



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

Contact Us: GJSCI, Mumbai





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Introduction Qualifications Pack- Manual Bruter

SECTOR: GEMS & JEWELLERY SUB-SECTOR: Diamond processing OCCUPATION: Bruting and coning REFERENCE ID: G&J/Q4503 ALIGNED TO: NCO-2004/7313.55

Manual Bruter: Also known as Bruter or Coner, the manual bruter provides round girdle and cone shape to the sawed rough diamond. It is a traditional way of bruting.

Brief Job Description: Individuals work on the doped diamond to be girdled and hold it against a second diamond spinning in opposite direction to slowly round it into a cone shape. A bruter must be careful: so that excess bruting does not cause too much stone loss or sub-optimal bruting causes the girdle to disappear at a later stage of processing.

Personal Attributes: The job requires the individual to have: attention to details; good eyesight; steady hands; ability to work in a process driven team; ability to work for long hours in sitting position mainly on the floor; high level of concentration; and a lot of patience.





Qualifications Pack Code	G&J/Q4503		
Job Role		Manual Bruter	
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Gems & Jewellery	Drafted on	31/05/13
Sub-sector	Diamond Processing	Last reviewed on	30/07/13
Occupation	Bruting and Coning	Next review date	15/07/15

Job Role	Manual Bruter Also known as 'Bruter' or 'Coner'
Role Description	Creating the round girdle of the diamond and giving a conical shape to the pavilion and crown area, maximizing yield while maintaining its dimensions as per plan
NVEQF/NVQF level	3
Minimum Educational Qualifications Maximum Educational Qualifications	Preferably 10 th Standard Passed
Training	Not Applicable
Experience	Not Applicable
Applicable National Occupational Standards (NOS)	Compulsory: 1. <u>G&J/N4503 Brut the diamond manually</u> 2. <u>G&J/N9930 Maintain IPR</u> 3. <u>G&J/N9931 Coordinate with team and superiors</u> 4. <u>G&J/N9933 Maintain safety</u> Optional: Not applicable
Performance Criteria	As described in the relevant OS units

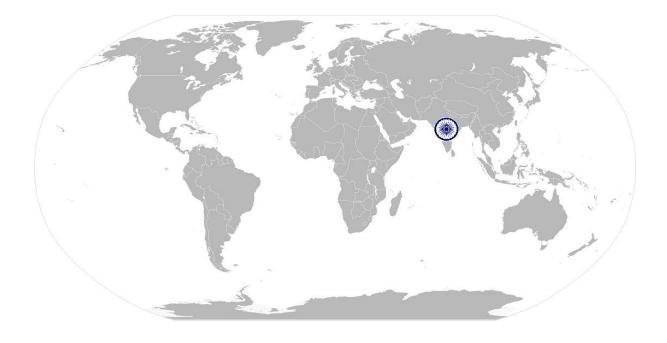






Brut the diamond manually

National Occupational Standard



Overview

This unit is a about giving the diamond its basic round-cum-conical shape by doping the diamond to be girdled and rubbing against a second spinning diamond. The objective is to ensure: that a perfectly round girdle is formed and the pavilion and crown coned, and maximum yield achieved as per planned dimensions.







Unit Code	G&J/N4503
Unit Title (Task)	Brut the diamond manually
Description	This OS unit is about creating the round girdle and, coned crown and pavilion of diamond in the proportion, symmetry and finish as per the planning or the objective fixed by the company, by manually pressing one diamond against another spinning one
Scope	This unit/task covers the following:
	 Set up the bruting lathe machine check all the parts of the bruting lathe, such as the motor, spinning wheel set the machine so that there is no vibration mount a rough diamond on the dop and fix it on the rotating motor check the rotation of the spinning diamond change the spinning diamond as it wears off
	 Fix the cut rough diamond on a dop and fix the dop on the handle keep the bottom as well as top dops in the heating machine select a hot dop according to the size of the diamond and the side to be bruted use lac to fix the rough diamond on the dop align the diamond as per plan ensure a secure fixing of the diamond on the dop mount the dop on the handle or rod
	 Brut and cone the diamond understand the planning on the job sheet for the final finish of the diamond plan the work start the rotating motor and hold the diamond fixed on the handle against the rotating diamond or wheel turn the handle for rounding remove the inclusions as per planning dip the diamond periodically in water to avoid heating pour water over the spinning diamond while bruting create the round girdle and cone one side then, remove from the dop and repeat the entire process for the other side refix the diamond on a hot dop by turning over to the other side ensure that the diamond in not overheated during doping maintain accurate dimensions set by the company such as +20 points from the diameter given in case of rough bruting or +5 points from the diameter given in case of final bruting. ensure there are no problems such as nicks, scratches, burn marks, abrasions. remove from the dop, clean the diamond and return to the issue department after labelling the job packet/ bag repeatedly check quality of rounding and coning with the help of an eye glass



NOS National Occupational Standards



	 Follow safety procedures at work ensure that no accidents take place while working with rotating diamond/wheel be careful while using heating machine for dops and lac Report problems to Supervisor/reporting authority about: technical problems with any part of the bruting lathe machine diamond received with planning defect higher weight loss than planned damage while bruting problems related to the machines and, wear and tear of tools personal problems and those with other workers
Performance Criteria(P	C) w.r.t. the Scope
Element	Performance Criteria
Quality of bruting	 To be competent, the user/individual on the job must be able to: PC1. achieve a perfect round girdle and conical pavilion and crown PC2. accurate proportions as per design requirement PC3. accurately remove inclusions while bruting as per plan PC4. maintain weight loss is as per plan PC5. set up the bruting lathe
Productivity	To be competent, the user/individual on the job must be able to: PC6. achieve the productivity in terms of carats or number of pieces as set by the company PC7. timely delivery for further processing
Controlling defects	To be competent, the user/individual on the job must be able to: PC8. minimize damage, weight loss and breakage PC9. ensure no flaws on diamond such as nicks, scratches, burning marks, abrasions PC10. repair a damaged stone
Knowledge and Unders	
A. Organizational Context (Knowledge of the company / organization and its processes)	 The individual on the job needs to know and understand: KA1. company's policies on: acceptable limits of weight loss; incentives; delivery standards; safety practices and hazards; security and performance measurement KA2. work flow involved in company's diamond processing KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. issue return procedures followed by the company KA6. typical customer profile and market trends KA7. specialization area of the company (size, clarity, shape, quality, etc. of diamonds) KA8. diamond processing objective of the company, e.g. maximizing yield, maximizing clarity, etc.







B. Technical	The user/individual on the job needs to know and understand:		
Knowledge	KB1. sawing and cutting procedure of roughs		
	KB2. blocking procedure of diamonds		
	KB3. bruting and coning		
	KB4. polishing process		
	KB5. 4Cs of diamond (Colour, Cut, Clarity and Carat)		
	KB6. use of various scopes in diamond processing		
	KB7. stress (tension) of the diamond		
	KB8. geometry to understand the angles and symmetry		
	KB9. process of preparation of bruting lathe machine		
	KB10. types of diamond inclusions		
	KB11. repair work		
	KB12. valuation of diamonds depending on different dimensions		
	KB13. fixing diamond on the dop and fixing the dop on the handle		
	KB14. uses of different types of tools and materials for different purposes		
	KB15. maintenance and preparation of tools as per job requirement		
	KB16. potential work hazards, particularly, when using machine tools		
Skills (S) [Optional]	KB10. potential work hazards, particularly, when using machine tools		
	Designation and writing skills		
A. Core Skills/	Basic reading and writing skills		
Generic Skills	The user/individual on the job needs to know and understand how:		
	SA1. to read descriptions on the diamond packets/ bags		
SA2. to document work done for status and performance appraisal			
	Calculation and geometry skills		
	The user/individual on the job needs to know and understand how:		
	SA3. to calculate the basic value of a diamond		
	SA4. to understand angles, proportions and other dimension requirements		
	Communication skills		
	The user/individual on the job needs to know and understand how:		
	SA5. to discuss task, schedules, and work-loads with co-workers and supervisors		
	SA6. to understand instructions and report problems		
	Teamwork and multitasking		
	The user/individual on the job needs to know and understand how:		
	SA7. to share work load as required		
	SA8. to assist others who require help		
	SA9. to share knowledge with co-workers		
	SA10. to work with other people sharing the workspace		
B. Professional Skills	Reading design dimensions		
	The user/individual on the job needs to know and understand how:		
	SB1. to work on dimensions mentioned on the job packet, in order to achieve		
	perfect proportion and symmetry as required by design		







Using tools and machines
 The user/individual on the job needs to know and understand how: SB2. to set up and work with the manual bruiting machine with all its parts such as the motor, spinning wheel SB3. to use tools like dops, dop heater, handle, eye glass, water bucket, tweezers and the sticking agent like lac SB4. to maintain tools and machines used
SB5. to work in a safe environment, i.e., without injuries
Reducing loss
The user/individual on the job needs to know and understand how: SB6. to handle diamonds with care SB7. to minimize damage or loss of any diamond during the bruting process SB8. to report diamond losses via documentation as per company policy SB9. to suggest improvements in order to reduce loss
Diamond valuation
The user/individual on the job needs to know and understand how: SB10. to brut in order to yield maximum value for the finished diamond, where no design is provided
Bruting technique
The user/individual on the job needs to know and understand how: SB11. to direct/angle the handle for bruting/coning SB12. much of pressure to be applied while bruting/coning Planning skills
The user/individual on the job needs to know and understand how: SB13. to plan work for maximum productivity SB14. to plan the best cut to get maximum value from the diamond
Innovative thinking
The user/individual on the job needs to know and understand how: SB15. to devise new means of working to improve productivity or reduce efforts SB16. to suggest improvements in tools/machines which can lead to improved productivity or quality
Problem solving
The user/individual on the job needs to know and understand how: SB17. to rectify defects occured Reflective thinking
The user/individual on the job needs to know and understand how: SB18. to work for long hours in a sitting position without health problems Critical thinking
The user/individual on the job needs to know and understand how: SB19. to spot process disruptions and delays







Brut the diamond manually

NOS Code	G&J/N4503		
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	31/05/13
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

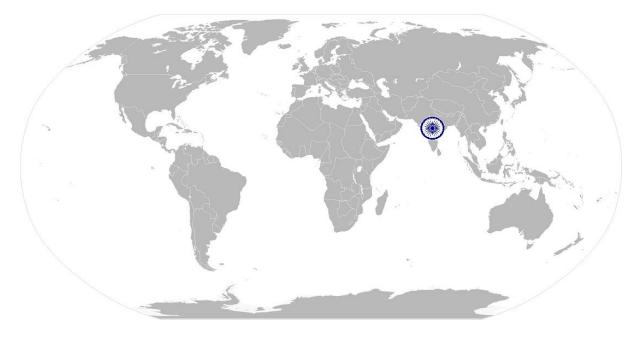






Maintain IPR

National Occupational Standard



Overview

This unit is about and respecting intellectual property rights (IPR) of the company's products, policies, procedures and orders.



	NOS	2
National	Occupational	Standards



Unit Code

Unit Title

(Task) Description

Scope

Maintain IPR
G&J/N9930
Respect IPR of company
This OS unit is about maintaining company's intellectual property
This unit/task covers the following:

Protect company's Intellectual Property Rights (IPR) prevent leak of new orders to competitors by reporting on time •

- prevent leak of the manufacturing processes or the policies followed by the • company
- be aware of any of company's product patents
- report IPR violations observed in the market, to supervisor or company heads •

Performance Criteria(PC) w.r.t. the Scope **Performance Criteria** Element

Respecting IPR	To be competent, the user/individual on the job must be able to:		
	PC1. spot plagiarism and report		
	PC2. understand rationale of patents and IPR		
	PC3. avoid being involved in IPR violations		
Knowledge and Understanding (K)			
A. Organizational	The individual on the job needs to know and understand:		
Context	KA1. company's policies on IPR, plagiarism and order leaks		

- KA2. company's patented products KA3. market trends and company's unique product range KA4. reporting structure **B.** Technical The individual on the job needs to know and understand:
 - Knowledge basics of patents and IPR laws KB1. KB2. how IPR protection is important for competitiveness of a company

Ski	Skills (S) [Optional]				
Α.	Core Skills/	Communication skills			
	Generic Skills	The user/individual on the job needs to know and understand how:			
		SA1. to effectively communicate any observed IPR violations or leaks			
В.	B. Professional Skills Decision making				
		The user/individual on the job needs to know and understand when and how:			
		SB2. to report sources of IPR violations			
		Reflective thinking			
		The user/individual on the job needs to know and understand how:			
		SB3. to learn from past mistakes and report IPR violations on time			
		Critical thinking			
		The user/individual on the job needs to know and understand how:			
		SB4. to spot signs of violations and alert authorities in time			







Maintain IPR

NOS Code	G&J/N9930			
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD Version number 1.0			
Industry	Gems & Jewellery	Drafted on	31/05/13	
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13	
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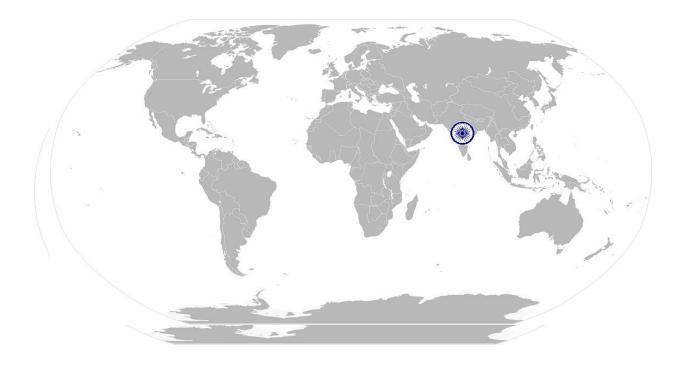






Coordinate with team and colleagues

National Occupational Standard



Overview

This unit is about the work ethics, team work, and level of communication with colleagues or clients in the diamond processing industry. 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&I/N9931

G&J/N9931	8		
Unit Code	G&J/N9931		
Unit Title (Task)	Interact with colleagues and seniors		
Description	This OS unit is about communicating with colleagues and seniors in order to maintain smooth ad hazards free work flow		
Scope	 This unit/task covers the following: Interact with supervisor to: 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 Interact with colleagues within and outside the department to: 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 an 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(P	C) 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. conflicts resolution and multi-tasking		
Knowledge and Unders	ů – – – – – – – – – – – – – – – – – – –		
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on personnel management KA2. work flow involved in company's diamond processing KA3. importance of the individual's role in the workflow KA4. reporting structure		
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. how to communicate effectively KB2. how to build team coordination		







	G&J/N9931	Coordinate with team and colleagues	
Ski	ills (S) [Optional]		
Α.	Core Skills/	Teamwork and some multitasking	
	Generic Skills	The individual on the job needs to know and understand how:	
		SA1. to share work load as required	
		SA2. to deliver product to next work process on time	
В.	Professional Skills	Decision making	
		The individual on the job needs to know and understand:	
		SB1. how to report potential areas of disruptions to work process	
		SB2. when to report to supervisor and when to deal with a colleague depending on	
		the type of concern	
		Reflective thinking	
		The individual on the job needs to know and understand:	
		SB3. how to improve work process	
		Critical thinking	
		The individual on the job needs to know and understand:	
		SB4. how to spot process disruptions and delays	







Coordinate with team and colleagues

NOS Code	G&J/N9931			
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD Version number 1.0			
Industry	Gems & Jewellery	Drafted on	31/05/13	
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13	
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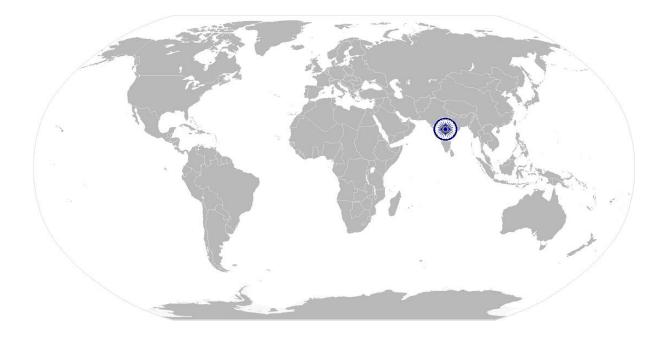






Maintain safety

National Occupational Standard



Overview

This unit is about the worker's commitment towards reporting potential hazards and containing accidents in order to make the work environment safe for self and colleagues.







G&J/N9933 Unit Code

Maintain	safety
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000710755	Maintain Safety	
Unit Code	G&J/N9933	
Unit Title (Task)	Maintain safety at work	
Description	This OS unit is about being aware of and communicating potential hazards and dangers of accidents on the job	
Scope	 dangers of accidents on the job This unit/task covers the following: Understand potential sources of accidents to avoid accidents related to use of potentially dangerous chemicals, gases, sharp tools and hazards from machines like rotating scaife, lasers, heating ovens, etc. Use safety gear to avoid accidents wear safety gear such as goggles, mask, gloves , jacket , etc. as prescribed for the job Understand the safety procedures followed by the company such as fire drills, emergency/ evacuation procedures, first aid, etc., which will be helpful in case of an emergency Communicate to reporting supervisor about: process flow improvements to reduce anticed or repetitive hazards mishandling of tools, machines or hazardous materials electrical problems that could result in accident 	
Performance Criteria(P	C) w.r.t. the Scope	
Element	Performance Criteria	
Understanding of potential sources of accidents and communicating	 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 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 be able to:	
Understanding of safety procedures	 PC4. understand which safety gear must we used for a particular task To be competent, the user/individual on the job must be able to: PC5. understand and follow the evacuation procedure properly during a fire drill PC6. provide first aid to self or others in case of emergency 	
Knowledge and Understanding (K)		
A. Organizational Context (Knowledge of the company / organization and its processes)	 The individual on the job needs to know and understand: KA1. company's policies on handling: harmful chemicals and sharp tools, safety and hazards of machines, fire safety/drill, first aid and, disposal of harmful chemicals and materials KA2. work flow involved in company's diamond processing process KA3. importance of the individual's role in the workflow KA4. reporting structure 	



NOS National Occupational Standards



G&J/N9933

Maintain safety

B. Technical Knowledge	 The 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 causing bodily harm KB3. fire safety education KB4. first aid execution 		
	KB5. disposal of hazardous chemicals, tools and materials by following prescribed environmental norms or as per company policy		
Skills (S) [Optional]			
A. Core Skills/	Communication skills		
Generic Skills	The individual on the job needs to know and understand how:		
	SA1. to effectively communicate the danger		
B. Professional Skills	Decision making		
	The individual on the job needs to know and understand:		
	1. importance of reporting potential sources of danger		
	appropriate actions to be taken in the event of an accident		
	B3. procedure for disposing of hazardous materials, safely and following		
	environmental guidelines		
	Reflective thinking		
	The individual on the job needs to know and understand how:		
	SB4. to learn from past mistakes regarding use of hazardous machines, tools or		
	chemicals		
	Critical thinking		
	The individual on the job needs to know and understand:		
	SB5. how to spot danger		
	SB6. procedure to follow in the event of a fire or other hazard		







Maintain safety

NOS Code	G&J/N9933			
Credits(NVEQF/NVQF/NSQF) [OPTIONAL]	TBD Version number 1.0			
Industry	Gems & Jewellery	Drafted on	31/05/13	
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13	
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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 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 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	
NOS	National Occupational Standard(s)	
NVQF	National Vocational Qualifications Framework	
NSQF	National Qualifications Framework	
NVEQF	National Vocational Education Qualifications Framework	
QP	Qualifications Pack	

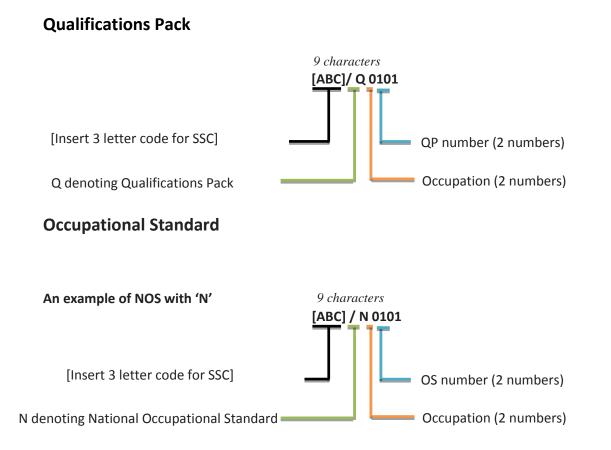


Qualifications Pack For Manual Bruter



<u>Annexure</u>

Nomenclature for QP and NOS



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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 Q P or N OS	Q
Next two numbers	Occupation code	45
Next two numbers	OS number	05





		CRITERIA FOR ASSESSMENT OF TRAINEES			
Job Role Qualification Pack Sector Skill Council	-	Manual Bruter Diamond Processing - Manual Bruter GEMS & JEWELLERY			
		Assessment Strategy	Marks Allocation		
NOS	Elements	Performance Criteria	Theory	Practical	
1.G&J/N4503 Brut the diamond manually	Quality of bruting	PC1. acheive a perfect round girdle and conical pavilion and crown	1	6	
		PC2. accurate proportions as per design requirement	1	8	
		PC3. accurately remove inclusions while bruting as per plan	0	8	
		PC4. maintain weight loss is as per plan	1	8	
		PC5. set up the bruting lathe	1	6	
	Productivity	PC6. achieve the productivity in terms of carats or number of pieces as set by the company	1	10	
		PC7. timely delivery for further processing			
	Controlling defects	PC8. minimize damage, weight loss and breakage	0	8	
		PC9. ensure no flaws on diamond such as nicks, scratches, burning marks, abrasions	1	10	
		PC10. repair a damaged stone	1	5	
		Sub Total	8	77	
2.G&J/N9930 Maintain IPR	Respecting IPR	PC1.spot plagiarism and report	1	0	
		PC2. understand rationale of patents and IPR	1	0	
		PC3. avoid being involved in IPR violations	1	0	
3. G&J/N9931 Coordinate with others	Interaction with supervisor	Sub Total	3	0	
		PC1. understand the work output requirements	1	0	
		PC2. comply with company policy and rule	1	0	





		PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	0	2
	Interactions with colleagues and other departments	PC4. put team over individual goals	1	0
		PC5. conflicts resolution and multi-tasking	1	0
		Sub Total	4	2
4. G&J/N9933 Maintain safe work environment	Understanding of potential sources of accidents and communicating	PC1. spot and report potential hazards on time	1	0
		PC2. follow company policy and rules regarding 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. understand which safety gear must we used for a particular task	0	1
	Understanding of safety procedures	PC5. understand and follow the evacuation procedure properly during a fire drill	1	0
		PC6. provide first aid to self or others in case of emergency	1	0
		Sub Total	5	1
		Total	20	80
		Grand Total		100