





#### QUALIFICATIONS PACK- OCCUPATIONAL STANDARDS FOR PLASTICS INDUSTRY

## What are ccupational tandards (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- Advanced Plastics Mould Manufacturing Assistant

**SECTOR: RUBBER** 

**SUB SECTOR:** MANUFACTURING / PLASTICS PROCESSING

**OCCUPATION: PLASTICS MOULD MANUFACTURING** 

REFERENCE ID: RSC/Q4701 (CPC/Q5803)

#### **ALIGNED TO:**

#### **Brief Job Description:**

The individual work will be assist to Make the Mould Parts, will assembly & Polish the Mould. The individual will capable to operation of the Machine Tools like Lathe, Milling, Shaper, Surface Grinder, Cylindrical Grinder to produce good quality Mould Parts, he also capable to Programme & operate the CNC Lathe, Milling & EDM Machine to produce mould cavity.Will independently Assemly & Polish a mould.

#### **Personal Attributes:**

This job requires the basic communication, basic numerical & computational abilities for the individuals to work under close supervion. The assistant mould maker is expected to be able to work in a factory environment and have the ability to work in standing position for long hours.







Qualifications Pack Code	RSC/Q4701 (CPC/Q5803)		
Job Role	Advanced Plastic Mould Manufacturing- Assistant		
Credits (NSQF)	24	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021
NSQC Clearance on	21/07/2016		

Job Role	Plastic Mould Manufacturing Assistant
Role Description	Will help the toolroom in terms of Making the Moulds Parts by operating the Conventional Machine Tools like Lathe, Milling, Shaper and Grinder & EDM. He will assist the CNC Programmer & Operator by operating the CNC Lathe & Milling Machine. He will assist the Tool room in Polishing & Assembly Work of Mould.
NSQF level	3
Minimum Educational Qualifications*	VIII Standard
Maximum Educational Qualifications*	N.A.
Training (Suggested but not mandatory)	No previous training required
Minimum Job Entry Age	18
Experience	No previous experience required
Applicable National Occupational Standards (NOS)	<ol> <li>Compulsory:         <ol> <li>RSC/N4101 (CPC/N0411): To maintain basic health and safty work environment at Workplace,5s.</li> <li>RSC/N4701 (CPC/N5802): To understand basic concepts of Engineering drawing &amp; Can able to study the Job Drawing/ Blue Print &amp; Dimensional Tolerances job</li> <li>RSC/N4702 (CPC/N5803): Assist in performing the Mould making Process by use of different types of Hand tools</li> <li>RSC/N4703 (CPC/N5804): Study Types of Mould and its function</li> </ol> </li> <li>RSC/N4704 (CPC/N5805): Machining Practice on Conventional &amp; CNC Machines</li> <li>RSC/N4705 (CPC/N5806): To Study about mould polishing and mould assembly</li> <li>RSC/N4203 (CPC/N7014): Effective working with others</li> </ol>
Performance Criteria	As described in the relevant OS units







Keywords /Terms	Description
Core	Core Skills or Generic Skills are a group of skills that are key to learning and
Skills/Generic	working in today's world. These skills are typically needed in any work
Skills	environment. In the context of the OS, these include communication
	related skills that are applicable to most job roles.
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.
Function	Function is an activity necessary for achieving the key purpose of the
	sector, occupation, or area of work, which can be carried out by a person
	or a group of persons. Functions are identified through functional analysis
	and form the basis of OS.
Job role	Job role defines a unique set of functions that together form a unique
	employment opportunity in an organization.
Knowledge	Knowledge and Understanding are statements which together specify the
and	technical, generic, professional and organizational specific knowledge that
Understanding	an individual needs in order to perform to the required standard.
Occupational	OS are Occupational Standards which apply uniquely in the Indian context
Standards (OS)	
Occupation	Occupation is a set of job roles, which perform similar/related set of
	functions in an industry.
Organizational Context	Organizational Context includes the way the organization is structured and
-	how it operates, including the extent of operative knowledge managers
	have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of
	performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the
	educational, training and other criteria required to perform a job role. A
	Qualifications Pack is assigned a unique qualification pack code.
Qualifications	Qualifications Pack Code is a unique reference code that identifies a
Pack Code	qualifications pack.
Scope	Scope is the 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 the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar
	businesses and interests. It may also be defined as a distinct subset of the
	economy whose components share similar characteristics and interests.
Sub-Sector	Sub-sector is derived from a further breakdown based on the
0.1.6	characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the
Table Cally and Lake	objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish
II.alt Carda	specific designated responsibilities.
Unit Code	Unit Code is a unique identifier for a OS unit, which can be denoted with an 'N'
Unit Title	Unit Title gives a clear overall statement about what the incumbent should
<del>-</del>	be able to do.
Vertical	Vertical may exist within a sub-sector representing different domain areas
	i and in a superior in a super







	or the client industries served by the industry.
Keywords /Terms	Description
OS	Occupational Standard(s)
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack











## **Overview**

This unit Covers health, safety and security at the work place. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment.









	Unit Code	RSC/N4101 (CPC/N0411)
Ī	Unit Title	Maintain basic health and safety practices at the workplace, 5S
	(Task)	Walitain basic ficatin and safety practices at the workplace, 33
D	escription	This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace. It covers responsibilities towards self, others, assets and the environment.  It includes understanding of risks & hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies etc. It covers knowledge of fire safety, common first aid applications and safe practice.  This OS is about ensuring all 5S activities both at the shop floor and the office area to facilitate increase in work productivity.
S	cope	The role holder will be responsible for
		Health and safety procedure.
		Fire safety procedure.
		Emergencies, rescue and first aid procedures.
		Ensure sorting, stream lining, storage and documentation, cleaning,
		standardization and sustenance across the plant premises of the
D	erformance Criteria (P	organization.
	ement	Performance Criteria
	Health and safety	The individual on the job should ensure to:
		PC1. Wear protective clothing/equipment for specific tasks and work conditions PC2. Carry out safe working practices while dealing with hazards to ensure the safety of Self and others. PC3. Ensure good housekeeping practices at all times
Fi	re safety	The individual on the job should be able to:
		PC4. Use the various appropriate fire extinguishers on different types of fires correctly PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.
aı	mergencies, rescue nd first aid rocedures.	<ul> <li>PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous / unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.</li> <li>PC7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.</li> <li>PC8. Create awareness amongst others by sharing information on the identified risks.</li> </ul>









Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises of the organization.	PC9. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un-necessary items are not cluttering the workbenches or work surfaces.  PC10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions  PC11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP  PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places  PC13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions  PC14. Ensure that areas of material storage are not overflowing  PC15. Ensure properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required  PC16. Return of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area  PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant per the prescribed instructions and standards  PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists  PC19. Ensure to check the items in the respective areas have been identified as broken or damaged  PC20. Follow the given instructions and check for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.  PC21. To make sure that all material and tools are stored in the designated places
	and in the manner indicated in the 5S instructions
Knowledge and Unders	2.1.1
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand:  KA1. The relevant standards, procedures and policies related to Health,  Safety and Environment followed in the company  KA2. The emergency handling procedures & hierarchy for escalation
B. Technical	The user/individual on the job needs to know and understand:
Knowledge	<ul> <li>KB1. The basic knowledge of Safety procedures (fire fighting, first aid) within the organization</li> <li>KB2. The basic knowledge of various types of PPEs and their usage</li> <li>KB3. The basic knowledge of risks/hazards associated with each occupation in the organization</li> <li>KB4. The knowledge of personal hygiene and how an individual contribute towards creating a highly safe and clean working environment the individual on the job needs to know and understand.</li> </ul>









	KB5. The meaning of "hazards" and "risks"  KB6 The health and safety hazards commonly present in the work environment and
	related precautions
	KB7. The possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible
	KB8. The Possible causes of risk and accident (due to oil leakage)
	KB9. Methods of accident prevention
	KB9. Safe working practices when working with tools and machines
	KB10. Safe working practices while working at various hazardous sites
	KB11. To know the where to find all the general health and safety equipment in the workplace
	KB12. Various dangers associated with the use of electrical equipment
	KB13. Preventative and remedial actions to be taken in the case of exposure to toxic
	materials
	KB14. The Importance of using protective clothing/equipment while working
	KB15. Precautionary activities to prevent the fire accident
	KB16. Various causes of fire
	KB17. To know the techniques of using the different fire extinguishers KB18. To know the different methods of extinguishing fire
	KB19. To know the different materials use for extinguishing fire
	KB20. Rescue techniques applied during a fire hazard
	KB21. Various types of safety signs and what they mean
	KB22. To know the appropriate basic first aid treatment relevant to the condition
	e.g. shock, electrical shock, bleeding, breaks to bones, minor burns,
	resuscitation, poisoning, eye injuries
	KB23. To know the content of written accident report
	KB24. Potential injuries and ill health associated with incorrect manual handing
	KB25. Safe lifting and carrying practices
	KB26. Personal safety, health and dignity issues relating to the movement of a person by others
	KB27. Potential impact to a person who is moved incorrectly
	KB28. To have basic knowledge of 5S procedures
	KB29. To know the various types 5s practices followed in various areas
	KB30. Understand to the 5S checklists provided in the department/ team
	KB31. To have skills to identify useful & non useful items
	KB32. To have knowledge of labels , signs & colours used as indicators
	KB33. To have knowledge on how to sort and store various types of tools,
	equipment, material etc.
	KB34. To know, how to identify various types of waste products  KB35. Understand to the impact of waste/ dirt/ dust/unwanted substances on the
	process/ environment/ machinery/ human body.
	KB36. To have knowledge of best ways of cleaning & waste disposal
Skills (S) [Optional]	
Element	Skills
A. Core Skills/	Writing Skills
Generic Skills	-
The user/ individual on the job needs to know and understand now to:	
	SA1. Understand basic level notes and observations.









	Reading Skills		
The user/individual on the job needs to know and understand about the:			
	SA2. safety instructions put up across the plant premises		
	SA3. Safety precautions mentioned in equipment manuals and panels and		
	understand the potential risks associated		
	Oral Communication (Listening and Speaking skills)		
	The user/individual on the job needs to know and understand how to:		
	SA4. Effectively communicate information to team members		
	SA5. Inform employees in the plant and concerned functions about events,		
	Incidents & potential risks observed related to Safety, Health and		
	Environment.		
	SA6. Question operator/ supervisor in order to understand the safety related		
	issues		
	SA7. Attentively listen with full attention and comprehend the information given		
	by the speaker during safety drills and training programs		
B. Professional Skills Plan and Organize			
	The user/individual on the job needs to know and understand how to:		
	SB1. Process the work order and jobs received from the internal customers.		
	SB2. Design documents received from internal customers		
	SB3. Understand & organize all process/ equipment manuals so that sorting out		
	information is fast.		
	Judgment and Critical Thinking		
	The user/individual on the job needs to know and understand how to:		
	SB4. Use common sense and make judgments during day to day basis		
	SB5. Use intuition to detect any potential problems which could arise during		
	operations		
	Desire to learn and take initiatives		
	The user/individual on the job needs to know and understand how to:		
SB6. Follow instructions and work on areas of improvement identified			
	SB7. Complete the assigned tasks with minimum supervision		
	SB8. Complete the job defined by the supervisor within the timelines and quality		
	norms		









## **NOS Version Control**

NOS Code	RSC/N4101 (CPC/N0411)		
Credits (NSQF)	1.5	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021



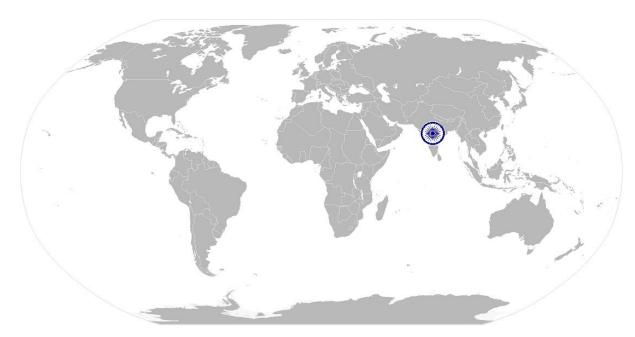








## National Occupational Standards



## **Overview**

This unit is about Understand basic concepts of Engineering drawing & Can able to study the Job drawing / Blue Print & Dimensional Tolerances job requirements & basics knowledge related to Mould Making process









Unit Code	RSC/N4701 (CPC/N5802)	
Unit Title	To understand basic concepts of Engineering drawing & Can able to stud	
(Task)	the Job Drawing/ Blue Print & Dimensional Tolerances job	
Description	This OS unit is about understanding the engineering Drawing, Standards.	
	Reading of Mould Assembly Drawings & Detail's Drawings of Mould Parts	
Scope	This unit/ task covers the following:	
	Understanding the Drawing required for mould making	
	Reading of Dimensional tolerances	
	Study of Bill of Materials	
Performance Criteria (		
Element	Performance Criteria	
Understand the	The individual on the job should be able to:	
work and the	PC1 Interact with the head mould maker & follow the mould drawing	
Operation	PC2 Help in planning the day's Mould making activities based on the	
requirements from	Drawing	
Mould Making	PC3 Ensure availability of tools and raw materials for production in	
point of View.	sufficient quantity as per production plan/operators instructions.	
•	PC4 Clearly understand the drawing, dimension & tolerances of the	
	individual part before making it.	
	PC5 Follow the assembly drawing & detail drawing of mould / mould	
	parts.	
Help in arrange	PC6 Ensure that the required raw material/tools is procured from the	
for the material	store/tool crib before starting the work	
,Tools to be	PC7 Ensure the tools required to execute mould making process and	
Used for Mould	ensure that the same is available in shop floor	
Making	PC8 If tool is not available collect the tools from tool crib.	
Check materials and	PC9 Ensure the raw material like steel material for different mould parts	
apparatus for	from the drawing	
Operations		
Knowledge and Unders	standing (K)	
B. Organizational	The user/individual on the job needs to know and understand:	
Context	KA1. Company's code of conduct	
(Knowledge of the	KA2. Different types of products manufactured by the company	
company /	KA3. Functional processes like Procurement, Store management,	
organization and	inventory management, quality management, incentives,	
its processes)	personnel management	
	KA4. Importance of individual's role in the work flow	
	KA5. Organization culture	
	KA6. Company's reporting structure	
	KA7. Company's documentation policy	
Skills (S) [Optional]		
C. Core Skills/ Reading and Writing Skills		
Generic Skills	The user/ individual on the job needs to know and understand how to:	
	SA1. How to read Drawings, instructions and other text material on	
	product labels, Mould Drawing etc	
	Oral Communication (Listening and Speaking skills)	
The user/individual on the job needs to know and understand how to		









			SA2.	Discuss task lists, schedules, and work-loads with co-workers
			SA3.	Question internal customers/ Shop floor operator appropriately in
				order to understand the nature of the problem and make a
				diagnosis
			SA4.	Avoid using jargon, slang or acronyms when communicating with an
				operator /fellow subordinates etc. Unless it is required.
	D.	<b>Professional Skills</b>	Decisi	on Making and Problem solving
			Detect	problems in day to day tasks:
			SB1.	Support operator in using specific problem solving techniques and
				detailing out the problems
			SB2.	Discuss possible solution with the operator for problem solving.
			Plan a	nd Organize
			The us	er/individual on the job needs to know and understand how to:
			SB3.	Plan and organize the work order and jobs received from the
				internal customers/ operator.
			SB4. Organize all process/ equipment manuals so that sorting out	
			Desire to learn and take initiatives	
			The us	er/individual on the job needs to know and understand how to:
			SB5.	Follow instructions and work on areas of improvement identified
			SB6.	Complete the assigned tasks with minimum supervision
/			SB7.	Complete the job defined by the operator within the timelines and
			-	quality.
			Judgm	ents and Critical Thinking
				er/individual on the job needs to know and understand how
V			to:	
\			SB8.	Use common sense and make judgments during day to day
			1 3	basis
			SB9.	Use basic reasoning skills to identify and resolve basic
				problems
			SB10.	Use intuition to detect any potential problems which could
				arise during operations.
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## **NOS Version Control**

NOS Code	RSC/N4701 (CPC/N5802)		
Credits (NSQF)	4 Version number 1.0		
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021



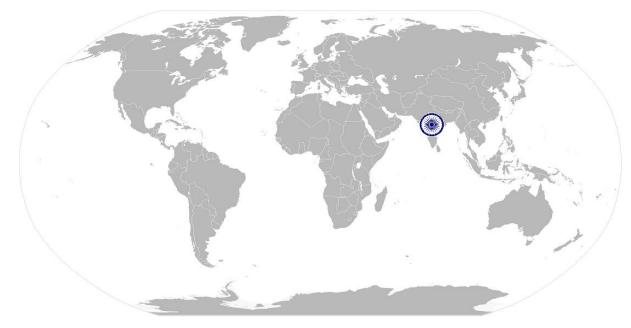








## National Occupational Standards



## **Overview**

This unit is about to accure the skill for use of different types of hand tools & Measuring instruments









Unit Code	RSC/N4702 (CPC/N5803)		
Unit Title	Assist in performing the Mould making Process by use of different types		
(Task)	of Hand tools		
Description	This OS unit is about assisting in producing good quality mold Parts &		
	assembled Mould in line with the required specifications		
Scope	The Mould Maker assistant will be responsible for		
	<ul> <li>Assist in Making the Mould Parts using Hand tools</li> </ul>		
	<ul> <li>Use of handling different measuring instruments</li> </ul>		
	<ul> <li>Assisting in Assembly of Mould using hand tool &amp; Polishing tools</li> </ul>		
Performance (PC) w.r.t.	the Scope		
Element	Performance Criteria		
USE Of Hand Tools,	The individual on the job should be able to:		
Measuring Instruments	PC1. Perform handling & using of different hand tools		
& Assembly Tools	PC2. Hands on skill & accuring practices on measurement of mould		
	parts		
	PC3. Select different tools for particular job		
	PC4. Perform to handle the vernier caliper, micrometer etc.		
	PC5. Can set job on different types of vices.		
Knowledge and Underst			
A. Organizational	The user/individual on the job needs to know and understand:		
Context (Knowledge	KA1. Department's code of conduct		
of the company /	KA2. Different types machines in the company, its specifications etc.		
organization and its	KA3. Department documentation policy		
processes)  B. Technical	The week limit and on the inhome and to know and and entered		
Knowledge	The user/individual on the job needs to know and understand:  KB1. General principles of moulding Making operations, Operation of		
Kilowieuge	Conventional & CNC Machines, Assembly of Mould etc.		
	KB2. Trail of the Mould		
Skills (S) [Optional]	NB2. Trail of the Modia		
A. Core Skills/ Generic	Reading and Writing Skills		
Skills	The user/ individual on the job needs to know and understand how to:		
	SA1. Read instructions especially safety instructions symbols while		
	using the equipment in the plant area		
	SA2. Note measurements, equipment panel readings for various		
	process parameters in the required reporting formats		
	SA3. how to visualize final product output and hence decide on the		
	key steps to be followed		
	SA4. Safety precautions to be taken for entire Mould Making process		
	Oral Communication (Listening and Speaking skills)		
	The user/individual on the job needs to know and understand how		
	SA6. Discuss task lists, schedules, and work-loads with co-		
	workers/operator		
	SA7. Question internal customers/ Mould shop operator		
	appropriately in order to understand the nature of the problem		
	and make a diagnosis		
B. Professional Skills	Decision Making and Problem solving		
	The user/individual on the job needs to know and understand how:		









SB1.	Detect	problems in	day to da	y tasks
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- SB2. Support operator in using specific problem solving techniques and detailing out the problems
- SB3. Discuss possible solution with the operator for problem solving
- SB4. Make decisions in emergency conditions in case the operator is not available ( as per the authority matrix defined by the organization)

#### **Plan and Organize**

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

- SB5. Organize all process/ equipment manuals so that sorting out information is Fast
- SB6. Organize apparatus etc. in an orderly manner at proper designated areas
- SB7. How to visualize final product output and hence decide on the key steps to be followed.

#### Desire to learn and take initiatives

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

- SB8. Follow instructions and work on areas of improvement identified
- SB9. Complete the assigned tasks with minimum supervision
- SB10. Complete the job defined by the operator within the timelines and Quality.

#### **Analytical Thinking**

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

- SB11. Visualize the final job product after understanding the given standard product.
- SB12. Finalize the optimum levels of physical parameters with operator guidance so that the job output meets the prescribed job standards



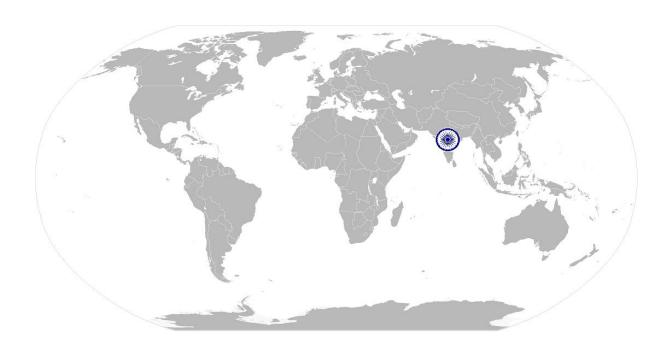






## **NOS Version Control**

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Credits (NSQF)	3 Version number 1.0		
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021











# National Occupational Standards



## **Overview**

Study about Types of Plastics Mould.









Unit Code	RSC/N4703 (CPC/N5804)		
Unit Title	Study about types of moulds and its function		
(Task)			
Description	This OS unit is about study of different types of Mould & Their Design Aspects		
Scope	The Mould Maker assistant will be responsible for		
	checking the finished Parts		
	<ul> <li>conducting minor repair/Replacing if any on output parts</li> </ul>		
Performance Criteria (			
Element	Performance Criteria		
Study of assembled	The individual on the job should be able to:		
mould & mould	PC1. Study about two plate injection mould & three plate injection mould		
design			
Study of mould	PC2. Study about mould feed system, types of gate		
feed system &	PC3. Study about different types of cooling system		
cooling system			
Study of mould	PC4. Study about different ejection system of mould.		
ejection system			
Knowledge and Unders			
A. Organizational	The user/individual on the job needs to know and understand:		
Context	KA1. Relevant standards specified for the manufacturing process		
(Knowledge of the	KA2. Basic process followed for inspection of the lot.		
company /	KA3. Quality Management policy of the organization.		
organization and its			
processes)			
B. Technical	The user/individual on the job needs to know and understand:		
Knowledge	KB1. Processes and procedures followed for manufacturing the lot/ pieces/		
	products.		
	KB2. Techniques of using measurement instruments like rulers, weighing		
	scales etc.		
	KB3. Methods to identify quality defects in the lot.		
	KB4. Impact of defects on the overall working of the Injection Moulding		
	machine.		
Skills (S) [Optional]	Writing Skills		
A. Core Skills/ Generic Skills	Writing Skills  The user/ individual on the job needs to know and understand how to:		
Generic Skins	SA1. Note the number of lot with defects which can be repaired to number		
	of lot which will be discarded.		
	Reading Skills  The user/individual on the ich, needs to know and understand, however.		
	The user/individual on the job needs to know and understand how to:		
	SA2. Read process and equipment manuals, material data sheets etc. to		
	understand the working of the equipment & material properties.  Oral Communication (Listening and Speaking skills)		
	Oral Communication (Listening and Speaking skills)  The user/individual on the job needs to know and understand how to:		
	SA3. Inform operator of any quality related defects arising out of the		
	manufacturing process.		
	SA4. Question internal customers/ operator appropriately in order to		
	understand the nature of the problem and make a diagnosis.		
	anderstand the nature of the problem and make a diagnosis.		









B. Professional Skills	Plan and Organize		
	The user/individual on the job needs to know and understand how to:		
	SB1. Organize all process/ equipment manuals so that sorting/ accessing		
	information is easy.		
	SB2. Keep fixtures, tools, drawings, Work Instructions, SOP manuals as per		
	the part number, colour codes etc. as defined under the 5S systems.		
	Critical Thinking and Judgment		
	The user/individual on the job needs to know and understand how to:		
	SB4. Use common sense and make judgments during day to day basis use		
	reasoning skills to identify and resolve basic problems		
	SB5. Carefully analyze each defect observed and try to find solution for the		
	defect along with the operator.		
	Quality Consciousness		
	The user/individual on the job needs to know and understand how to:		
	SB6. Identify defective parts in the manufacturing line by comparing		
	manufactured with the work standard.		
	SB7. Link the defect observed with the overall impact on the performance		
	of the Mould).		





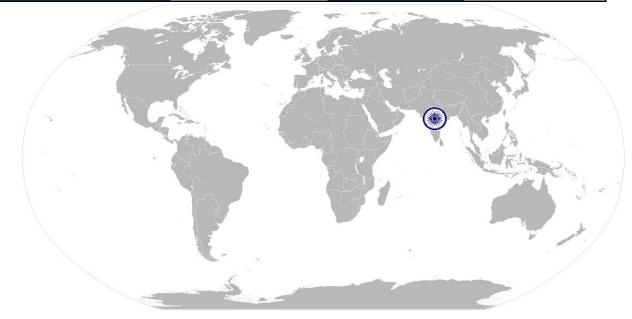






## **NOS Version Control**

NOS Code	RSC/N4703 (CPC/N5804)		
Credits (NSQF)	6	Version number	1.0
Sector	Rubber	Drafted on	18/05/2016
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021













## **Overview**

Can able to Operate all kind of Conventional Machines and CNC Machine









Unit Code	RSC/N4704 (CPC/N5805)		
Unit Title	Machining Practice on Conventional & CNC Machines		
(Task)			
Description	This OS unit is about the accuring the required skill in operation of Conventional		
	Machine & CNC Machine for Mould Making		
Scope	The role holder will be responsible for		
	Can manufacture the Mould parts independently using conventional Lathe,		
	Milling, & Grinding machine		
	Can able to operate CNC Machine for Mould manufacturing		
Performance Criteria (I	PC) w r t the Scone		
Element	Performance Criteria		
Understand the	The individual on the job should be able to:		
work and the	PC1 Set the work piece & Set the cutting Tools		
Operation of Lathe	PC2 Operate the Lathe Machine & to perform different operation		
Machine from	PC3 Operate the CNC Lathe		
Mould Making			
point of View.	The state of the s		
Understand the	PC4 Set the work piece & Set the cutting Tools		
work and the	PC5 Operate the Milling Machine & to perform different operation		
Operation of	PC6 Operate the CNC Milling machine to perform different operations		
Conventional	TO THE RESERVE TO THE		
Milling Machine			
& CNC Milling			
Machine from			
Mould Making			
point of View			
Understand the work	PC7 Grind the Mould Plates & Inserts using Surface Grinding machine		
and the Operation of	PC8 Operate the Cylindrical Grinding & to perform different operation		
Grinding Machine	PC9 Perform Grinding on Guide Pillar & Bush		
from Mould Making point of View			
Knowledge and Unders	standing (K)		
C. Organizational	The user/individual on the job needs to know and understand:		
Context	KA1. Company's code of conduct		
(Knowledge of the	KA2. Different types of products manufactured by the company		
company /	KA3. Functional processes like Procurement, Store management, inventory		
organization and	management, quality management, incentives, personnel management		
its processes)	KA4. Importance of individual's role in the work flow		
,	KA5. Organization culture		
	KA6. Company's reporting structure		
	KA7. Company's documentation policy		
Skills (S) [Optional]			
E. Core Skills/	Reading and Writing Skills		
Generic Skills	The user/ individual on the job needs to know and understand how to:		
	SA5. How to read Drawings, instructions and other text material on product		
	labels, Mould Drawing etc		









		Oral Communication (Listening and Speaking skills)		
		The user/individual on the job needs to know and understand how to:		
		SA6. Discuss task lists, schedules, and work-loads with co-workers		
		SA7. Question internal customers/ Shop floor operator appropriately in order		
		to understand the nature of the problem and make a diagnosis		
		SA8. Avoid using jargon, slang or acronyms when communicating with an		
		operator /fellow subordinates etc. Unless it is required.		
F.	Professional	Decision Making and Problem solving		
	Skills	Detect problems in day to day tasks:		
		SB1. Support operator in using specific problem solving techniques and detailing out the problems		
		SB2. Discuss possible solution with the operator for problem solving.		
		Plan and Organize		
		The user/individual on the job needs to know and understand how to:		
		SB3. Plan and organize the work order and jobs received from the internal		
		customers/ operator.		
		SB4. Organize all process/ equipment manuals so that sorting out		
		Desire to learn and take initiatives		
		The user/individual on the job needs to know and understand how to:		
		SB5. Follow instructions and work on areas of improvement identified		
		SB6. Complete the assigned tasks with minimum supervision		
		SB7. Complete the job defined by the operator within the timelines and quality.		
		Judgments and Critical Thinking		
		The user/individual on the job needs to know and understand how to:		
		SB8. Use common sense and make judgments during day to day basis		
		SB9. Use basic reasoning skills to identify and resolve basic problems		
		SB10. Use intuition to detect any potential problems which could arise during operations.		



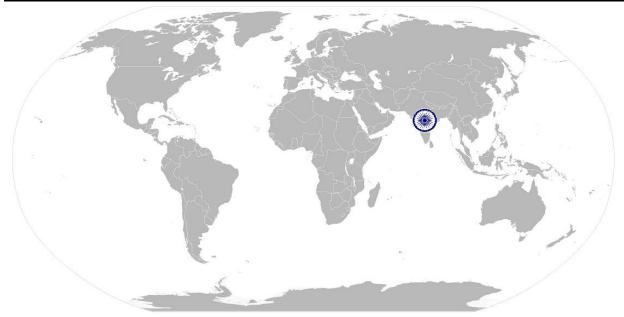






## **NOS Version Control**

NOS Code	RSC/N4704 (CPC/N5805)			
Credits (NSQF)	2 Version number 1.0			
Sector	Rubber	Drafted on	18/05/2016	
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016	
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021	











RSC/N4705 (CPC/N5806): To Study about mould polishing and mould assembly

# National Occupational Standard



## **Overview**

Mould Polishing & Mould Assembly









RSC/N4705 (CPC/N5806): To Study about mould polishing and mould assembly

Unit Code	RSC/N4705 (CPC/N5806)		
Unit Title (Task)	To Study about mould polishing and mould assembly		
Description	This OS unit is about the accuring the required skill in polishing the mould as		
	well as assembly the Mould		
Scope	The role holder will be responsible for		
	Assembly the Mould independently		
	Polish mould parts		
	To identify difficulties while assembly		
Performance Criteria (PC) w.r.t. t	· ·		
Element	Performance Criteria		
Mould Polishing & Assembly	The individual on the job should be able to:		
	PC1 Polish the core and cavity		
	PC2. Polish the mating parts of mould		
	PC3. Identify the mould parts		
	PC4. Assemble the mould independently		
Knowledge and Understanding (R			
Element	Knowledge and Understanding		
A. Organizational	The user/individual on the job needs to know and understand:		
Context (Knowledge of the	KA1. Relevant standards, procedures and policies related to Health,		
company / organization and its	Safety and Environment followed in the company		
processes)	KA2. Emergency handling procedures & hierarchy for escalation		
B. Technical Knowledge	The user/individual on the job needs to know and understand:		
	KB1. Basic knowledge of mould		
	KB2. Basic knowledge of various techniques of polishing		
	KB4. Knowledge of mould parts		
	KB5. Knowledge of Mould assembly		
Skills (S)w.r.t. the scope Element	Skills		
A. Core Skills/ Generic Skills			
A. Core skills/ Generic skills	Writing Skills  The user/ individual on the job needs to know and understand how to:		
	SA1. Write basic level notes and observations		
	Reading Skills		
	The user/individual on the job needs to know and understand how to:		
	SA2. Assembly the mould and what are the parts of mould		
	SA3. Mould handling device		
	Oral Communication (Listening and Speaking skills)		
	The user/individual on the job needs to know and understand how to:		
	SA4. Effectively communicate information to team members		
	SA5. Inform employees in the plant and concerned functions about		
	events, incidents & potential risks observed related to Safety, Health and		
	Environment.		
	SA6. Question operator/ supervisor in order to understand the safety		
	related issues		
	SA7. Attentively listen with full attention and comprehend the		
	information given by the speaker during safety drills and training programs		
B. Professional Skills	Judgmental Thinking		
	The user/individual on the job needs to know and understand how to:		
	SB1. Use common sense and make judgments during day to day basis		
	1 552. See common sense and make judgments during day to day busis		







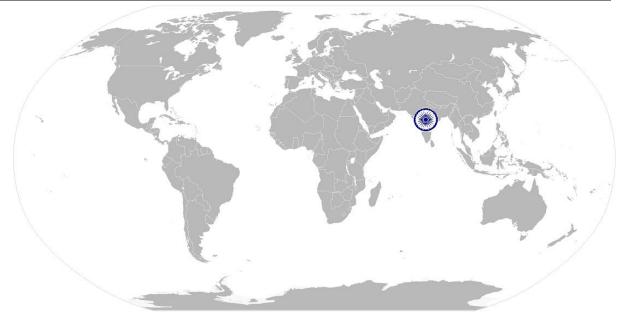


RSC/N4705 (CPC/N5806): To Study about mould polishing and mould assembly

SB2. Use reasoning skills to identify and resolve basic problems

## **NOS Version Control**

NOS Code	RSC/N4705 (CPC/N5806)			
Credits (NSQF)	6 Version number 1.0			
Sector	Rubber	Drafted on	18/05/2016	
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016	
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021	











RSC/N4203 (CPC/N7014): Effective working with others

# National Occupational Standard



## **Overview**

This unit covers general practices that improve effectiveness of working with others in an organizational set-up.









## RSC/N4203 (CPC/N7014): Effective working with others

Unit Code	RSC/N4203 (CPC/N7014)
Unit Title (Task)	Effective working with others
Description	This unit covers basic etiquette and competencies that an individual is required to possess & demonstrate in their behavior & interactions with others at workplace.  These cover areas such as communication, discipline, handling conflict and grievances.
Scope	This unit/task covers the following:
l '	Effective Working with others
Performance Criteria (	PC) w.r.t. the Scope
Element	Performance Criteria
Effective Working with others	<ul> <li>PC1. Follow appropriate communication etiquette while working</li> <li>PC2. Display active listening skills while interacting with others at work</li> <li>PC3. Demonstrate responsible &amp; disciplined behaviors at the workplace</li> <li>PC4. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required</li> <li>PC5. Accurately pass on information to authorized persons who require it &amp; within agreed timescale and confirm its receipt</li> <li>PC6. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible</li> <li>PC7. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks</li> <li>PC8. Escalate grievances and problems to appropriate authority as per</li> </ul>
	procedure to resolve them and avoid conflict.
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand:  KA1. Policies and procedures followed in the company for working with others in an organizational set-up.  KA2. Grievance/ conflict handling mechanism of the company  KA3. Relevant people and their responsibilities within the work area
B. Technical Knowledge	<ul> <li>The user/individual on the job needs to know and understand:</li> <li>KB1. Importance of effective communication in the workplace</li> <li>KB2. Importance of teamwork in organizational and individual success</li> <li>KB3. Barriers to effective communication</li> <li>KB4. Importance of avoiding casual expletives and unpleasant terms while communicating professional circles</li> <li>KB5. Various categories of people that one is required to communicate and co- ordinate within the organization</li> <li>KB6. Importance of discipline for professional success</li> <li>KB7. Importance of ethics for professional success</li> <li>KB8. What constitutes disciplined behavior for a working professional</li> <li>KB9. Common reasons for interpersonal conflict</li> <li>KB10. Importance and ways of managing interpersonal conflict effectively</li> <li>KB11. Importance of developing effective working relationships for professional success</li> <li>KB12. Expressing and addressing grievances appropriately and effectively</li> </ul>





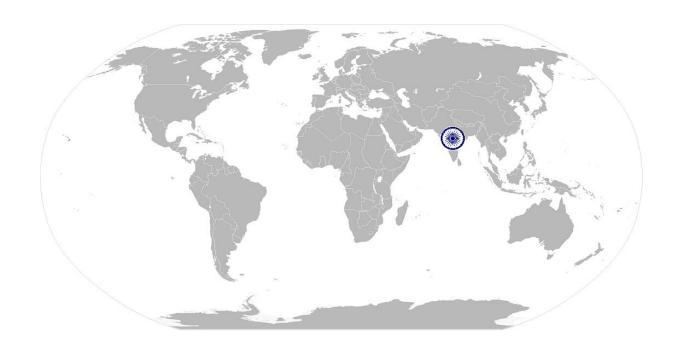




RSC/N4203 (CPC/N7014): Effective working with others

## **NOS Version Control**

NOS Code	RSC/N4303 (CPC/N7014)			
Credits (NSQF)	1.5	Version number	1.0	
Sector	Rubber	Drafted on	18/05/2016	
Sub Sector	Manufacturing / Plastics Processing	Last reviewed on	26/12/2016	
Occupation	Plastics Mould Manufacturing	Next review date	31/12/2021	









#### **CRITERIA FOR ASSESSMENT OF TRAINEES**

Job Role: Machine Operator - Advanced Plastic Mould Manufacturing Assistant

Qualification Pack Code: RSC/Q 4701 (CPC/ Q 5803)
Sector Skill Council: Rubber Skill Development Council

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

	Marks Allocation			
NOS	Performance Criteria	Total	Theory	Practical
RSC/N4101 (CPC/N0411):	PC1. Wear protective clothing/equipment for specific tasks and work conditions	2.5	0.5	2
Maintain basic health and safety	PC2. Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	2.5	0.5	2
practices at the	PC3. Apply good housekeeping practices at all times	2.5	0.5	2
workplace, 5S	PC4. Use the various appropriate fire extinguishers on different types of fires correctly	2.5	0.5	2
	PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.	2.5	0.5	2
	PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous/unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.	2.5	0.5	2
	PC7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages	2.5	0.5	2







	which can potentially harm man/ machine during operations.			
PC8.	•	2.5	0.5	2
PC9.	Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un-necessary items are not cluttering the workbenches or work surfaces.	2.5	0.5	2
PC10	. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions	2.5	0.5	2
PC11	. Follow the technique of waste disposal and waste storage in the proper bins as per SOP	1.5	0.5	1
PC12	. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places	1.5	0.5	1
PC13	. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions	1.5	0.5	1
	<ul> <li>Ensure that areas of material storage areas are not overflowing</li> <li>Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</li> </ul>	1.5	0.5	1
PC16	. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area	1.5	0.5	1
PC17	. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards.	1.5	0.5	1
PC18	. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	1.5	0.5	1
PC19	. Check that the items in the respective areas have been identified as broken or damaged	1.5	0.5	1
PC20	. Follow the given instructions and check for levelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same To avoid spillage, leakage, fire etc.	1.5	0.5	1
PC21	. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions.	1.5	0.5	1
	Sub total	40	10	30
PC1. RSC/N4701	To interact with the head mould maker & understand the mould drawing	7.5	2.25	5.25







(CPC/N5802): To	PC2.	To help in planning the day's Mould	7.5	2.25	5.25
understand basic		making activities based on the Drawing	7.5	2.23	3.23
concepts of	PC3.	To ensure availability of Tools and Raw			
Engineering		materials for production in sufficient	5	1.5	3.5
drawing & Can		quantity as per production	3	1.5	3.3
able to study the		plan/operators instructions.			
Job Drawing/ Blue	PC4.	Clearly understand the Drawing,			
Print &		Dimension & Tolerances of the individual	5	1.5	3.5
Dimensional		part before making it.			
Tolerances job	PC5.	Understand the Assembly Drawing &	5	1.5	3.5
		Detail Drawing of Mould / Mould Parts.	3	1.5	3.5
	PC6.	Ensure that the required raw			
		material/Tools is procured from the	5	1.5	3.5
		store/Tool Crib before starting the work			
	PC7.	Understand the Tools required to execute			
		the required Mould Making Process and	5	1.5	3.5
		ensure that the same is available in shop	3	1.5	5.5
		floor			
	PC8.	If tool is not available collect the tools	5	1.5	3.5
		from tool crib.	3	1.5	3.5
	PC9.	Understand the raw material like steel			
		material for different mould parts from	5	1.5	3.5
		the drawing			
		Sub total	50	15	35
RSC/N4702	PC1	Perform Handling & Using of Different Hand	10	3	7
(CPC/N5803):		tools			
Assist in	PC2	Hands on Skill & Accruing Practices on	10	3	7
performing the		measurement of Mould Parts	10		,
Mould making		Select Different tools for particular job	10	3	7
Process by use of	PC4	Perform to handle the vernier Caliper,	10	3	7
different types of		Micrometer etc.		<u> </u>	,
Hand tools	PC5	Can able to set job on different types of	10	3	7
		vices.			
		Sub total	50	15	35
RSC/N4703	PC1.	Study of Two Plate Injection Mould & Three	20	6	14
(CPC/N5804):		Plate Injection Mould			- '
Study of Types of	PC2.	Study of Mould Feed System, Types of Gate	10	3	7
Plastics Mould	PC3.	Study of Different types of cooling System	10	3	7
	PC4.	Study of Different ejection system of	10	3	7
		Mould.	10	,	,
RSC/N4704		Sub total  To Set the work piece & Set the cutting	50	15	35







(CPC/N5805):	Tools			
Machining	PC2. To Operate the Lathe Machine & to perform		_	_
Practice on	different operation	10	2	8
Conventional &	PC3. To Operate CNC Lathe	10	2	8
<b>CNC Machines</b>	PC4. To Set the work piece & Set the cutting	4.0		
	Tools	10	2	8
	PC5. To Operate the Milling Machine & to	4.0	2	0
	perform different operation	10	2	8
	PC6. To operate CNC Milling machine to perform	10	2	0
	different operations	10	2	8
	PC7. To grind the Mould Plates & Inserts using	10	2	8
	Surface Grinding machine	10	2	٥
	PC8. To Operate the Cylindrical Grinding & to	10	2	8
	perform different operation	10	2	٥
	PC9. To perform Grinding on Guide Pillar & Bush	6.5	1.5	5
	Sub total	86.5	17.5	69
RSC/N4705	PC1. Polish the core and cavity	50	15	35
(CPC/N5806): To	PC2. Polish the mating parts of mould	20	5	15
Study about	PC3. Identify the mould parts	20	5	15
mould polishing &	PC4. Assemble the mould independently	20	5	15
mould assembly	Sub total	110	30	80
RSC/N 4203(CPC/ N 7014)	PC1. Display appropriate communication etiquette while working.	2	1	1
Effective working with others	PC2. Display active listening skills while interacting with others at work	2	1	1
with others	PC3. Demonstrate responsible and disciplined behaviors at the workplace	2	1	1
	PC4. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required.	1.5	0.5	1
	PC5. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt	1.5	0.5	1
	PC6. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible	1.5	0.5	1
	PC7. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks	1.5	0.5	1
	PC8. Escalate grievances and problems to	1.5	0.5	1







appropriate authority as per procedure to resolve them and avoid conflict.			
Sub total	13.5	5.5	8
Total	400	100	300