2. learn from past mistakes and report IPR violations on time

G&J/N9920

Maintain IPR at work

	Critical thinking
	The user/individual on the job needs to know and understand how to: SB3. spot signs of violations and alert authorities in time

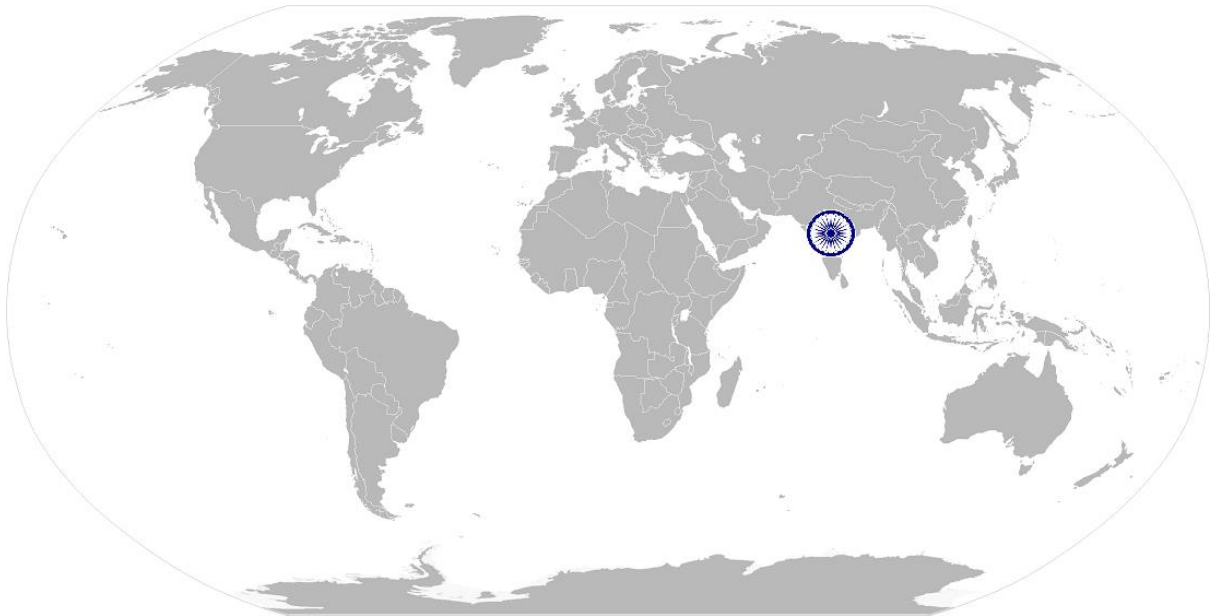
G&J/N9920

Maintain IPR at work

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Industry	Gems & Jewellery	Drafted on	19/06/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

National Occupational Standard



Overview

This unit is about team work and level of communication with colleagues or clients. It determines the ability to work as a team member, share work and multi-task in order to achieve the required deliverables on schedule.

G&J/N9921

Coordinate with colleagues

National Occupational Standard	Unit Code	G&J/N9921
	Unit Title (Task)	Coordinate with colleagues and seniors
	Description	This OS unit is about communicating with colleagues and seniors in order to achieve smooth and hazard-free work flow
	Scope	<p>This unit/task covers the following:</p> <p>Interact with supervisor to:</p> <ul style="list-style-type: none"> • receive work instructions and raw materials from reporting supervisor • communicate to reporting supervisor about process-flow improvements, product defects received from previous process, repairs and maintenance of tools and machinery as required • communicate any potential hazards or expected process disruptions • handover completed work to supervisor <p>Interact with colleagues within and outside the department to:</p> <ul style="list-style-type: none"> • work as a team with colleagues and share work as per their or own work load and skills • work with colleagues of other departments • communicate and discuss work flow related difficulties in order to find solutions with mutual agreement • receive feedback from QC and rework in order to complete work on time
	Performance Criteria(PC) w.r.t. the Scope	
	Element	Performance Criteria
	Interaction with supervisor	To be competent, the user/individual on the job must: PC1. understand the work output requirements PC2. comply with company policy and rule PC3. deliver quality work on time as required by reporting any anticipated reasons for delays
	Interactions with colleagues and other departments	To be competent, the user/individual on the job must: PC4. put team over individual goals PC5. resolve conflicts and multi-task
	Knowledge and Understanding (K)	
	A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the workflow KA4. reporting structure

G&J/N9921

Coordinate with colleagues

<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand how to:</p> <p>KB1. communicate effectively KB2. build team coordination</p>
<p>Skills (S) [Optional]</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Teamwork and multitasking</p> <p>The individual on the job needs to know and understand:</p> <p>SA1. importance of sharing work load as required SA2. significance of delivering product to next work process on time</p>
<p>B. Professional Skills</p>	<p>Decision making</p> <p>The individual on the job needs to know and understand:</p> <p>SB1. potential areas of disruptions to work process and report the same SB2. when to report to supervisor and when to deal with a colleague individually, depending on the type of concern</p> <p>Reflective thinking</p> <p>The individual on the job needs to know and understand how to:</p> <p>SB3. improve work processes</p> <p>Critical thinking</p> <p>The individual on the job needs know and understand how to:</p> <p>SB4. spot process disruptions and delays</p>

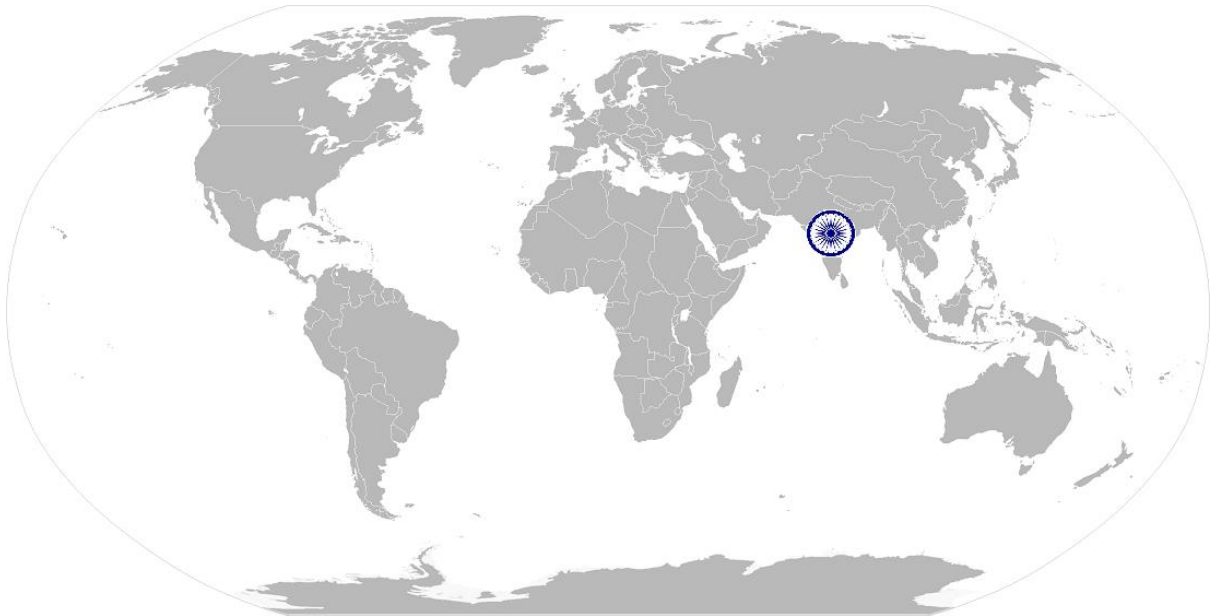
G&J/N9921

Coordinate with colleagues

NOS Version Control

NOS Code	G&J/N9921		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	19/06/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

National Occupational Standard



Overview

This unit is about commitment towards reporting potential hazards, taking preventive measures to contain accidents in order to make the work environment safe for self and colleagues and maintaining a clean working environment.

G&J/N9924

Maintain safety at work

National Occupational Standard

Unit Code	G&J/N9924
Unit Title (Task)	Maintain safety at work
Description	This OS unit is about being aware of, communicating and taking steps towards minimizing potential hazards and dangers of accidents on the job and maintaining a clean work environment
Scope	<p>This unit/task covers the following:</p> <p>Understand potential sources of accidents</p> <ul style="list-style-type: none"> to avoid accidents related to use of potentially dangerous chemicals, sharp tools, hazards from machines such as laser sawyer, heating lamps, rotating scaife and lap <p>Use safety gear to avoid accidents</p> <ul style="list-style-type: none"> wear safety gear such as goggles, mask, gloves, ear plugs <p>Keep the work environment clean and organised</p> <ul style="list-style-type: none"> keep the work station, machine, tools clean keep all the tools in an organised manner not litter or spit on work premises <p>Communicate to reporting supervisor about:</p> <ul style="list-style-type: none"> process flow improvements that can reduce anticipated or repetitive hazards mishandling of tools, machines or hazardous materials electrical problems that could result in accident
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Communicating potential accident points	To be competent, the user/individual on the job must: PC1. spot and report potential hazards on time PC2. follow company policy and rules regarding use of hazardous materials PC3. deliver quality work on time as required by reporting any anticipated reasons for delays
Using safety gear	To be competent, the user/individual on the job must: PC4. use or wear safety gear as per the rules of the company
Cleanliness and hygiene	To be competent, the user/individual on the job must: PC5. clean the work station PC6. organise tools and equipment in use

G&J/N9924

Maintain safety at work

Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: stone collection, safety and hazards and personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the workflow KA4. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. how different chemicals react and the danger involved KB2. how to use machines and tools without suffering bodily harm
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills
	The individual on the job needs to know and understand how to: SA1. effectively communicate the danger
	Organising skills
	The individual on the job needs to know and understand how to: SA2. keep all the tools in an organised manner so as to find them quickly SA3. keep the work environment clean
B. Professional Skills	Decision making
	The individual on the job needs to know and understand how to: SB1. report potential sources of danger SB2. follow prescribed procedure in the event of an accident SB3. avoid an accident by wearing appropriate safety gear
	Reflective thinking
	The individual on the job needs to know and understand how to: SB4. learn from past mistakes regarding use of hazardous machines or chemicals
	Critical thinking
	The individual on the job needs to know and understand how to: SB5. spot dangers SB6. organise tools so as the work process is smooth
	Decision making
The individual on the job needs to know and understand how to: SB7. report potential sources of danger SB8. follow prescribed procedure in the event of an accident	

G&J/N9924

Maintain safety at work

NOS Version Control

NOS Code	G&J/N9924		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	19/06/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
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Definitions

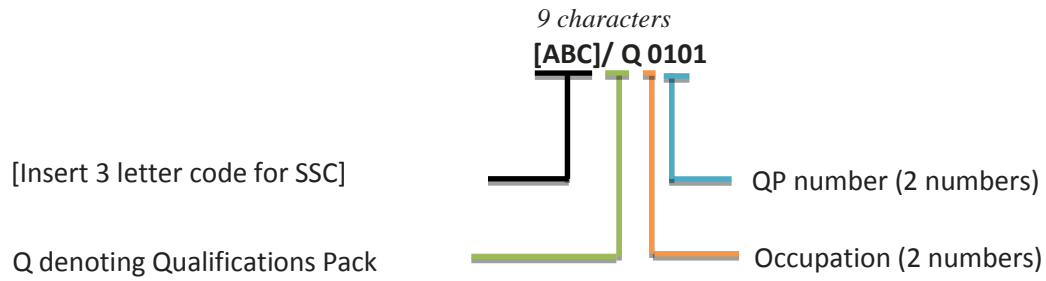
Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defied as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further 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 an 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.
Sub-function	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (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.
National Occupational Standards (OS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications 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.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding	Knowledge and understanding are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation 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/ Generic	Core skills or generic skills are a group of skills that are the key to learning

Skills	and working in today's world. These skills are typically needed in any work environment 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.
Keywords /Terms	Description
IPR	Intellectual Property Rights
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack

Annexure

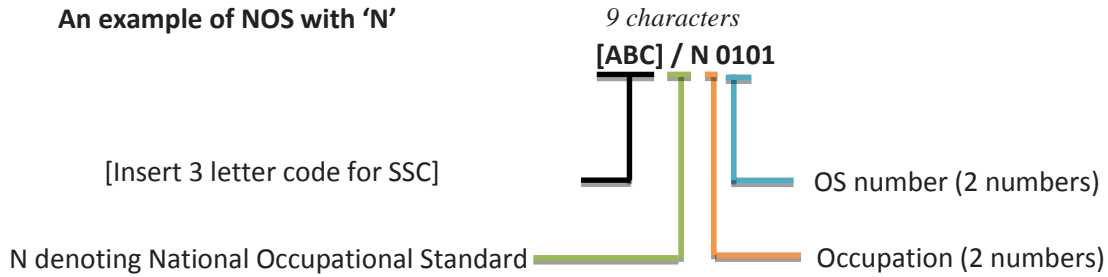
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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

Sub-sector	Range of Occupation numbers
Handmade gold and gems-set jewellery	01-20
Cast and diamond-set jewellery	21-40
Diamond processing	41-60
Gemstone processing	61-80
Jewellery retailing	81-98

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

<u>CRITERIA FOR ASSESSMENT OF TRAINEES</u>					
Job Role		Qualifications Pack-Gemstone Driller			
Qualification Pack		Qualifications Pack-Gemstone Driller			
Sector Skill Council		GEMS & JEWELLERY			
Assessment Strategy				Marks Allocation	
NOS	Elements	Performance Criteria	Theory	Practical	
1. G&J/N6801 Drill hole on gemstone	Drilling	PC1. accurately match or centre holes as drilled from both sides	2	10	
		PC2. avoid over drilling at the mouths of holes on both sides	2	10	
		PC3. maintain finish and colour of on outer side	1	10	
		PC4. finish inner hole after drilling	1	10	
		PC5. accurately calibrate after drilling	1	10	
		PC6. deliver maximum number of QC okayed stones	0	4	
	Productivity	PC7. meet target for number and carats of stones faceted per day	0	4	
		PC8. achieve scratch-less drilling	0	4	
		PC9. maintain stone loss within prescribed limits, particularly, in precious stones	0	4	
	Handling problems	PC11. deliver drilled stones in time by reporting problems faced or anticipated well in advance	0	4	
			7	70	
2. G&J/N9920 Maintain IPR at work	Reducing stone loss and maintaining IPR	PC1. be aware of patents and IPR	1	0	
		PC2. not be involved in IPR violations	1	0	
			2	0	
3. G&J/N9921 Coordinate with others	Interaction with supervisor	PC1. understand the work output requirements	1	2	
		PC2. comply with company policy and rule	1	2	
		PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	1	2	
	Interactions with	PC4. put team over individual goals	1	0	

	colleagues and other departments	PC5. resolve conflicts and multi-task	1	0
			5	6
4. G&J/N9924 Maintain safe work environment	Communicating potential accident points	PC1. spot and report potential hazards on time	1	0
		PC2. follow company policy and rules regarding use of hazardous materials	1	0
		PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	1	0
	Using safety gear	PC4. use or wear safety gear as per the rules of the company	1	2
	Cleanliness and hygiene	PC5. clean the work station	1	1
		PC6. organise tools and equipment in use	1	1
			6	4
			20	80
			100	