

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-Wax Setter (Basic)

SECTOR: GEMS & JEWELLERY

SUB-SECTOR:Cast and Diamond-Set Jewellery

OCCUPATION: Wax setting

REFERENCE ID: G&J/Q2703

ALIGNED TO: NCO-2004/7313.30

Wax setter (basic): Wax setter sets diamonds and gemstones in wax replica of the jewellery piece for the purpose of casting.

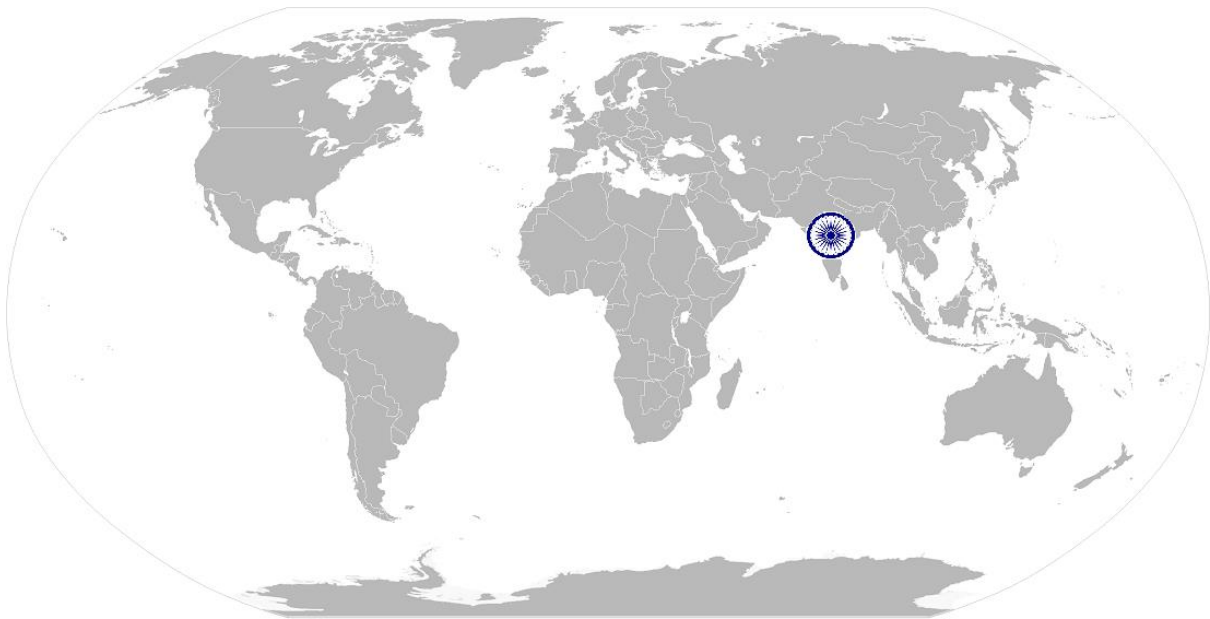
Brief Job Description: The individual works with numerous hand tools to set diamond and gemstones as per design. The individual is responsible for delivering: levelled, damage-free and secured setting of stones while maintaining its brilliance.

Personal Attributes: The job requires the individual to have: attention to details; good eyesight; steady hands and ability to work in a process driven team for long hours in sitting position. The individual is expected to have a high level of integrity in dealing with diamonds and gemstones.

Qualifications Pack Code	G&J/Q2703		
Job Role	Wax setter (basic)		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Gems & Jewellery	Drafted on	29/05/13
Sub-sector	Cast and Diamond-set Jewellery	Last reviewed on	11/07/13
Occupation	WaxSetting	Next review date	15/06/15

Job Role	Wax setter (Basic)
Role Description	Setting diamonds and gemstones of different size and shapes in wax replica of jewellery as per design requirement and without defects, for the purpose of casting
NVEQF/NVQF level	3
Minimum Educational Qualifications	Minimally qualified
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/N2701 Set diamond and stones in the wax models G&J/N9901 Respect and maintain IPR G&J/N9902 Coordinate with others G&J/N9905 Maintain occupational health and safety <p>Optional: Not applicable</p>
Performance Criteria	As described in the relevant OS units

National Occupational Standard



Overview

This unit is a key pre-casting process of the cast and diamond-set jewellery manufacturing, in which diamonds and gemstones with hardness above 9 mohs are set into wax models, for the purpose of producing jewellery on mass scale through tree-making and casting.

G&J/N2701

Set diamond and stones in the wax models

National Occupational Standard

Unit Code	G&J/N2701
Unit Title (Task)	Set diamonds and gemstones in the wax models
Description	This OS unit is about setting diamond and gemstones with hardness above 9 mohs in the wax pieces by using hand tools and wax soldering iron
Scope	<p>This unit/task covers the following:</p> <p>Read the job sheet and identify raw materials</p> <ul style="list-style-type: none"> • follow design specifications in terms of type of jewellery as well as number, weight and size of diamonds and gemstones required • match the size of diamonds and gemstones received against the requirement mentioned in the job sheet <p>Clean and check each wax piece</p> <ul style="list-style-type: none"> • inspect all wax patterns for signs of defects or blemishes that will be transported into the metal cast jewellery • clean and smooth all wax patterns in preparation for setting the diamond and stones into the wax <p>Set the diamonds and gemstones in the wax piece</p> <ul style="list-style-type: none"> • place the gemstone of appropriate size into the pattern • press the gemstones at the required levels using hand tools • use the specified soldering/locking technique required for the design of jewellery • finish the wax pieces by correcting the surface for defects <p>Control damage to stones</p> <ul style="list-style-type: none"> • handle diamonds and precious stones with care • minimise or avoid damage to diamonds and precious stones during setting process <p>Send wax pieces for quality check</p> <ul style="list-style-type: none"> • rework as per QC suggestions on the defective wax pieces • return completed wax piece to supervisor • ensure timely delivery <p>Keep the work environment clean and organised</p> <ul style="list-style-type: none"> • keep the work station, machine and tools clean • keep all the tools in an organised manner • do not litter or spit on work premises <p>Report problems with respect to:</p> <ul style="list-style-type: none"> • mismatch in diamond and gemstone: sizes and numbers against specifications in the job sheet • defective wax pieces • damage of wax pieces due to mishandling • loss of diamonds and stones

G&J/N2701

Set diamond and stones in the wax models

Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Wax Setting	To be competent, the user/individual on the job must be able to: PC1. secure setting of diamonds and gemstones PC2. provide finishing to the wax pieces as per design requirement
Controlling defects	To be competent, the user/individual on the job must be able to: PC3. maintain zero defect wax pieces in the process before setting PC4. select right size of diamonds and gemstone for setting in the wax piece
Productivity	To be competent, the user/individual on the job must be able to: PC5. deliver in time product to tree-making and casting processes PC6. set number of stones or carat per day against target given
Quality of output	To be competent, the user/individual on the job must be able to: PC7. maintain accurate level of the stones in the wax piece PC8. produce number of Quality Control approved wax pieces set
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: incentives, quality and delivery standards, safety and hazards, integrity and ipr, and personnel management KA2. work flow involved in jewellery manufacturing process of the 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. different types of setting techniques for diamond/stones such as prong, channel, bead, flush, bezel and pre-cut pave KB2. quality standards as per design or company guidelines KB3. uses of different types of tools for different end results KB4. potential work hazards, particularly, when using wax soldering iron and hand tools KB5. types of wax and their properties
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 and interpret job sheets SA2. read company rules and compliance documents required to complete the work
	Measuring and sizing skills
	The user/individual on the job needs to know and understand how to: SA3. measure size by gauge tool or vernier calipers SA4. count the number of stones

G&J/N2701

Set diamond and stones in the wax models

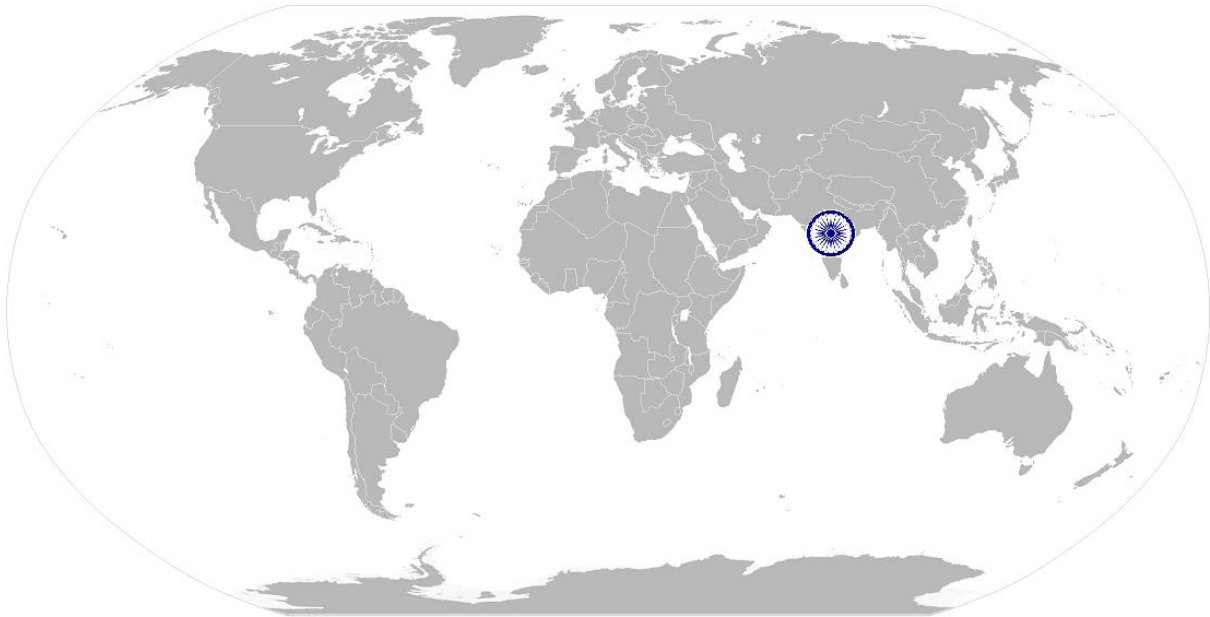
B. Professional Skills	Teamwork
	The user/individual on the job needs to know and understand how to: SA5. share work load as required
	Reading design
	The user/individual on the job needs to know and understand how to: SB1. interpret the design as per specifications and supervisor's instructions
	Using tools and machines
	The user/individual on the job needs to know and understand how to: SB2. work with wax soldering iron and pusher SB3. use and maintain tools SB4. organise required toolkit at the work bench for better time management SB5. use effective lighting at the work bench SB6. work in a safe environment, i.e., without injuries
	Soldering technique
	The user/individual on the job needs to know and understand how to: SB7. solder accurately in order to fix the stones securely without damaging the wax
	Reflective thinking
	The user/individual on the job needs to know and understand how to: SB8. use correct posture for performing the job of the setting SB9. increase productivity
Critical thinking	
The user/individual on the job needs to know and understand how to: SB10. increase efficiency based on past work experience	

G&J/N2701

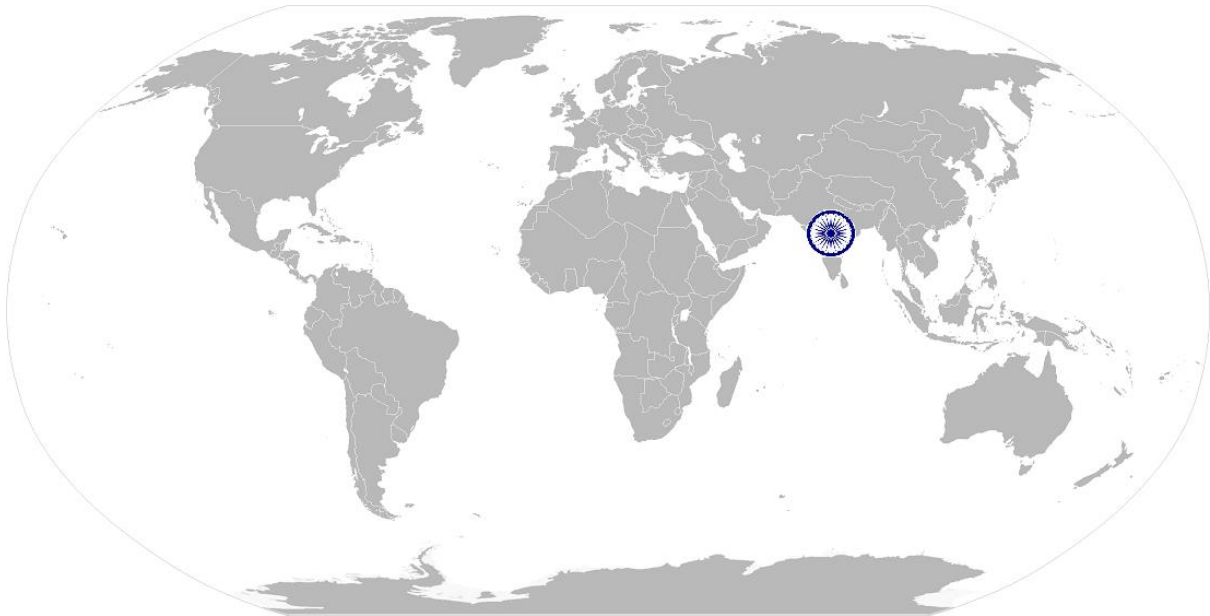
Set diamond and stones in the wax models

NOS Version Control

NOS Code	G&J/N2701		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and Diamond-set Jewellery	Last reviewed on	11/07/13
Occupation	Wax setting	Next review date	15/06/15



National Occupational Standard



Overview

This unit is about respecting intellectual property rights of the company's products and designs and avoiding infringement on IPR of other companies.

G&J/N9901

Respect and maintain IPR

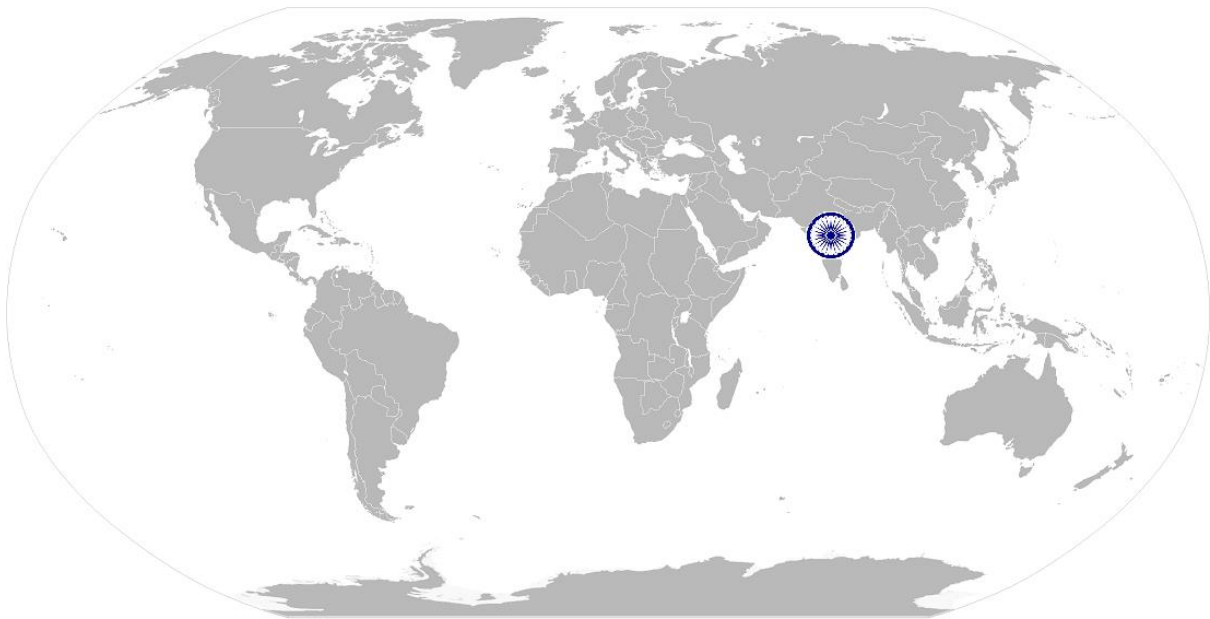
National Occupational Standard

Unit Code	G&J/N9901
Unit Title (Task)	Maintain IPR of company and respect IPR of other companies
Description	This OS unit is about protecting company's IPR and avoiding infringement to IPR of other companies
Scope	<p>This unit/task covers the following:</p> <p>Protect company's Intellectual Property Rights (IPR)</p> <ul style="list-style-type: none"> • prevent leak of new designs to competitors by reporting on time • be aware of any of company's product or design patents • report IPR violations observed in the market, to supervisor or company heads <p>Avoid infringement to IPR of other companies</p> <ul style="list-style-type: none"> • read copyright clause of the material published on the internet and any other printed material • consult supervisor or senior management when in doubt about using publicly available information • report any infringement observed in the company
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Respecting and Maintaining IPR	To be competent, the user/individual on the job must: PC1. be able to spot plagiarism and report PC2. be aware of patents and IPR PC3. not be involved in IPR violations
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on IPR and plagiarism KA2. reporting structure KA3. company's unique product range
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. patents and IPR laws KB2. how IPR protection is important for competitiveness of a company
Skills (S) [Optional]	
A. 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
B. Professional Skills	Decision making
	The user/individual on the job needs to know and understand how to:

G&J/N9901

Respect and maintain IPR

	SB1. report potential sources of violations
	Reflective thinking
	The user/individual on the job needs to know and understand to: 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: SB3. spot signs of violations and alert authorities in time

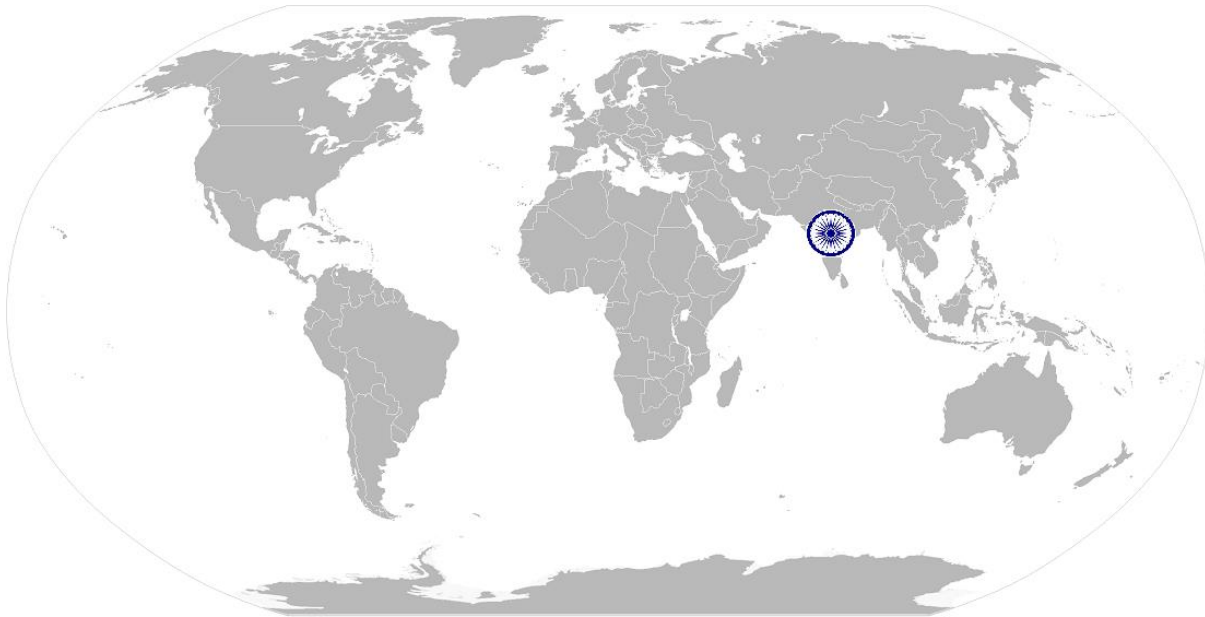


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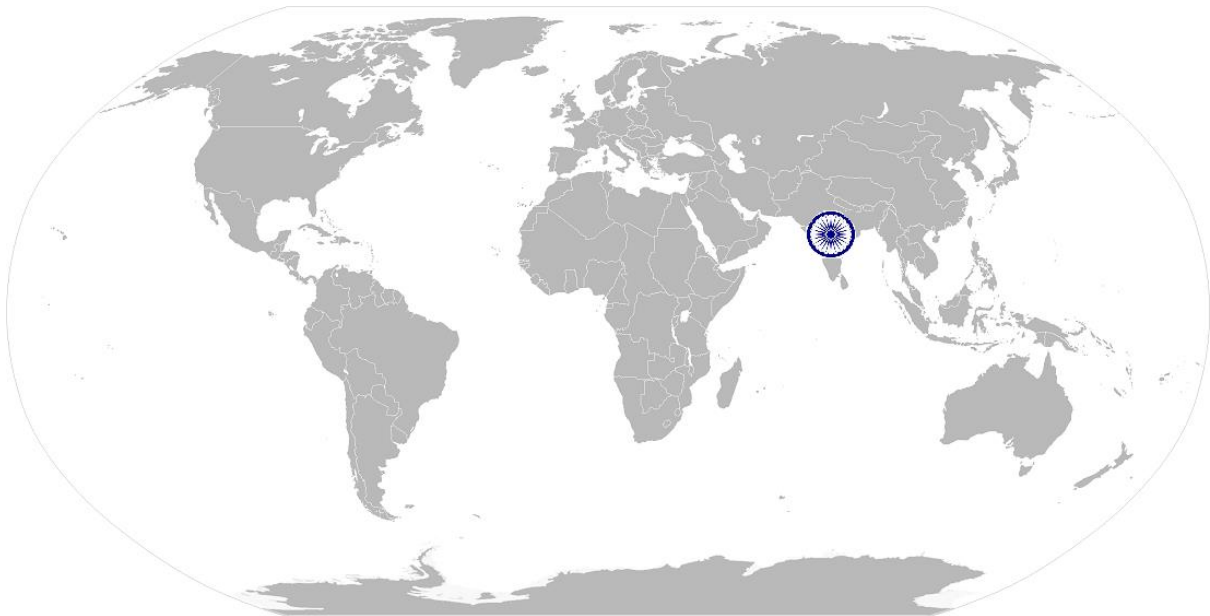
Respect and maintain IPR

NOS Version Control

NOS Code	G&J/N9901		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and Diamond-set Jewellery	Last reviewed on	11/07/13
		Next review date	15/06/15



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 deliverables on schedule.

G&J/N9902

Coordinate with others

National Occupational Standard

Unit Code	G&J /N9902
Unit Title (Task)	Interact 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</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</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 be able to: 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 be able to: PC4. put team over individual goals PC5. be able to resolve conflicts PC6. learn how to multi-task relevant activities
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: preferred language of communication, reporting and escalation policy, quality delivery standards, and personnel management KA2. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand how to: KB1. communicate effectively KB2. build team coordination

G&J/N9902

Coordinate with others

Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills
	The individual on the job needs to know and understand how to: SA1. read and write preferred language of communication as prescribed by the company SA2. read job sheets and interpret technical details mentioned in the jobsheet
B. Professional Skills	Decision making
	The individual on the job needs to know and understand: SB1. how to spot and communicate 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
	Reflective thinking
	The individual on the job needs to know and understand how to: SB3. improve work processes by interacting with others and adopting best practices
	Critical thinking
The individual on the job needs know and understand how to: SB4. spot process disruptions and delays and report and communicate with solutions	

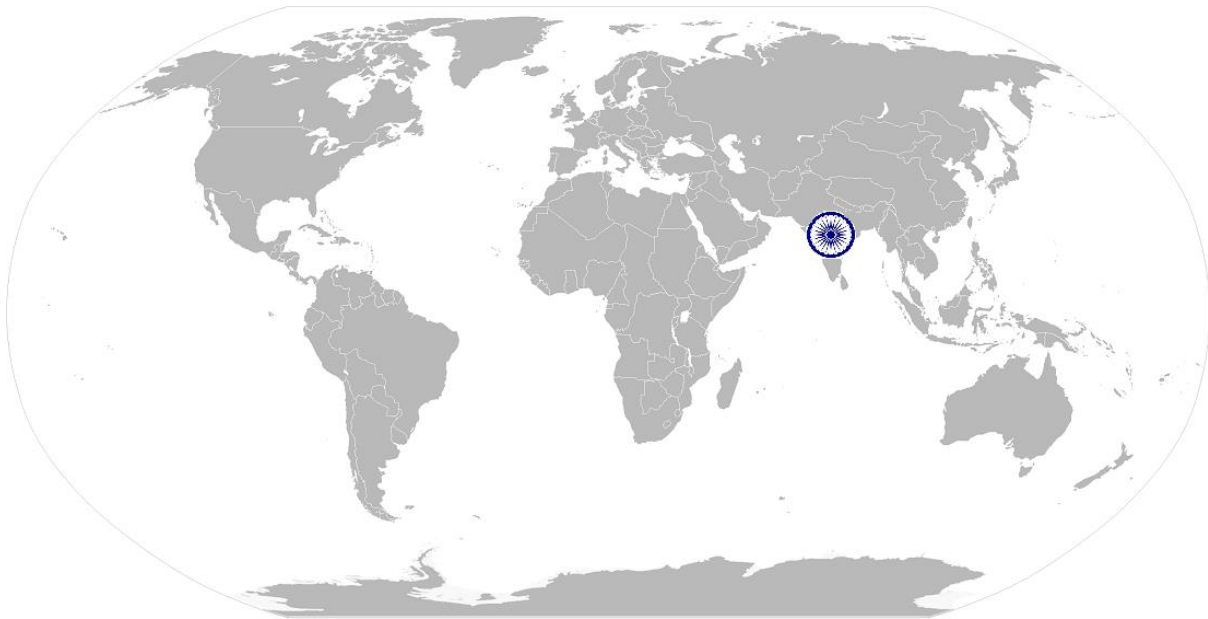


G&J/N9902

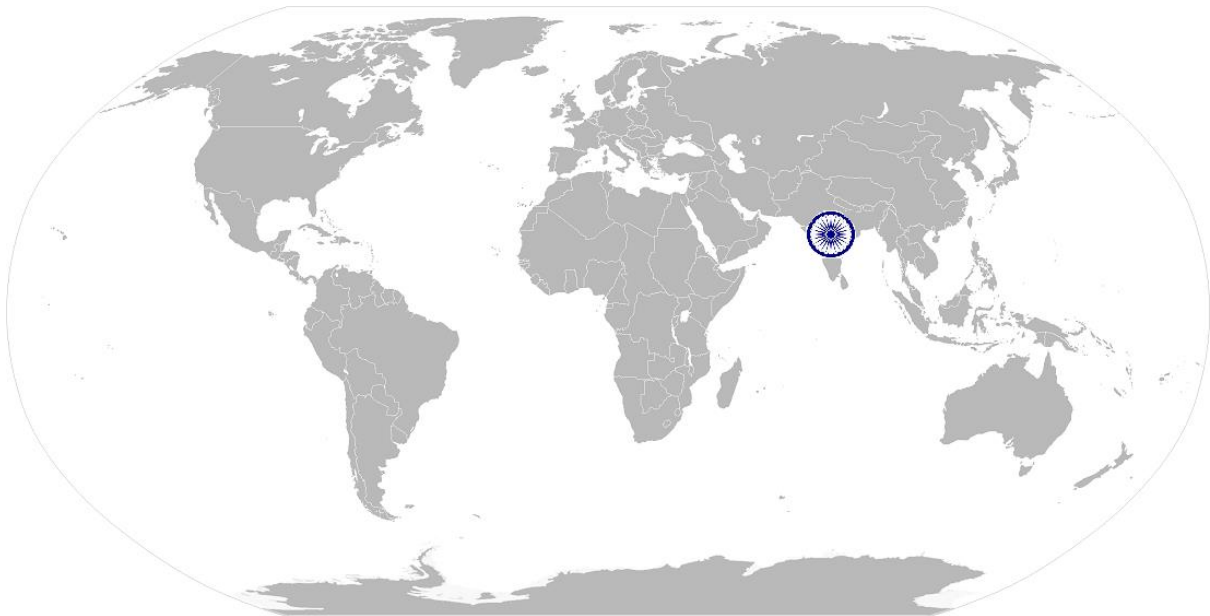
Coordinate with others

NOS Version Control

NOS Code	G&J/N9902		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and diamond-set jewellery	Last reviewed on	11/07/13
		Next review date	15/06/15



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 occupational health and safety.

G&J/N9905

Maintain occupational health and safety

National Occupational Standard

Unit Code	G&J /N9905
Unit Title (Task)	Maintain occupational health and safety
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 occupational health and safety
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 and such as heating lamps <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>Actively participate in the health and safety awareness campaigns</p> <ul style="list-style-type: none"> attend fire drills organised by the company or industrial zone learn first aid procedure be alert about designated assembly area in the event of an emergency read and understand the evacuation and emergency procedures <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 be able to: PC1. spot and report potential hazards on time PC2. follow company policy and rules regarding use of hazardous materials PC3. attend and actively participate in the health and safety campaigns organised by the company
Using safety gear	To be competent, the user/individual on the job must be able to: PC4. use or wear safety gear as per the rules of the company
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: safety and hazards and personnel management KA2. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. how different chemicals react and what could be the danger from them KB2. how to use machines and tools without suffering bodily harm

G&J/N9905

Maintain occupational health and safety

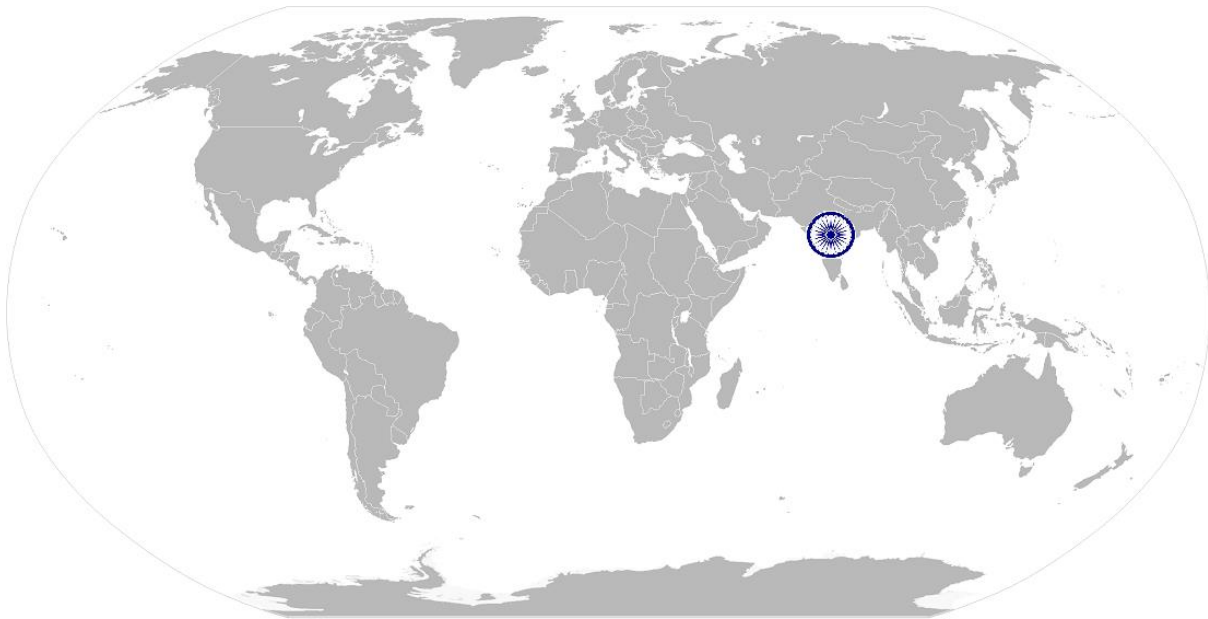
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills
	The individual on the job needs to know and understand how to: SA1. effectively communicate the danger
	Organising skills
	The individual on the job needs to know and understand how to: SA2. keep all the tools in an organised manner so as to avoid accidents SA3. keep the work environment safe and 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. wear appropriate safety gear to avoid an accident
	Reflective thinking
	The individual on the job needs to know and understand 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
	Decision making
	The individual on the job needs to know and understand how to: SB6. report potential sources of danger SB7. follow prescribed procedure in the event of an accident SB8. wear appropriate safety gear to avoid an accident

G&J/N9905

Maintain occupational health and safety

NOS Version Control

NOS Code	G&J/N9905		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	29/05/13
Industry Sub-sector	Cast and diamond-set jewellery	Last reviewed on	11/07/13
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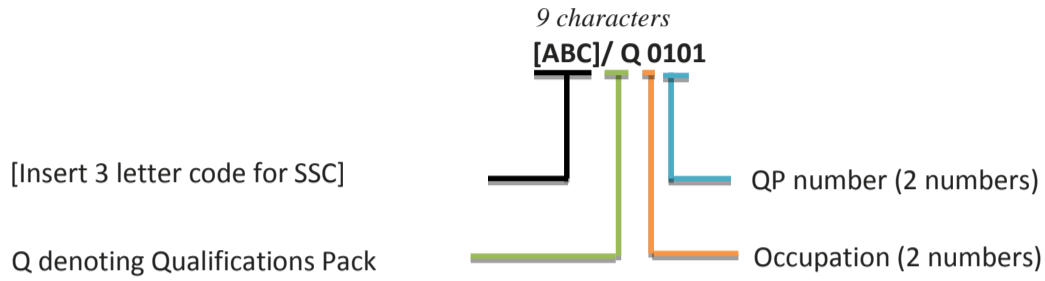


Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defied as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further 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 Skills	Core skills or generic skills are a group of skills that are the key to learning 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
Mohs	Mohs scale of mineral hardness
NOS	National Occupational Standard(s)
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework
QP	Qualifications Pack

Annexure

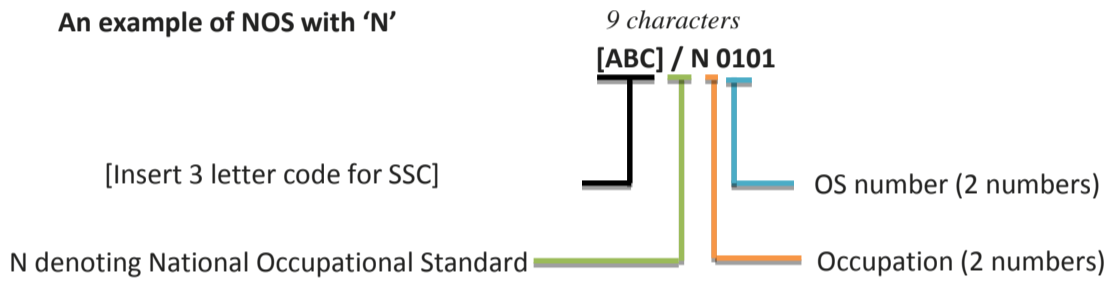
Nomenclature for QP and NOS

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

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Wax Setter (Basic)

Qualification Pack G&J/Q2703

Sector Skill Council Gem & Jewellery

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 theory question papers for candidates at every examination/training centre. (as per assessment criteria below)
4. Individual assessment agencies will create practical tests for skill evaluation for candidates at every examination/training centre. (as per assessment criteria below)
5. To pass the Qualification Pack, every candidate should score a minimum of 50% in theory and 70% in practical to successfully clear the assessment.
6. In case of successfully passing only certain number of NOS's, the candidate is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

		Marks Allocation			
		Total Marks (80+20)	Out Of	Theory	Skills Practical
1. G&J/N2701 Set diamond and stones in the wax models	PC1. secure setting of diamonds and gemstones	75	12	2	10
	PC2. provide finishing to the wax pieces as per design requirement		12	2	10
	PC3. maintain zero defect wax pieces in the process before setting		12	2	10
	PC4. select right size of diamonds and gemstone for setting in the wax piece		12	2	10
	PC5. deliver in time product to tree-making and casting processes		5	0	5
	PC6. set number of stones or carat per day against target given		5	0	5
	PC7. maintain accurate level of the stones in the wax piece		12	2	10
	PC8. produce number of Quality Control approved wax pieces set		5	0	5

		Total	75	10	65
2. G&J/N9901 Respect and maintain IPR	PC1. be able to spot plagiarism and report	9	3	2	1
	PC2. be aware of patents and IPR		4	1	3
	PC3. not be involved in IPR violations		2	1	1
		Total	9	4	5
3. G&J/N9902 Coordinate with others	PC1. understand the work output requirements	8	2	1	1
	PC2. comply with company policy and rule		1	0	1
	PC3. deliver quality work on time as required by reporting any anticipated reasons for delays		1	0	1
	PC4. put team over individual goals		1	1	0
	PC5. be able to resolve conflicts		1	0	1
	PC6. learn how to multi-task relevant activities		2	1	1
		Total	8	3	5
4. G&J/N9905 Maintain occupational health and safety	PC1. spot and report potential hazards on time	8	2	1	1
	PC2. follow company policy and rules regarding use of hazardous materials		2	0	2
	PC3. attend and actively participate in the health and safety campaigns organised by the company		2	1	1
	PC4. use or wear safety gear as per the rules of the company		2	1	1
		Total	8	3	5