PAINTS AND COATINGS SKILL COUNCIL

N·S·D·C
National Skill Development Corporation

Contents

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: Air Classification Mill Operator

SECTOR: PAINTS AND COATINGS

SUB-SECTOR: MANUFACTURING

OCCUPATION: Production - Powder Coating

REFERENCE ID: PCS/Q0601

ALIGNED TO: NCO-2004/ NIL

The Air Classification Mill Operator is responsible for operating the air classification mill to produce finely ground powder paint as per company's or customer's specifications.

Brief Job Description: The individual converts the extruded form of powder paint from the previous process, to achieve the desired particle size of powder paint, by configuring the air classification mill in line with the process chart and operating the mill.

Personal Attributes: The job requires the individual to have: good physical strength, ability to work in paint-redolent environment, attention to details, good eyesight, and superior hand-eye coordination.

Job Details

Qualifications Pack Code	PCS/Q0601		
Job Role	Air Classification Mill Operator		
Credits(NSQF)	TBD	Version number	1.0
Sector	Paints and Coatings	Drafted on	17/02/16
Sub-sector	Manufacturing	Last reviewed on	31/03/16
Occupation	Production – Powder Coating	Next review date	31/03/18
NSQC Clearance on	NA		

Job Role	Air Classification Mill Operator Also known as ACM Operator
Role Description	Operating the air classification mill to produce finely ground powder paint as per company's or customer's specifications
NSQF level Minimum Educational Qualifications	4 Preferable 10th Standard
Maximum Educational Qualifications	12th standard
Training (Suggested but not mandatory)	Not Applicable
Minimum Job Entry Age	18 years
Experience	Minimum preferable 2-3 years in as Helper to ACM Operator
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. PCS/N0601 Prepare and operate the air classification mill 2. PCS/N9901 Coordinate with colleagues and/ or customers 3. PCS/N9902 Maintain standards of product/ service quality 4. PCS/N9903 Maintain OH&S standards and follow environmental norms **Optional:** 1. NA
Performance Criteria	As described in the relevant OS units

Definitions

| Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
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 NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational 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 Pack Code	Qualifications Pack Code is a unique reference code that identifies a 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 characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.

Acronyms

Keywords /Terms	Description
NSQF	National Skills Qualifications Framework
QP	Qualification Pack
OS	Occupational Standards
OH&S	Occupational Health and Safety
PPE	Personal Protective Equipment
HR	Human Resources
TBD	To be done

National Occupational Standard
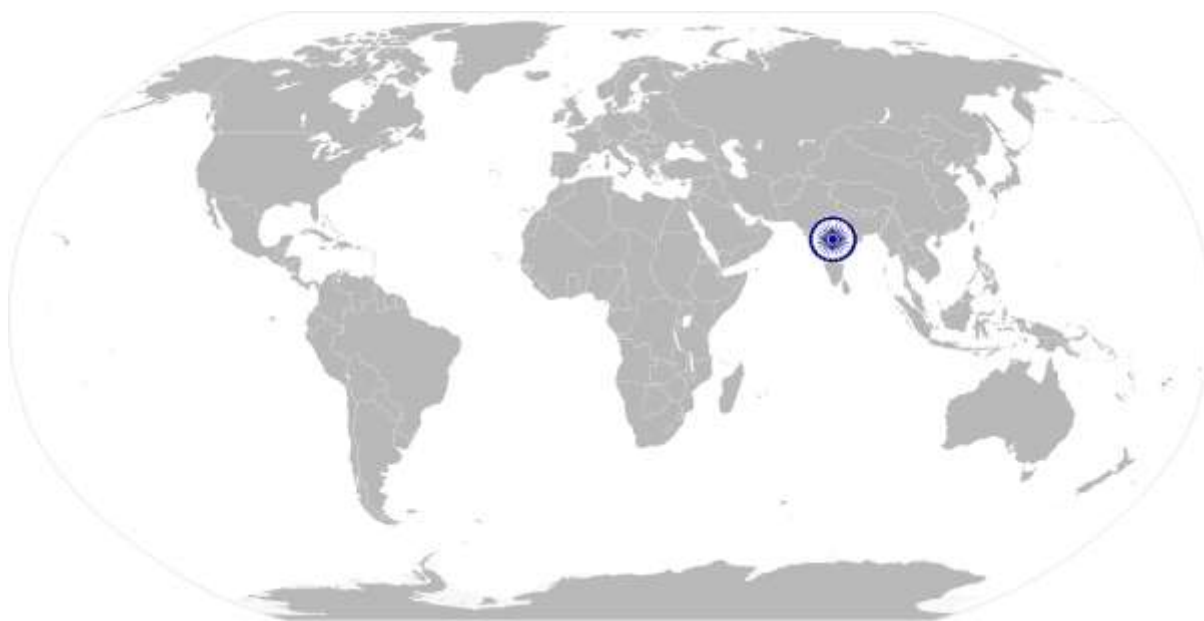
Overview

This unit is about preparing the air classification mill for operation and operating the mill by understanding the process work sheet and calibrating the mill, based on particle size requirements.

PCS/N0601 **Prepare and operate the air classification mill**

Unit Code	PCS /N0601
Unit Title (Task)	**Prepare and operate the air classification mill**
Description	This OS unit is about preparing the air classification mill for operation and operating it, by understanding the process work-sheet and calibrating the mill, based on particle size requirements
Scope	This unit/task covers the following: • Understand the process work or doc-sheet • Calibrate the air classification mill • Visually track the work-in-progress powder paint • Operate the air classification mill • Filter and pack (non-textured powder) • Clean the air classification mill **Range statement:** Air classification mill.

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understanding the process sheet	To be competent, the user/individual must be able to: PC1. receive the process document-sheet from the shift in-charge or production supervisor PC2. understand the overall process flow PC3. understand the specific instructions pertaining to the air classification mill operation PC4. assimilate the materials required PC5. plan for calibrating in line with process requirements and milling machine manual
Calibrating the air classification mill	To be competent, the user/ individual must be able to: PC6. identify the air classification mill controls in the equipment control room or chamber PC7. calibrate the mill by modifying specifications such as temperature, flow, discharge control, etc. PC8. ensure the calibration is in line with the process requirements PC9. ensure the other equipment controls are not modified, once set PC10. notify the shift in-charge or production supervisor about completion of calibration before exiting the equipment control room or chamber
Visual tracking of work-in-progress powder paint process	To be competent, the user/ individual must be able to: PC11. inspect the overall process flow in order to achieve productivity standards PC12. visually assess the flakes from the extruder to check if they are in line with process requirement PC13. notify the shift in-charge / production supervisor in case of any significant deviation from the process requirements

Operating the air classification mill	To be competent, the user/individual must be able to: PC14. operate the mill as per standard operating procedure PC15. ensure the mill operates after scheduled calibration in order to avoid unwanted fineness of powder PC16. inspect if the particles are being ground as required by the process sheet PC17. ensure the ground product moves to the next stage, i.e., filtering process in stipulated time and as per specified quality standards PC18. cease the operation once the batch is completed
Filtering and packing	To be competent, the user/individual must be able to: PC19. ensure that the output is non-textured powder PC20. filter the output appropriately PC21. ensure visually the output is in line with process expectations PC22. assemble packing covers / barrels PC23. fill the same with appropriate quantities of non-textured powder PC24. ensure the area is clean after the filtering and packing
Cleaning the air classification mill	To be competent, the user/individual must be able to: PC25. identify the various parts / chambers of the air classification mill PC26. understand how the mill needs to be handled during cleaning PC27. clean the various parts of the mill like external chamber, grinding chamber, classifier wheel, etc. PC28. ensure the effluents (if any) are contained and disposed off carefully PC29. make the mill ready in working condition for next batch
Knowledge and Understanding (K)	
A. Organisational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policy and work instructions on quality standards, KA2. importance of the individual's role in the workflow KA3. reporting structure KA4. occupational health and safety standards KA5. production area layout and quality standards KA6. cleanliness norms of the organization
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. different types of powder paints, their properties and uses KB2. overall powder paint manufacturing process KB3. standard operating procedures of powder paint manufacturing process KB4. various parts of the air classification mill such as frame, inlets for air and material input, grinding tips and chamber, rotor assembly, drives, coarse and fine outlets, etc. KB5. mechanism of air classification mill operation KB6. sampling and classification methods of particle size including simulation KB7. significance of various process controls, e.g., air velocity and pressure gauges, rejecter elements and aperture, rejecter speed, feed and air ratios KB8. regular maintenance requirements of the mill KB9. mill calibration process and precautions KB10. the significance of use of personal protective equipment while operating the mill

	KB11. the quality of the output of every sub process in the overall powder manufacturing process
	KB12. company's quality standards
	KB13. various types of materials used to clean the air classification mill
	KB14. how to assemble the mill post cleaning
	KB15. disposal techniques
	KB16. the hazards and safety precautions associated with the cleaning process
	KB17. various cleaning techniques
	KB18. the handling of supplies and tools in a safe and sound manner
	KB19. quality standards that have to be maintained while cleaning
	KB20. effects of various resins, additives and other chemicals on mill and how they need to be cleaned
	KB21. filtering techniques
	KB22. packing methodologies for non-textured powder
Skills (S)	
A. Core Skills/ Generic Skills	**Reading Skills**
	The user/individual on the job needs to know and understand how:
	SA1. to read company's work instructions, docs and quality policy
	SA2. to read instruction manuals
	Writing Skills
	The user/individual on the job needs to know and understand how:
	SA3. to maintain the record as per company's policy
	SA4. to note down calibration details
	SA5. to create and maintain cleaning records
	SA6. to create and maintain powdering records
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA7. interact with shift in-charge or production supervisor for smooth workflow
	SA8. convey process related concerns and work status in time for shift in-charge or production supervisor in professionally acceptable language
	SA9. interact with other team members in the production area in order to achieve time and quality related targets smoothly
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how:
	SB1. to calibrate the air classification mill using controls
	SB2. to accept or reject the extruder output
	SB3. to select the chemical/s for effective mill cleaning
	SB4. to undertake mill cleaning using chemicals and manual tools without damaging it
	SB5. to inform shift in charge / production supervisor in time about any problems or hazards
	SB6. to filter and pack non-textured powder in given time

Plan and Organize
The user/individual on the job needs to know and understand how: SB7.   to arrange for materials, tools, logistics, machines required to do the work SB8.   to carry necessary documents as per company's standards SB9.   to prepare for contingencies or rescheduling or special requirements SB10.   to prioritize the work process in order to complete as per agreed schedule SB11.   to work in coordination with co-workers to do the quality work in time SB12.   to manage time so that the overall production flow is not impacted
Customer Centricity
The user/individual on the job needs to know and understand how to: SB13. ensure the completion of work as per the process sheet to adhere to customer expectation
Problem Solving
The user/individual on the job needs to know and understand how to: SB14. resolve work related problems in the powder paint production process by effective communication or escalating to superior SB15. to solve work related problems, e.g., cleaning equipment management SB16. to coordinate with team and customer to find satisfactory solutions to contingences
Analytical Thinking
The user/individual on the job needs to know and understand how to: SB17. interpret process sheet SB18. manage the preparation process so that the grinding may be done in line with process requirements SB19. improve work process to optimise time SB20. use varieties of hand tools like clean spray hose, brush or stick etc. SB21. undertake routine maintenance of hand tools SB22. estimate the time taken for mill cleaning SB23. assess effort required for mill cleaning SB24. assess and estimate the chemicals and tools required for mill cleaning SB25. assemble the mill post cleaning
Critical Thinking
The user/individual on the job needs to know and understand how to: SB26. flag process deviation or delays SB27. achieve specified productivity standards

NOS Version Control

NOS Code	PCS/N0601		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	17/02/16
Industry Sub-sector	Manufacturing	Last reviewed on	31/03/16
Occupation	Production – Powder Coating	Next review date	31/03/18

National Occupational Standard

Overview

This unit is about communicating effectively with superiors, colleagues and customers to achieve a smooth workflow.

PCS/N9901   **Coordinate with colleagues and/ or customers**

Unit Code	PCS/N9901
Unit Title (Task)	Coordinate with colleagues and/or customers
Description	This OS unit is about communicating effectively with superiors, colleagues and customer to achieve a smooth workflow
Scope	This unit/task covers the following: • Interact with superior • Communicate with colleagues • Communicate effectively with customers, if required

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Interacting with superior	To be competent, the user/individual must be able to: PC1. receive job order and instructions from reporting superior PC2. understand the work output requirements, targets, performance indicators and incentives PC3. deliver quality work on time and report any anticipated reasons for delays PC4. escalate unresolved problems or complaints to the relevant senior PC5. communicate maintenance and repair schedule proactively to the superior PC6. receive feedback on work standards PC7. document the completed work schedule and handover to the superior
Communicating with colleagues	To be competent, the user/individual must be able to: PC8. exhibit trust, support and respect to all the colleagues in the workplace PC9. aim to achieve smooth workflow PC10. help and assist colleagues with information and knowledge PC11. seek assistance from the colleagues when required PC12. identify the potential and existing conflicts with the colleagues and resolve PC13. pass on essential information to other colleagues on timely basis PC14. maintain etiquette, use polite language, demonstrate responsible and disciplined behavior to the colleagues PC15. interact with colleagues from different functions, clearly and effectively on all aspects, to carry out the work as a team and understand the nature of their work PC16. put team goals over individual goals and multi task or share work where necessary supporting the colleagues PC17. highlight any errors of colleagues, help to rectify and ensure quality output PC18. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each others performance
Communicating effectively with customers, if required	To be competent, the user/individual must be able to: PC19. ask relevant questions to the customers to identify their needs PC20. possess strong knowledge on the product, services and market PC21. inform the customers on potential costs and hazards PC22. communicate with the customers in a polite, professional and friendly manner PC23. build effective but impersonal relationship with the customers

PCS/N9901   **Coordinate with colleagues and/ or customers**

	PC24. listen actively and have a two way communication
	PC25. be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.
	PC26. understand the customer expectations correctly and provide the appropriate products and services
	PC27. understand the customer dissatisfaction and address or escalate their complaints effectively
	PC28. maintain a positive, sensible and cooperative manner at all times
	PC29. ensure to maintain a proper body language, dress code, gestures and etiquettes towards the customers
	PC30. avoid interrupting the customers while they talk
	PC31. take care to avoid negative questions and statements to the customers
	PC32. inform the customers on any issues or problems before hand and also on the developments involving them
	PC33. ensure prompt response to the customer's voice messages, e-mails, apps, etc.
	PC34. develop good rapport with the customers and promote other products and services
	PC35. seek feedback from the customers on their understanding of what was discussed
	PC36. explain the terms and conditions clearly
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 effective team work at workplace KA2. company's reporting structure KA3. company's documentation policy KA4. company's customer profile KA5. occupational health, safety and environmental standards
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. methods for effective communication with various categories of people and the different departments in the organization KB2. significance of team coordination and productivity targets of the organisation KB3. how to record the job activity as required on various types of documents KB4. how to use computer or smartphone to communicate effectively and productively KB5. significance of helping colleagues with specific issues and problems KB6. importance of meeting quality and time standards as a team KB7. how to practice effective listening and talking KB8. effective use of voice tone and pitch for communication KB9. how to demonstrate ethics and convey discipline to the customers KB10. how to build effective working relationship with mutual trust and respect within the team

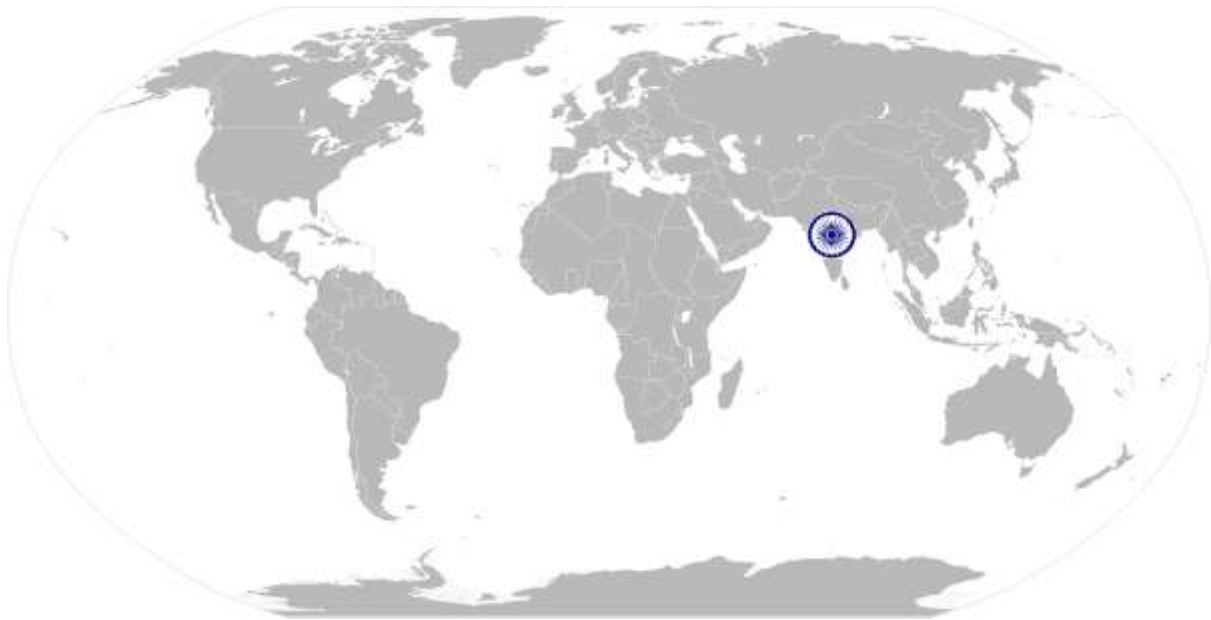**PCS/N9901**   **Coordinate with colleagues and/ or customers**

	KB11. importance of dealing with grievances effectively and in time

Skills (S)	
A. Core Skills/ **Generic Skills**	**Reading Skills**
	The user/individual on the job needs to know and understand how to: SA1. read job sheets, company policy documents and information displayed at the workplace SA2. read notes/comments from the supervisor
	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA3. complete the documentation pertaining to job requirement
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. interact with team members to work efficiently SA5. communicate effectively with superior to achieve smooth workflow SA6. communicate effectively with the customers to build a good rapport with them SA7. use language that the customer or colleague understands SA8. use the communications systems of the company, e.g., telephone, fax, public announcement systems, E-mail and Internet. SA9. use of audio-visual aids to communicate complex issues
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. spot and communicate potential areas of disruptions to work process and report the same SB2. report to supervisor and deal with a colleague individually, depending on the type of concern
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB3. plan communication strategy in order to avoid conflicts and work disruption
	Customer Centricity
	The user/ individual on the job needs to know and understand how to: SB4. practice patient listening, careful talking and paraphrasing in order to avoid misunderstanding
	Problem Solving
	The user/ individual on the job needs to know and understand how to: SB5. coordinate with different departments and multi-task as necessary SB6. contribute to quality of team work and achieve smooth workflow SB7. share work load as required SB8. delegate work in consultation with superior or as necessary instead of allowing work to pile up

PCS/N9901   **Coordinate with colleagues and/ or customers**

	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB9. resolve recurring inter-personal conflicts by clear and two-way dialogue
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB10. improve work processes by interacting with others and adopting best practices

NOS Version Control

NOS Code	PCS/N9901		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	07/03/16
Industry Sub-sector	Manufacturing and Application	Last reviewed on	31/03/16
Occupation	Production – Powder Coating	Next review date	31/03/18

National Occupational Standard
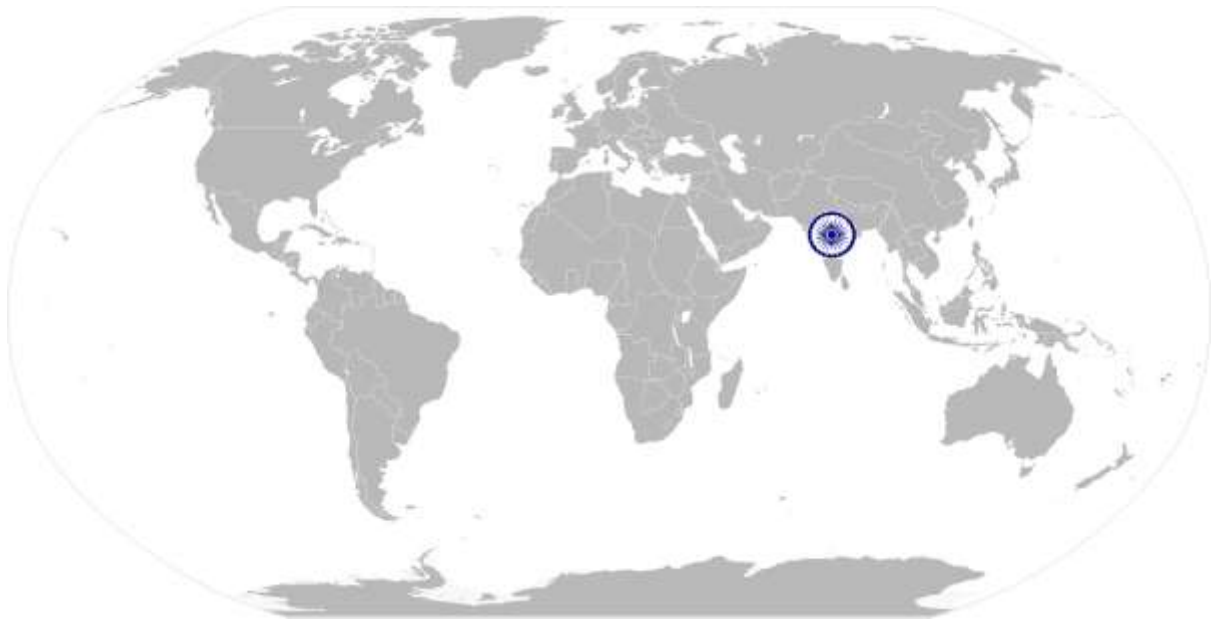
Overview

This unit is about understanding accepted levels of standards of product quality or customer service and executing the designated work in a manner that results in 100% satisfaction.

PCS/N9902   **Maintain standards of product/service quality**

Unit Code	PCS/N9902
Unit Title (Task)	Maintain standards of product/ service quality
Description	This OS unit is about understanding accepted levels of standards of product quality or customer service and executing the designated work in a manner that results in 100% satisfaction.
Scope	This unit covers the following: • Engage with superior or customers to understand their product/service quality requirements • Achieve 100% satisfaction for given quality • Work to fulfil end-customers's expectations

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Engaging with superior or customers to understand product/ service quality requirements	To be competent, the user/individual must be able to: PC1. keep in mind the profiles of customers PC2. understand the target customers and their product/ service quality requirements as defined by the comapny PC3. receive superior's/ customer feedback regularly PC4. aim to build a good connect with the customers through quality product/ service PC5. keep tab on frequent discussions with regular customers on general likes and dislikes in the market, latest trends, customer expectations, etc. PC6. receive regular updates from the clients on current service, complaints, and improvements to be made, etc. PC7. if necessary, compulsively seek customer rating of product/ service in order to help develop a set of regularly improved procedures PC8. demonstrate quality orientation at all level PC9. aim to gain their long lasting loyalty through satisfaction
Achieving 100% customer satisfaction for given quality	To be competent, the user/individual must be able to: PC10. ensure 100% customer satisfaction via product/ service quality PC11. treat the customers fairly and with due respect PC12. focus on executing company's marketing strategies and product development needs PC13. focus on enhancing brand value of company by maintaining or enhancing quality standards
Fulfilling customer requirement	To be competent, the user/ individual must be able to: PC14. ensure that customer expectations are met PC15. learn to read customers' needs and wants PC16. willingly accept and implement new and innovative products and services that help improve customer satisfaction PC17. communicate feedback of customer to senior, especially, the negative feedback PC18. maintain close contact with the customers and focus groups PC19. offer promotional schemes periodically, to improve product satisfaction level

	of the customers
	PC20. weigh the cost of fulfilling unscheduled customer requests, consult with senior and advise the customer on alternatives

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 quality standards policy KA2. company's reporting structure KA3. company's documentation policy for quality compliance KA4. company's end-customer profile
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. significance of maintaining or enhancing company's quality standards KB2. significance of treating the customers with respect and professional way KB3. Quality parameters to be checked KB4. test pass/ fail criteria and acceptable tolerance levels KB5. equipment used for quality tests KB6. importance of gaining customer loyalty KB7. methods of effective and professional engagement of the customers KB8. ways to improve company's customer satisfaction rating KB9. benchmark against prevailing standards of customer satisfaction KB10. standard operating procedure (SOP) KB11. the various common and unscheduled requests made by the customers KB12. significance of being transparent and courteous under all circumstances involving customer interaction without losing composure

| **Skills (S)**	
A. Core Skills/ Generic Skills	**Reading Skills**
	The user/ individual on the job needs to know and understand how to: SA1. read job sheets, company policy documents and information displayed at the workplace about quality standards SA2. read notes/comments from the supervisor
	Writing Skills
	The user/individual on the job needs to know and understand how to: SA3. fill up documentation pertaining to one's role in customer satisfaction
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. interact with team members to achieve quality standards SA5. communicate effectively with customers in field jobs SA6. engage with customer to understand their expectations in field jobs SA7. company standards and effectiveness improvement pattern SA8. resolve customer's concerns satisfactorily within the timeframe stipulated by the company or as agreed with customer or colleague

	SA9. use Internet for updating on current quality related practices SA10. use of audio-visual aids to communicate recurring quality concerns	
B. Professional Skills	**Decision Making**	
	The user/individual on the job needs to know and understand: SB1. how to spot and when to report potential areas of recurring quality concerns SB2. how to address the complaints and handle the dissatisfied the customers	
	Plan and Organize	
	The user/individual on the job needs to know and understand: SB3. how to plan workflow to achieve/ deliver 100% quality in the given time and with the given equipment	
	Customer Centricity	
	The user/individual on the job needs to know and understand: SB4. how to earn full customer loyalty	
	Problem Solving	
	The user/individual on the job needs to know and understand how to: SB5. coordinate with different departments in order to service the customer better SB6. contribute to quality of team work and achieve smooth workflow SB7. share work load as required	
	Analytical Thinking	
	The user/individual on the job needs to know and understand how to: SB8. communicate new product quality standards to different stakeholders in the market and train colleagues for quality, if required	
	Critical Thinking	
	The user/individual on the job needs to know and understand how to: SB9. improve work processes by interacting with customers and adopting best practices SB10. resolve recurring inter-personal or system related conflicts with colleagues that hinder customer service SB11. constructively act upon on any problems pointed out by the customers SB12. resolve personality clashes effectively	

NOS Version Control

NOS Code	PCS/N9902		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	07/03/16
Industry Sub-sector	Manufacturing and Application	Last reviewed on	31/03/16
Occupation	Production – Powder Coating	Next review date	31/03/18
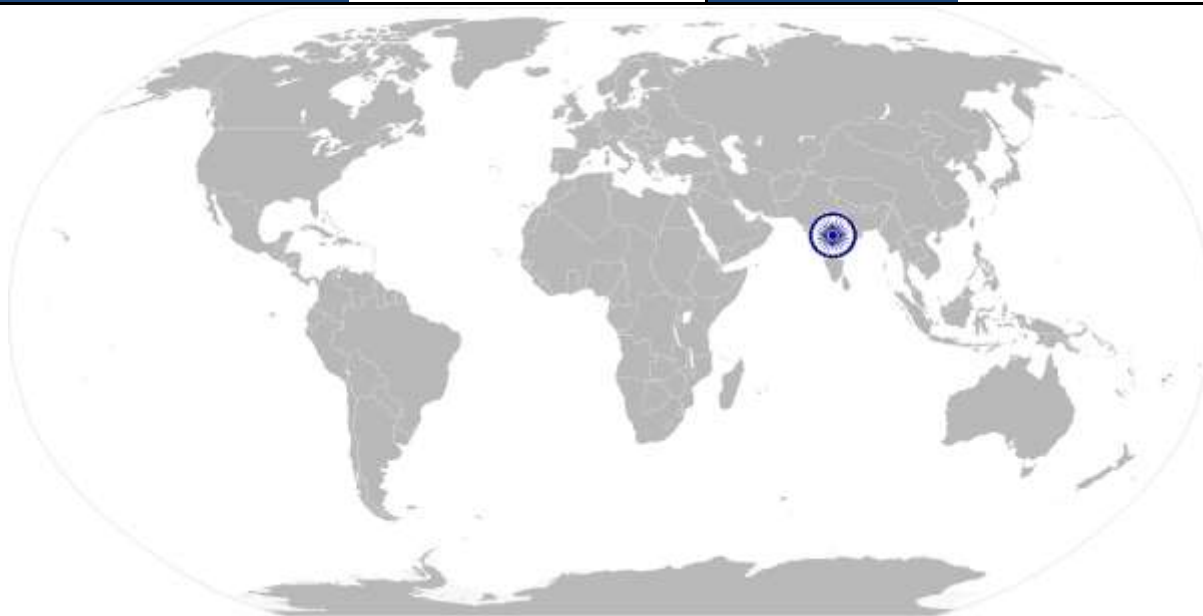
PCS/N9903   Maintain OH&S standards and follow environmental norms

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National Occupational Standard
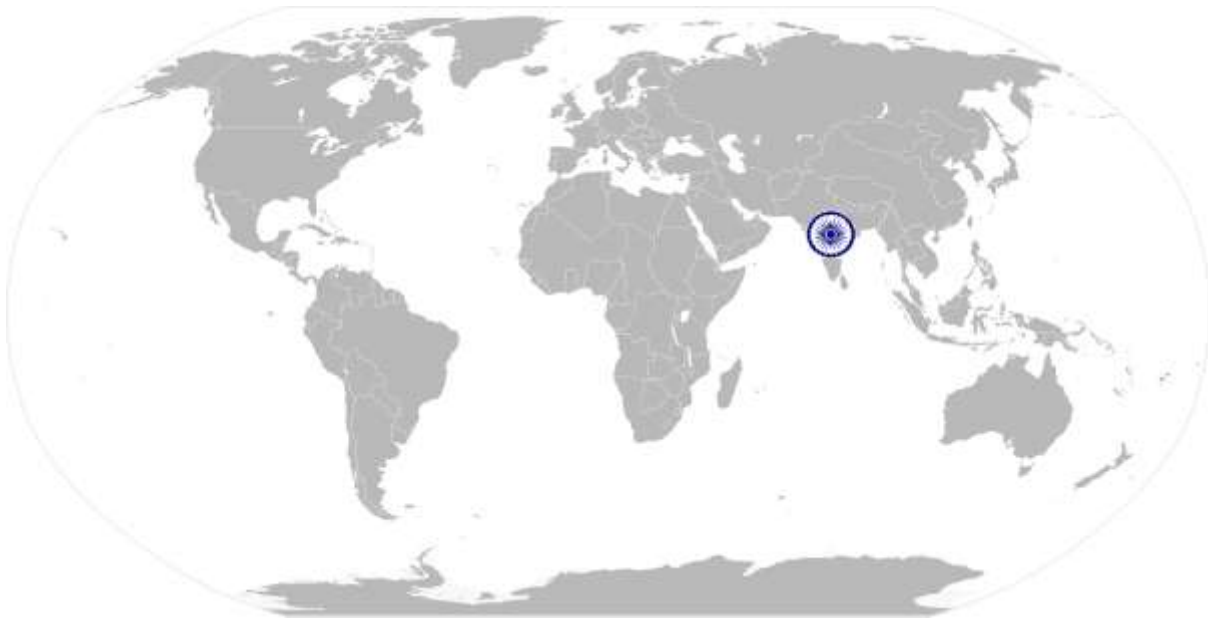
Overview

This unit is about complying with workplace health, hygiene, safety and environmental standards to have a hazard-free environment and avoid downtime. It is also about following government laid norms for waste treatment and disposal.

PCS/N9903   **Maintain OH&S standards and follow environmental norms**

Unit Code	PCS/N9903
Unit Title (Task)	Maintain OH&S standards and follow environmental norms
Description	This OS unit is about complying with workplace health, hygiene, safety and environmental standards to have a hazard-free environment and avoid downtime. It is also about following government laid norms for waste treatment and disposal
Scope	This unit/task covers the following: • Take precautionary measures to avoid work hazards and environmental damage • Follow standard health, safety and environmental policies and procedures • Use safety tools and/ or personal protective equipments • Achieve health, safety and environmental standards

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Taking precautionary measures to avoid health, safety and environmental hazards	To be competent, the user/individual must be able to: PC1. assess the various health, safety and environmental hazards in the work areas PC2. take necessary steps to eliminate or minimize the hazards PC3. analyze the causes of accidents at the workplace PC4. suggest measures to prevent such accidents from taking place PC5. take preventive measures to avoid risk of burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc. PC6. suggest methods to improve the existing safety procedures at the workplace PC7. dispose waste in the designated areas safely as per company's policies and rules PC8. maintain appropriate ventilation in the rooms while there is more exposure to paint vapours PC9. avoid dumping unused cans to safeguard the environment
Following standard health, safety and environmental policies and procedure	To be competent, the user/individual must be able to: PC10. be aware of the locations of fire extinguishers, emergency exits, etc. PC11. practice correct emergency procedures PC12. check and review the storage areas frequently PC13. stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas PC14. ensure to be safe while handling materials, tools, acids, chemicals, equipment, etc. PC15. store the chemicals and acids in a well-ventilated and locked areas with warning signs displayed PC16. ensure safe techniques while moving furniture and fixtures PC17. ensure to reduce risk of injury from use of electrical tools PC18. read the manufacturer's manual carefully before use of any equipment PC19. unplug the electrical equipment before performing maintenance PC20. keep the floors free from oil, water and grease to avoid slippery surface PC21. use rubber mats in the places where floors are constantly wet PC22. ensure safety from injuries of cuts to loss of fingers, while handling sharp

	hazardous tools and equipment
	PC23. use flat surfaces, secure holding and protective wear while using such sharp tools
	PC24. use health, safety and environmental protection practices for storing, cleaning, and maintaining tools, equipment, and supplies
	PC25. practice ergonomic lifting, bending, or moving equipment and supplies
	PC26. identify the requirement for maintaining environmental norms
	PC27. comply with the environmental safety norms while on work to prevent accidents and health hazards
	PC28. follow company policies and rules regarding use of hazardous materials to avoid health, safety and environmental impacts caused by them
Using safety tools or Personal Protective Equipment	To be competent, the user/individual must be able to: PC29. ensure the employees have access to first aid kit when needed PC30. ensure all equipment and tools are stored and maintained properly and safe to use PC31. ensure to use personal protective equipment and safety gear such as gloves, mask, headwear, footwear, glasses, goggles, etc. for specific tasks and work conditions where required PC32. ensure to display safety signs at places where necessary for people to be cautious PC33. ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc. PC34. ensure availability of general health and safety equipment such as fire extinguishers, first aid equipment, safety equipment, clothing, safety installations such as fire exits, exhaust fans, etc.
Achieving health, safety and environmental standards	To be competent, the user/individual must be able to: PC35. document all the first aid treatments, inspections, etc., conducted to keep track of the safety measures undertaken PC36. document all the environmental hazards caused and the measures undertaken to comply with the established safety procedures of the workplace PC37. report to the supervisor on any problems and hazards identified and any breach of environmental procedures. PC38. ensure zero accident at workplace PC39. adhere to safety standards and ensure no material damage PC40. take necessary action and correct any environmental hazards caused
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 health, safety and environmental procedures at the workplace KA2. company's reporting structure KA3. company's documentation policy KA4. Occupational health, safety and environmental standards.

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B. Technical Knowledge	The individual on the job needs to know and understand:
	KB1. the purpose and usage of protective gears such as gloves , protective goggles, masks, etc. while working
	KB2. use of first aid at workplace
	KB3. significance of accidental risks to the worker and productivity loss
	KB4. reporting procedure or heirarchy for signs of damage and potential hazards
	KB5. methods to minimize accidental risks
	KB6. safe handling of chemicals, acids, etc. for cleaning
	KB7. material handling procedure
	KB8. standard operating procedure for safety drills and equipment maintenance
	KB9. precautionary activities to be followed for work place safety
	KB10. operation of tools and electrical equipment
	KB11. emergency procedures to be followed in case of an mishap such as fire, accidents, etc.
	KB12. government and company's environmental norms
	KB13. solid, liquid and gaseous waste disposal, treatment norms and equipment
	KB14. necessary action to be taken for the hazards identified
	KB15. methods to minimize environmental hazards
	KB16. precautionary activities to be followed to minimize environmental impacts

Skills (S)

A. Core Skills/ Generic Skills	**Reading Skills**
	The user/individual on the job needs to know and understand how to:
	SA1. read and interpret the relevant organisation policies, procedures and diagrams that identify health, safety and safe environmental practices.
	SA2. read job sheets, company policy documents and information displayed at the workplace for health, safety and environment.
	SA3. read notes/comments from the supervisor
	Writing Skills
	The user/individual on the job needs to know and understand how to:
	SA4. fill up documentation related to health, safety and environmental standards, if required
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA5. verbally report health, safety and environmental hazards and poor organisation practice.
	SA6. communicate to the supervisor about the work health, safety and environmental issues
	SA7. receive instructions from supervisor on minimizing the risks
	SA8. communicate with co-workers about the precautions to be taken for hazards free work

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B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. take preventive measures for the identified hazards SB2. select appropriate hand tools and personal protection equipment SB3. identify first aid needs in case of an injury
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB4. incorporate elements of health, safety and environment in daily work practices
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB5. ensure targeted product/ service delivery by practicing stipulated standards of occupational health safety and environmental measures
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB6. take care of personal and equipment protection SB7. identify the hazards and suggest possible solutions
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB8. use safety equipment such as fire extinguisher during fire accidents SB9. store chemicals and tools in a safe way SB10. use tools and equipment without causing any injury to fellow workers SB11. analyze the seriousness of the hazards
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB12. evolve smooth workflow by avoiding hazards at workplace SB13. evaluate and apply the possible solutions for the hazards, as necessary

NOS Version Control

NOS Code	PCS/N9903		
Credits(NSQF)	TBD	Version number	1.0
Industry	Paints and Coatings	Drafted on	07/03/16
Industry Sub-sector	Manufacturing and Application	Last reviewed on	31/03/16
Occupation	Production - Powder Coating	Next review date	31/03/18
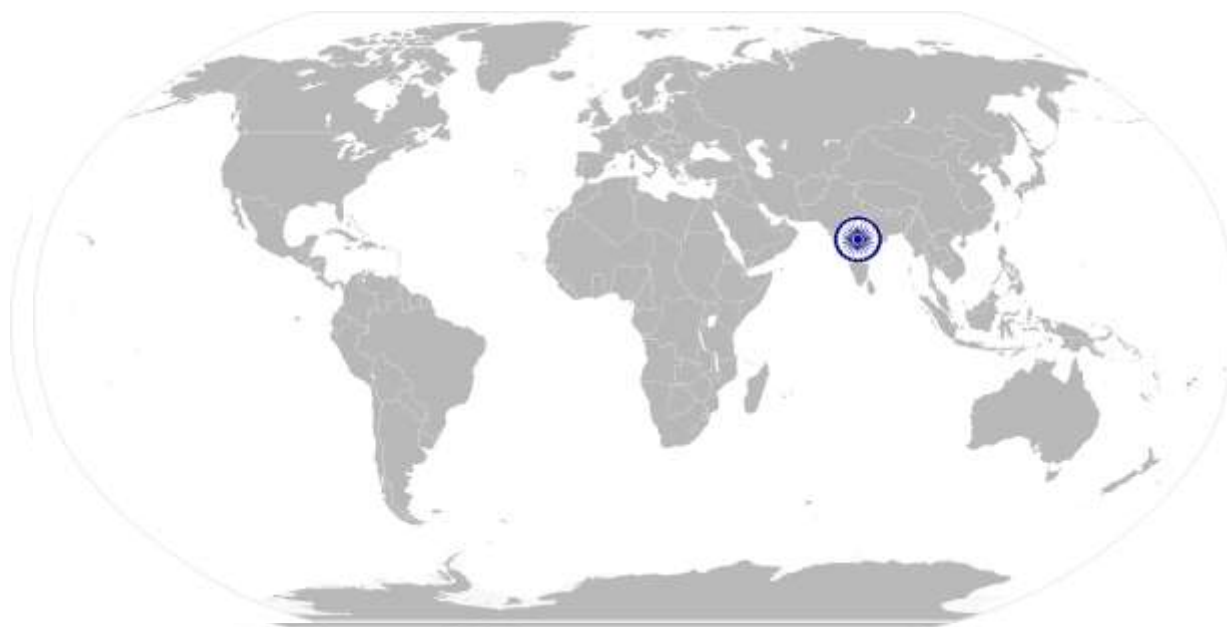
Annexure

Nomenclature for QP and NOS

Qualifications Pack

9 characters
[ABC]/ Q 0101

[Insert 3 letter codes for SSC]

Q denoting Qualifications Pack

QP number (2 numbers)

Occupation (2 numbers)
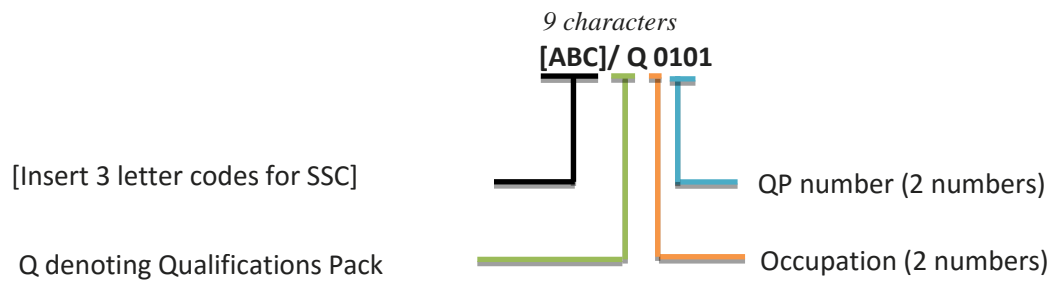
Occupational Standard

An example of NOS with 'N'

9 characters
[ABC] /N0101

[Insert 3 letter code for SSC]

N denoting National Occupational Standard

OS number (2 numbers)

Occupation (2 numbers)
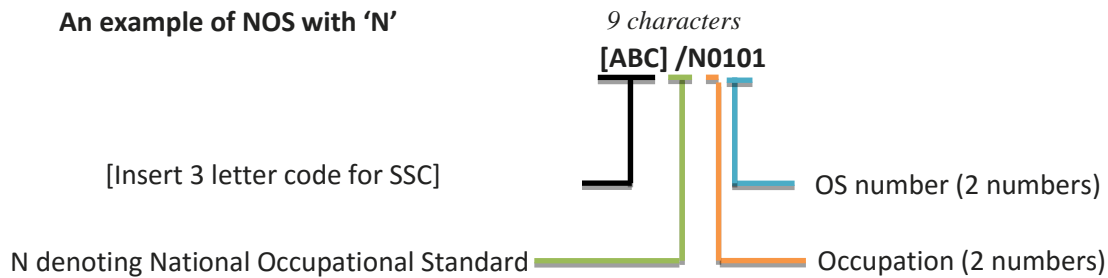
The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Manufacturing	01 - 49
Application	50 - 59
Unused	60 - 97
Generic occupation	98 - 99

Sequence	Description	Example
Three letters	Industry name	PCS
Slash	/	/
Next letter	Whether **Q**P or **N**OS	Q / N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

ASSESSMENT CRITERIA

Job Role : Air Classification Mill Operator **Qualification Pack** : PCS/Q0601 **Sector Skill Council** : Paints and Coatings			

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 unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack , every trainee should score a minimum of 60% 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.

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
PCS/N0601 Prepare and operate the air classification mill	PC1.　receive the process document-sheet from the shift in-charge or production supervisor	50	1.5	0.5	1.0
	PC2.　understand the overall process flow		1.5	0.5	1.0
	PC3.　understand the specific instructions pertaining to the air classification mill operation		1.5	0.5	1.0
	PC4.　assimilate the materials required		1.5	0.5	1.0
	PC5.　plan for calibrating in line with process requirements and milling machine manual		1.5	0.5	1.0
	PC6.　identify the air classification mill controls in the equipment control room or chamber		1.5	0.5	1.0
	PC7.　calibrate the mill by modifying specifications such as temperature, flow, discharge control, etc.		1.5	0.5	1.0
	PC8.　ensure the calibration is in line with the process requirements		1.5	0.5	1.0
	PC9.　ensure the other equipment controls are not modified, once set		1.5	0.5	1.0
	PC10.　notify the shift in-charge or production supervisor about completion of calibration before exiting the equipment control room or chamber		1.5	0.5	1.0
	PC11.　inspect the overall process flow in order to achieve productivity standards		1.5	0.5	1.0

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
	PC12. visually assess the flakes from the extruder to check if they are in line with process requirement		1.5	0.5	1.0
	PC13. notify the shift in-charge / production supervisor in case of any significant deviation from the process requirements		1.5	0.5	1.0
	PC14. operate the mill as per standard operating procedure		2.0	0.5	1.5
	PC15. ensure the mill operates after scheduled calibration in order to avoid unwanted fineness of powder		2.5	1.0	1.5
	PC16. inspect if the particles are being ground as required by the process sheet		2.5	1.0	1.5
	PC17. ensure the ground product moves to the next stage, i.e., filtering process in stipulated time and as per specified quality standards		2.5	1.0	1.5
	PC18. cease the operation once the batch is completed		2.5	1.0	1.5
	PC19. ensure that the output is non-textured powder		2.5	1.0	1.5
	PC20. filter the output appropriately		2.0	0.5	1.5
	PC21. ensure visually the output is in line with process expectations		2.0	0.5	1.5
	PC22. assemble packing covers / barrels		1.5	0.5	1.0
	PC23. fill the same with appropriate quantities of non-textured powder		1.5	0.5	1.0
	PC24. ensure the area is clean after the filtering and packing		1.5	0.5	1.0
	PC25. identify the various parts / chambers of the air classification mill		1.5	0.5	1.0
	PC26. understand how the mill needs to be handled during cleaning		1.5	0.5	1.0
	PC27. clean the various parts of the mill like external chamber, grinding chamber, classifier wheel, etc.		1.5	0.5	1.0
	PC28. ensure the effluents (if any) are contained and disposed off carefully		1.5	0.5	1.0
	PC29. make the mill ready in working condition for next batch		1.5	0.5	1.0
	POINTS		**50**	**17**	**33**
	TOTAL POINTS		**50**		

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
PCS/N9901 Coordinate with colleagues and/or customers	PC1. receive job order and instructions from reporting superior	50	0.5	0.0	0.5
	PC2. understand the work output requirements, targets, performance indicators and incentives		2.0	0.5	1.5
	PC3. deliver quality work on time and report any anticipated reasons for delays		2.0	0.5	1.5
	PC4. escalate unresolved problems or complaints to the relevant senior		2.0	0.5	1.5
	PC5. communicate maintenance and repair schedule proactively to the superior		2.0	0.5	1.5
	PC6. receive feedback on work standards		1.0	0.0	1.0
	PC7. document the completed work schedule and handover to the superior		2.0	0.5	1.5
	PC8. exhibit trust, support and respect to all the colleagues in the workplace		1.0	0.25	0.75
	PC9. aim to achieve smooth workflow		2.0	0.5	1.5
	PC10. help and assist colleagues with information and knowledge		1.0	0.0	1.0
	PC11. seek assistance from the colleagues when required		1.0	0.25	0.75
	PC12. identify the potential and existing conflicts with the colleagues and resolve		1.0	0.25	0.75
	PC13. pass on essential information to other colleagues on timely basis		1.0	0.0	1.0
	PC14. maintain the etiquette, use polite language, demonstrate responsible and disciplined behaviours to the colleagues		2.0	0.5	1.5
	PC15. interact with colleagues from different functions clearly and effectively on all aspects to carry out the work among the team and understand the nature of their work		1.0	0.25	0.75
	PC16. put team over individual goals and multi task or share work where necessary supporting the colleagues		2.0	0.0	2.0
	PC17. highlight any errors of colleagues, help to rectify and ensure quality output		1.0	0.25	0.75
	PC18. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each other's performance		1.0	0.0	1.0
	PC19. ask more questions to the customers and identify their needs		1.0	0.25	0.75
	PC20. possess strong knowledge on the product, services and market		2.0	0.5	1.5
	PC21. brief the customers clearly on		1.0	0.25	0.75

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
	potential costs and hazards				
	PC22. communicate with the customers in a polite, professional and friendly manner		1.0	0.25	0.75
	PC23. build effective but impersonal relationship with the customers		0.5	0.25	0.25
	PC24. ensure the appropriate language and tone are used with customers		1.0	0.25	0.75
	PC25. listen actively and have a two way communication		1.0	0.25	0.75
	PC26. be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.		1.0	0.25	0.75
	PC27. understand the customer expectations correctly and provide the appropriate products and services		2.0	0.5	1.5
	PC28. understand the customer dissatisfaction and address or escalate their complaints effectively		2.0	0.5	1.5
	PC29. maintain a positive, sensible and cooperative manner all time		1.0	0.25	0.75
	PC30. ensure to maintain a proper body language, dress code, gestures and etiquettes towards the customers		1.0	0.25	0.75
	PC31. avoid interrupting the customers while they talk		1.0	0.0	1.0
	PC32. ensure to avoid negative questions and statements to the customers		1.0	0.0	1.0
	PC33. inform the customers on any issues or problems before hand and also on the developments involving them		2.0	0.5	1.5
	PC34. ensure to respond back to the customer immediately for their voice messages, e-mails, apps, etc.		1.0	0.0	1.0
	PC35. develop good rapport with the customers and promote other products and services		2.0	0.5	1.5
	PC36. seek feedback from the customers on their understanding to what was discussed		1.0	0.0	1.0
	PC37. explain the terms and conditions clearly		2.0	0.5	1.5
	POINTS		**50**	**10**	**40**
	TOTAL POINTS				**50**

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
PCS/N9902 Maintain standards of product/	PC1. keep in mind the profiles of expected customers	50	2.0	0.5	1.5
	PC2. understand the target customers and their product/ service quality requirements as		3.0	0.5	2.5

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
service quality	defined by the company				
	PC3. receive superior's/ customer feedback regularly		2.0	0.0	2.0
	PC4. aim to build a good connect with the customers through quality product/ service		2.0	0.5	1.5
	PC5. keep tab on frequent discussions with regular customers on general likes and dislikes in the market, latest trends, customer expectations, etc.		2.0	0.5	1.5
	PC6. receive updates on regular feedbacks from the clients on current service, complaints, and improvements to be made, etc.		2.0	0.5	1.5
	PC7. if necessary, compulsively seek customer rating of product/ service in order to help develop a set of regularly improved procedures		2.0	0.5	1.5
	PC8. demonstrate quality orientation at all level		4.0	1.5	2.5
	PC9. aim to gain their long lasting loyalty through satisfaction		3.0	1.0	2.0
	PC10. ensure 100% customer satisfaction via product/ service quality		3.0	0.5	2.5
	PC11. treat the customers fairly and with due respect		3.0	0.5	2.5
	PC12. focus on executing company's marketing strategies and product development needs		3.0	1.0	2.0
	PC13. focus on enhancing brand value of company by maintaining or enhancing quality standards		3.0	1.0	2.0
	PC14. ensure that customer expectations are met		2.0	0.5	1.5
	PC15. learn to read customers' needs and wants		2.0	0.5	1.5
	PC16. willingly accept and implement new and innovative products and services that help improve customer satisfaction		3.0	1.0	2.0
	PC17. communicate feedback of customer to senior, especially, the negative feedback		2.0	0.5	1.5
	PC18. maintain close contact with the customers and focus groups		2.0	0.5	1.5
	PC19. offer promotions to improve product satisfaction level to the customers periodically		3.0	1.0	2.0
	PC20. weigh the cost of fulfilling unscheduled customer requests, consult with senior and advise the customer on alternatives		2.0	0.5	1.5
	POINTS		**50**	**13**	**37**

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
	TOTAL POINTS				**50**

	Performance Criteria	**Total Marks (200)**	**Out of**	**Theory**	**Skills Practical**
PCS/N9903 Maintain O&HS standards and follow environmental norms	PC1. assess the various health, safety and environmental hazards in the work areas	50	1.5	0.4	1.1
	PC2. take necessary steps to eliminate or minimize the hazards		1.0	0.4	0.6
	PC3. analyze the causes of accidents at the workplace		1.5	0.4	1.1
	PC4. suggest measures to prevent such accidents from taking place		1.5	0.4	1.1
	PC5. take preventive measures to avoid risk of burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc.		1.5	0.4	1.1
	PC6. suggest methods to improve the existing safety procedures at the workplace		1.5	0.4	1.1
	PC7. dispose waste in the designated areas safely as per company's policies and rules		1.5	0.4	1.1
	PC8. maintain appropriate ventilation in the rooms while there is more exposure to paint vapours		1.0	0.4	0.6
	PC9. avoid dumping unused cans to safeguard the environment		1.0	0.0	1.0
	PC10. be aware of the locations of fire extinguishers, emergency exits, etc.		1.0	0.4	0.6
	PC11. practice correct emergency procedures		1.5	0.4	1.1
	PC12. check and review the storage areas frequently		1.5	0.4	1.1
	PC13. stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas		1.5	0.4	1.1
	PC14. ensure to be safe while handling materials, tools, acids, chemicals, equipment, etc.		1.0	0.4	0.6
	PC15. store the chemicals and acids in a well-ventilated and locked areas with warning signs displayed		1.5	0.4	1.1
	PC16. ensure safe techniques while moving furniture and fixtures		1.5	0.4	1.1
	PC17. ensure to reduce risk of injury from use of electrical tools		1.5	0.4	1.1
	PC18. read the manufacturer's manual carefully before use of any equipment		1.0	0.0	1.0

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
	PC19. unplug the electrical equipment before performing maintenance		1.0	0.4	0.6
	PC20. keep the floors free from oil, water and grease to avoid slippery surface		1.0	0.4	0.6
	PC21. use rubber mats in the places where floors are constantly wet		1.0	0.0	1.0
	PC22. ensure safety from injuries of cuts to loss of fingers, while handling sharp hazardous tools and equipment		1.5	0.4	1.1
	PC23. use flat surfaces, secure holding and protective wear while using such sharp tools		1.5	0.4	1.1
	PC24. use health, safety and environmental protection practices for storing, cleaning, and maintaining tools, equipment, and supplies		1.5	0.4	1.1
	PC25. practice ergonomic lifting, bending, or moving equipment and supplies		1.5	0.4	1.1
	PC26. identify the requirement for maintaining environmental norms		1.0	0.4	0.6
	PC27. comply with the environmental safety norms while on work to prevent accidents and health hazards		1.0	0.4	0.6
	PC28. follow company policies and rules regarding use of hazardous materials to avoid health, safety and environmental impacts caused by them		1.0	0.4	0.6
	PC29. ensure the employees have access to first aid kit when needed		1.0	0.0	1.0
	PC30. ensure all equipment and tools are stored and maintained properly and safe to use		1.0	0.4	0.6
	PC31. ensure to use personal protective equipment and safety gear such as gloves, mask, headwear, footwear, glasses, goggles, etc. for specific tasks and work conditions where required		1.5	0.4	1.1
	PC32. ensure to display safety signs at places where necessary for people to be cautious		1.5	0.4	1.1
	PC33. ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc.		1.5	0.4	1.1
	PC34. ensure availability of general health and safety equipment such as fire extinguishers, first aid equipment, safety equipment, clothing, safety installations such as fire exits, exhaust fans, etc.		1.5	0.4	1.1

	Performance Criteria	Total Marks (200)	Out of	Theory	Skills Practical
	PC35. document all the first aid treatments, inspections, etc., conducted to keep track of the safety measures undertaken		1.0	0.4	0.6
	PC36. document all the environmental hazards caused and the measures undertaken to comply with the established safety procedures of the workplace		1.0	0.0	1.0
	PC37. report to the supervisor on any problems and hazards identified and any breach of environmental procedures.		1.0	0.4	0.6
	PC38. ensure zero accident at workplace		1.0	0.4	0.6
	PC39. adhere to safety standards and ensure no material damage		1.0	0.4	0.6
	PC40. take necessary action and correct any environmental hazards caused		1.0	0.4	0.6
	POINTS		**50**	**14**	**36**
	TOTAL POINTS			**50**	
	GRAND TOTAL	**200**			