

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GEMS & JEWELLERY INDUSTRY

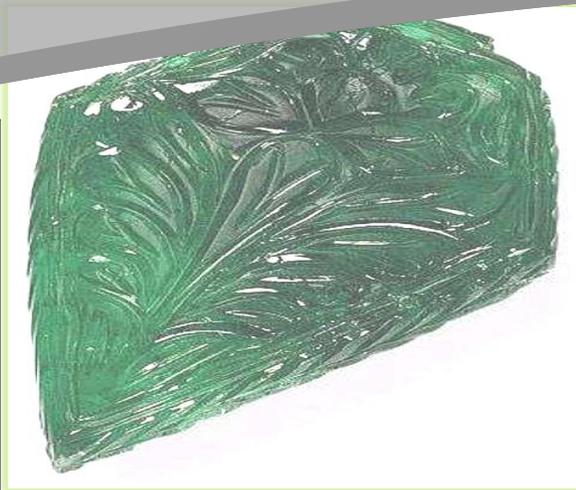
What are Occupational Standards(OS)?

- 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 Engraver

SECTOR: GEMS & JEWELLERY

SUB-SECTOR: Gemstone Processing

OCCUPATION: Faceting and Polishing

REFERENCE ID: G&J/Q6702

ALIGNED TO: NCO-2004/ NIL

Gemstone Engraver: Also called, '*Naqqashi maker*', the Engraver carves out different types of patterns on precious and semi-precious gemstones.

Brief Job Description: The individual works with high-speed rotating machines and individual sets of hand-made tools to etch out patterns on gemstones for further polishing and use in jewellery making. It is a traditional and highly creative role.

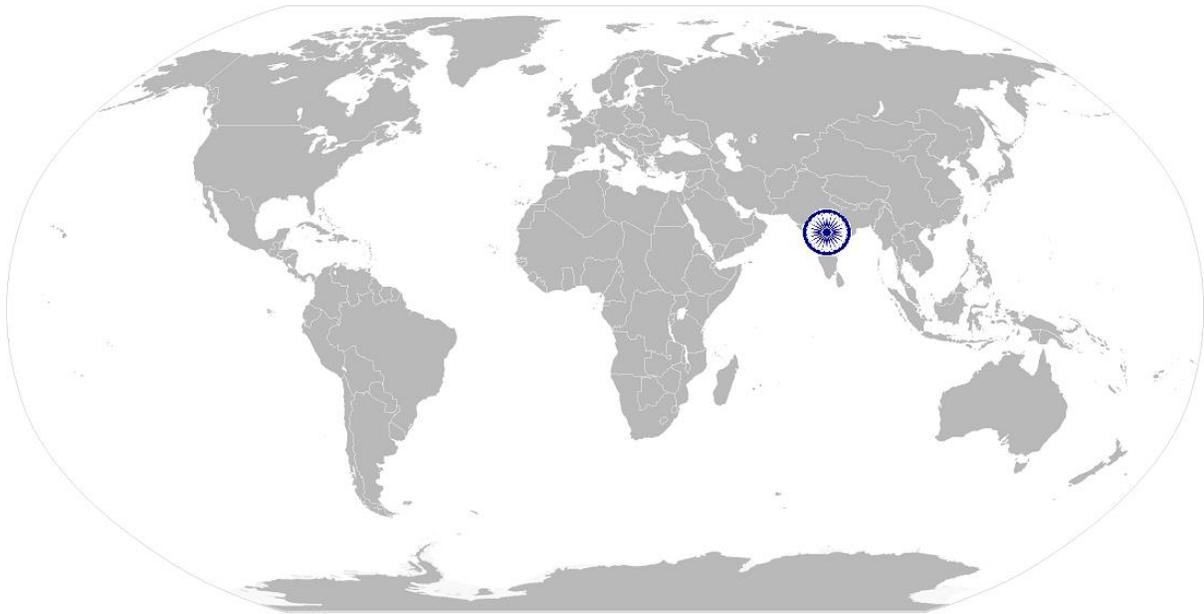
Personal Attributes: The job requires the individual to have: creativity; attention to details; good eyesight; steady hands; ability to work in sitting position with a lot of patience. The individual must also be able to make customised sets of tools for new patterns and designs.

Job Details

Qualifications Pack Code	G&J/Q6702		
Job Role	Gemstone Engraver		
Credits(NSQF)	TBD	Version number	1.0
Sector	Gems & Jewellery	Drafted on	26/08/13
Sub-sector	Gemstone Processing	Last reviewed on	13/08/14
Occupation	Gemstone Faceting & Polishing	Next review date	12/08/15

Job Role	Gemstone Engraver
Role Description	Etching and carving different types of patterns on gemstones for use in jewellery
NSQF level	4
Minimum Educational Qualifications	Preferably 10 th standard passed
Maximum Educational Qualifications	
Training	Shaping, Faceting and Polishing
Experience	Not applicable
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> G&J/N6705 Carve patterns on gemstones 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 etching and carving different types of patterns on gemstones as per customers' requirements. It requires creativity in making new designs and tools for carving.

G&J/N6705

Carve patterns on gemstones

National Occupational Standard

Unit Code	G&J/N6705
Unit Title (Task)	Create patterns on gemstones by carving and etching
Description	This OS unit is about carving design patterns on gemstones by using hand and machine tools
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Receive bag of faceted gemstones from supervisor • Carve and etch patterns on the gemstone • Polish and calibrate the carved gemstone • Interact with superior or polisher or QC department
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Receiving and carving the gemstone	<p>To be competent, the user/ individual on the job must be able to:</p> <p>PC1. match the stone type, weight and number as mentioned on the bag</p> <p>PC2. check shape and size of stone as per job sheet for symmetry and colour defects and potential problems in carving process</p> <p>PC3. understand the permitted level of stone loss</p> <p>PC4. understand the type of stone to be polished such as soft or hard, transparent or translucent or opaque</p> <p>PC5. mark patterns on the stone as per design to be carved</p> <p>PC6. select the hand or machine tool to be used for carving</p> <p>PC7. select rotating machine speed for the type of stone, tool and pattern</p> <p>PC8. use water jet to reduce adverse effect of overheating of stone, such as change of colour or breakage</p> <p>PC9. follow the design pattern as per job sheet, even in small stones</p> <p>PC10. select the correct tools and speed for a required for a pattern and stone</p> <p>PC11. maintain shape and size of the gemstones as per design</p> <p>PC12. accurately calibrate of shape and size of the gemstone to design</p> <p>PC13. avoid harm to any facets that were previously created</p> <p>PC14. use correct lap, powder and buff</p> <p>PC15. achieve maximum number of QC okayed carved gemstones</p>
Polishing and calibrating the carved gemstone	<p>To be competent, the user/ individual on the job must be able to:</p> <p>PC16. select the buffing plate to be used for the stone type such as cloth, wool, wood according to the stone hardness and colour changing properties and polish</p> <p>PC17. calibrate the gemstone as per job sheet and allowed losses</p>
Interacting with superior and others	<p>To be competent, the user/ individual on the job must be able to:</p> <p>PC18. return the carved gemstones for quality check</p> <p>PC19. return any damaged stones</p> <p>PC20. receive instructions and materials from reporting supervisor</p>

G&J/N6705

Carve patterns on gemstones

	<p>PC21. give feedback to supervisor or co-workers on any specific stone handling requirement</p> <p>PC22. rework based on feedback from Quality Control department</p> <p>PC23. report problems related to machine failure</p> <p>PC24. report shortage of tools and consumables</p> <p>PC25. identify and report reasons for anticipated delays that may adversely affect delivery</p>
Achieving productivity	<p>To be competent, the user/ individual on the job must be able to:</p> <p>PC26. achieve the number of carved stones per day against target given</p> <p>PC27. deliver scratch-less and well-polished stones as per job sheet</p> <p>PC28. maintain, stone loss within prescribed limits, particularly, in precious stones</p> <p>PC29. create new designs in accordance with changing customer preferences and company's targets</p>
Handling problems	<p>To be competent, the user/ individual on the job must be able to:</p> <p>PC30. deliver carved stones in time by reporting problems faced or anticipated well in advance</p> <p>PC31. create new tools for new design patterns, if necessary</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: acceptable limits of stone loss, incentives, delivery standards, safety and hazards, integrity and 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 workflow</p> <p>KA4. reporting structure</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. the process of shaping, faceting and polishing</p> <p>KB2. basic Gemmology and properties of different stones</p> <p>KB3. different types of stones such as precious, semi-precious, synthetic</p> <p>KB4. market value of stone to understand the rationale for different acceptable levels of stone loss</p> <p>KB5. origin of the stone, i.e., which mine, particularly, precious stones to read the softness/ hardness as developed from precedence of use</p> <p>KB6. tools to be used for different types of carving and etching and stones</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	<p>Basic reading and writing skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. read height, weight, dimensions of the stones as given on job sheets</p> <p>SA2. read company rules and compliance documents required to complete the work</p>

G&J/N6705

Carve patterns on gemstones

	Geometry skills
	The user/individual on the job needs to know and understand how to: SA3. maintain symmetry of pattern as per design
	Teamwork and multi-tasking
	The user/individual on the job needs to know and understand how to: SA4. share work load when multiple deliverables are required SA5. deliver the stone to next work process 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 the stone plan on job sheet to a carved and polished stone SB2. spot difficulties with respect to practicality of plan or facets created
	Using tools and machines
	The user/individual on the job needs to know and understand how: SB3. to make different types of pointed tools for etching and carving SB4. to maintain rotating machine and tools SB5. many different types of laps available in terms of material such as diamond or steel or the grits SB6. to use water jet and keep the stone cool SB7. to use different types of buff for different stone types such as wool, wood, and leather and buffing powders such as chrome oxide 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 or greater productivity SB15. maintain good posture while working in sitting position for long hours
	Critical thinking
	The user/individual on the job needs to know and understand how to: SB16. spot process disruption and reasons for delay

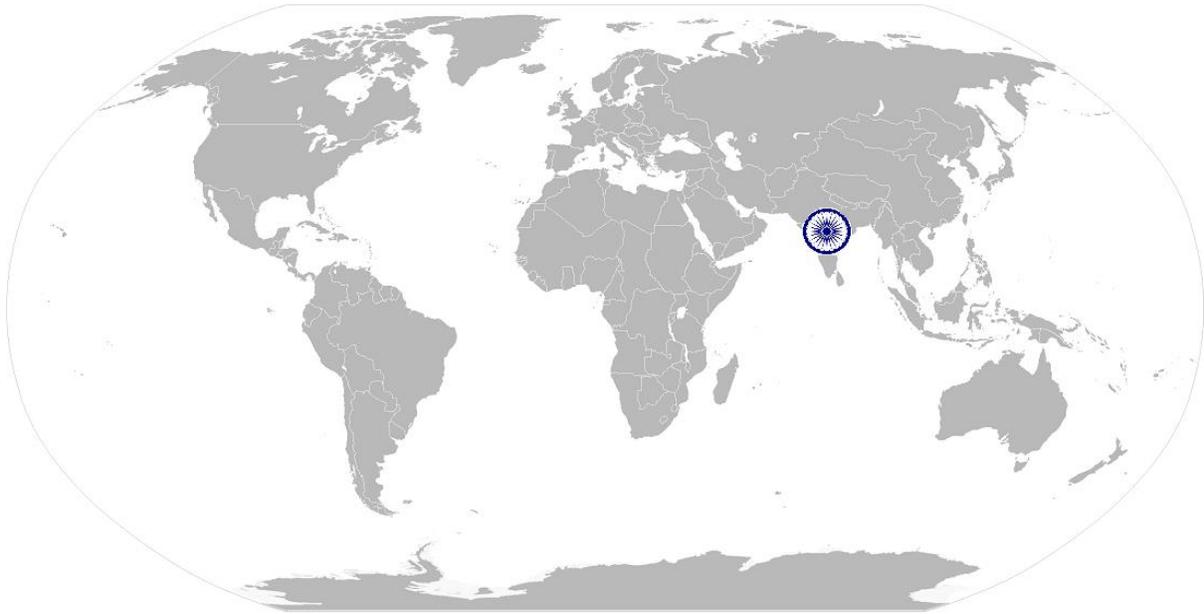
G&J/N6705

Carve patterns on gemstones

NOS Version Control

NOS Code	G&J/N6705		
Credits(NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	26/08/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	13/08/14
		Next review date	12/08/15

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 at work
Description	This OS unit is about protecting company's Intellectual Property Rights
Scope	This unit/task covers the following: <ul style="list-style-type: none"> Protect company's Intellectual Property Rights (IPR)
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Maintaining IPR	To be competent, the user/individual on the job must: <ul style="list-style-type: none"> PC1. prevent leak of new designs/ plans to competitors by reporting on time PC2. be aware of any of company's product, process or design patents PC3. report IPR violations observed in the market, to supervisor or company heads PC4. be aware of patents and IPR PC5. not be involved in IPR violations
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. company's policies on: integrity, IPR and personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the organisation KA4. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. patents and IPR laws KB2. how IPR protection is important for competitiveness of a company KB3. market trends
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA1. effectively communicate any observed IPR violations or order leaks
B. Professional Skills	Decision making
	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> SB2. learn from past mistakes and report IPR violations on time
	Critical thinking
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB3. spot signs of violations and alert authorities in time

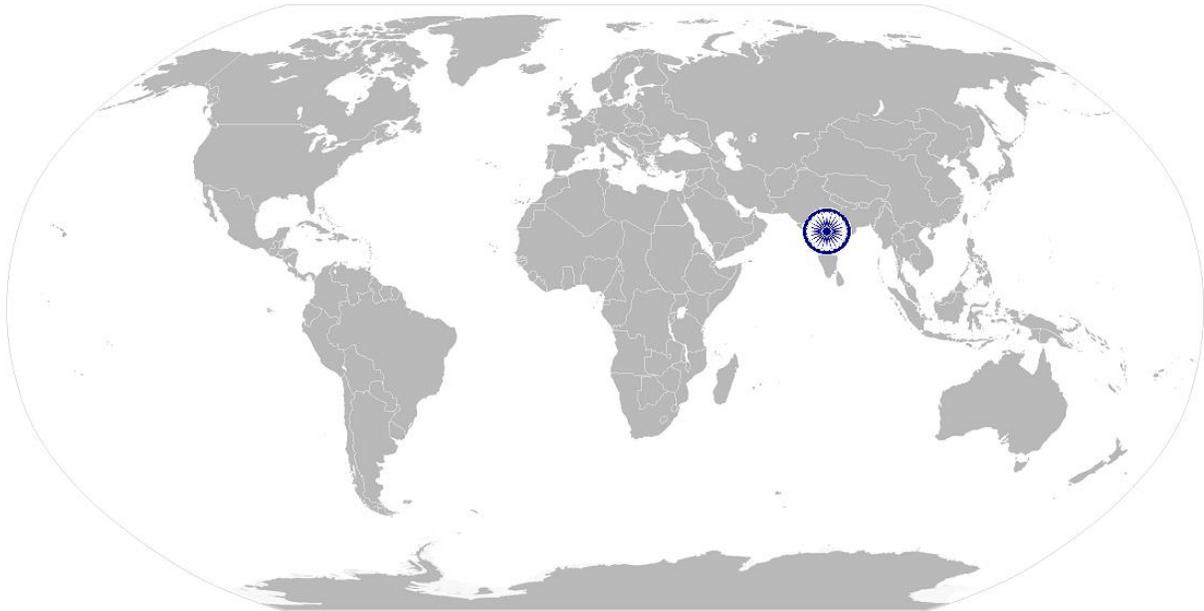
G&J/N9920

Maintain IPR at work

NOS Version Control

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Credits(NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	26/08/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	13/08/14
		Next review date	12/08/15

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
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> <ul style="list-style-type: none"> • Interact with supervisor • Interact with colleagues within and outside the department
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Interaction with supervisor	<p>To be competent, the user/individual on the job must:</p> <p>PC1. receive work instructions and raw materials from reporting supervisor</p> <p>PC2. communicate to reporting supervisor about process-flow improvements, product defects received from previous process, repairs and maintenance of tools and machinery as required</p> <p>PC3. communicate any potential hazards or expected process disruptions</p> <p>PC4. handover completed work to supervisor</p> <p>PC5. understand the work output requirements</p> <p>PC6. comply with company policy and rule</p> <p>PC7. deliver quality work on time as required by reporting any anticipated reasons for delays</p>
Interactions with colleagues and other departments	<p>To be competent, the user/individual on the job must:</p> <p>PC8. work as a team with colleagues and share work as per their or own work load and skills</p> <p>PC9. work with colleagues of other departments</p> <p>PC10. communicate and discuss work flow related difficulties in order to find solutions with mutual agreement</p> <p>PC11. receive feedback from QC and rework in order to complete work on time</p> <p>PC12. put team over individual goals</p> <p>PC13. resolve conflicts and multi-task</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 personnel management</p> <p>KA2. work flow involved in gemstone processing of company</p> <p>KA3. importance of the individual's role in the workflow</p> <p>KA4. reporting structure</p>

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>

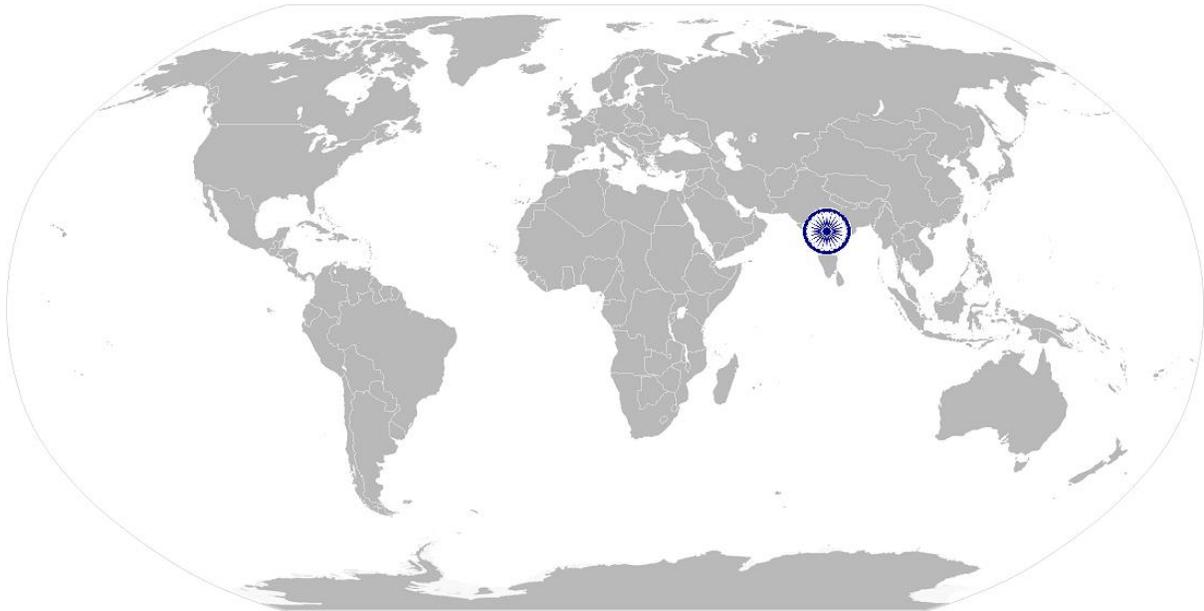
G&J/N9921

Coordinate with colleagues

NOS Version Control

NOS Code	G&J/N9921		
Credits(NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	26/08/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	13/08/14
		Next review date	12/08/15

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> <ul style="list-style-type: none"> • Understand potential sources of accidents • Use safety gear to avoid accidents • Keep the work environment clean and organised • Communicate to reporting supervisor
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Communicating potential accident points	<p>To be competent, the user/individual on the job must:</p> <p>PC1. 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> <p>PC2. spot and report potential hazards on time</p> <p>PC3. follow company policy and rules regarding use of hazardous materials</p> <p>PC4. deliver quality work on time as required by reporting any anticipated reasons for delays</p> <p>PC5. Follow process flow improvements that can reduce anticipated or repetitive hazards</p> <p>PC6. report about mishandling of tools, machines or hazardous materials</p> <p>PC7. inform about electrical problems that could result in accident</p>
Using safety gear	<p>To be competent, the user/individual on the job must:</p> <p>PC8. wear safety gear such as goggles, mask, gloves, ear plugs</p> <p>PC9. use or wear safety gear as per the rules of the company</p>
Cleanliness and hygiene	<p>To be competent, the user/individual on the job must:</p> <p>PC10. keep the work station, machine, tools clean</p> <p>PC11. keep all the tools in an organised manner</p> <p>PC12. not litter or spit on work premises</p> <p>PC13. clean the work station</p> <p>PC14. organise tools and equipment in use</p>

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(NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	26/08/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	13/08/14
		Next review date	12/08/15

Definitions

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business 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 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

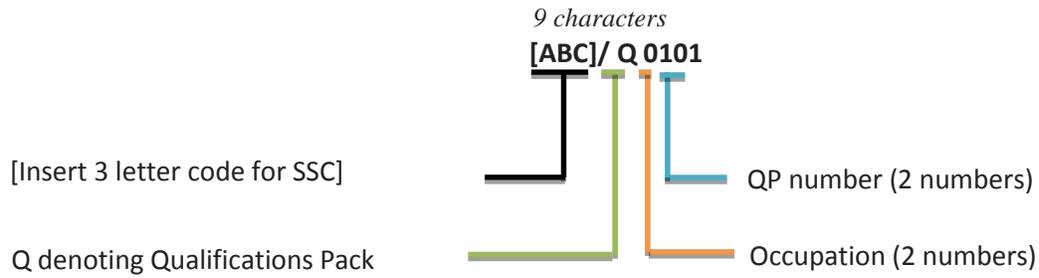
Acronyms

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
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack

Annexure

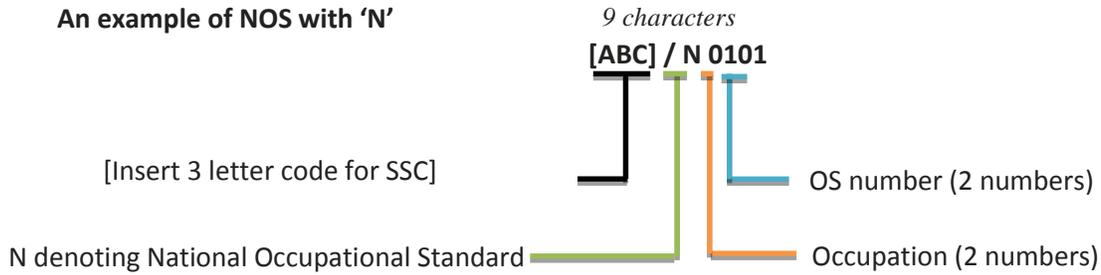
Nomenclature for QP and NOS

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 QPor NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

CRITERIA FOR ASSESSMENT OF TRAINEES					
Job Role		GP-Engraver			
Qualification Pack		GP-Engraver			
Sector Skill Council		GEMS & JEWELLERY			
To pass the Assessment, a candidate needs to score 50% in Theory and 70% in Practical					
Assessment Strategy				Marks Allocation	
NOS	Elements	Performance Criteria	Theory	Practical	
1. G&J/N6705 Carve patterns on gemstones	Carving the gemstone	PC1. the design pattern as per job sheet, even in small stones	2	10	
		PC2. select the correct tools and speed for a required for a pattern and stone	1	10	
		PC3. maintain shape and size of the gemstones as per design	1	8	
		PC4. accurately calibrate of shape and size of the gemstone to design	1	7	
		PC5. avoid harm to any facets that were previously created	1	6	
		PC6. use correct lap, powder and buff	1	5	
		PC7. achieve maximum number of QC okayed carved gemstones	1	5	
	Productivity	PC8. achieve the number of carved stones per day against target given	1	4	
		PC9. deliver scratch-less and well-polished stones as per job sheet	1	4	
		PC10. maintain, stone loss within prescribed limits, particularly, in precious stones	1	4	
		PC11. create new designs in accordance with changing customer preferences and company's targets	1	3	
	Handling problems	PC12. deliver carved stones in time by reporting problems faced or anticipated well in advance	0	2	
		PC13. create new tools for new design patterns, if necessary	0	2	
		Sub Total	12	70	
2. G&J/N8001 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	
		Sub Total	2	0	
3. G&J/N8002	Interaction with seniors	PC1. understand the work output requirements	1	1	

CRITERIA FOR ASSESSMENT OF TRAINEES				
Coordinate with others		PC2. comply with company policy and rule	0	2
		PC3. comply with Government regulations	1	1
	Interactions with colleagues, customers and/or vendors	PC4. put team over individual goals	0	1
		PC5. resolve conflicts and multi-task	0	1
			Sub Total	2
4. G&J/N8005 Maintain safe work environment	Communicating potential accident points	PC1. spot and report potential hazards on time	2	2
		PC2. follow company policy and rules regarding use of hazardous materials	1	1
		PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	0	0
	Using safety gear	PC4. use or wear safety gear as per the rules of the company	0	1
	Cleanliness and hygiene	PC5. clean the work station	1	0
		PC6. organise tools and equipment in use	0	0
		Sub Total	4	4
		Total	20	80

