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

Contents

Introduction

Qualifications Pack- Pneumatic Tyre Moulding Operator

SECTOR: RUBBER INDUSTRY

SUB-SECTOR: Tyre

OCCUPATION: Moulding/ Curing

REFERENCE ID: RSC/Q0211

ALIGNED TO: NCO-2015/8141.1800

Brief Job Description: The pneumatic tyre moulding operator is responsible for loading a green tyre in a curing press fitted with proper tyre mould, operate the press to cure/vulcanize the tyre, extract the cured tyre from mould. Press, inspect and place the tyre on PCI ring for cooling under specified air pressure .

Personal Attributes: This job requires the individual to work independently and be comfortable in performing laborious work. He should be result oriented and positive in attitude. The individual must be willing to work in the factory environment.

Job Details

Qualifications Pack Code	**RSC/Q0211**		
Job Role	**Pneumatic Tyre Moulding Operator**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Sector	**Rubber**	**Drafted on**	**29/04/2016**
Sub-sector	**Tyre**	**Last reviewed on**	**17/05/2017**
Occupation	**Moulding/Curing**	**Next review date**	**17/05/2021**
NSQC Clearance on			

Job Role	**Pneumatic Tyre Moulding Operator**
Role Description	The pneumatic tyre moulding operator is responsible for loading a green tyre in a curing press fitted with proper tyre mould, operate the press to cure/vulcanize the tyre, extract the cured tyre from mould. Press, inspect and place the tyre on PCI ring for cooling under specified air pressure.
NSQF level **Minimum Educational Qualifications*** **Maximum Educational Qualifications***	4 Class VIIIth Pass
Prerequisite License or Training	NA
Minimum Job Entry Age	18 years
Experience	The employee has worked as a semi-skilled helper for minimum 6 months. (Preferred)
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. RSC/N1101 - Prepare pneumatic tyre moulding machine 2. RSC/N1102 - Perform pneumatic tyre moulding operation 3. RSC/N1103 - Perform post - pneumatic tyre moulding operation activities 4. RSC/N5001 - Carry out housekeeping in rubber product manufacturing 5. RSC/N5002 - Carry out reporting and documentation 6. RSC/N5003 - Carry out quality checks 7. RSC/N5004 - Carry out problem identification and escalation
Performance Criteria	As described in the relevant OS units

Definitions

Keywords /Terms	Description
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.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
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.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills or 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 OS , these include communication related skills that are applicable to most job roles.

National Occupational Standard

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Overview

This unit is about preparing the tyre curing press and green tyre for moulding operation.

National Occupational Standard

Unit Code	RSC/N1101
Unit Title (Task)	**Prepare pneumatic tyre moulding machine**
Description	This unit is about preparing the tyre curing press and green tyre for moulding / curing operation
Scope	This unit/task covers the following: • Prepare the tyre moulding press, equipments and mould • Preparing the green tyre and collect raw material for moulding operation • Ensure housekeeping and safety in work area

Performance Criteria (PC) w.r.t. the Scope	
Element	**Criteria**
Equipment readiness	To be competent, the user/individual on the job must be able to PC1. Ensure that press is clean PC2. Blow air to remove any condensate and foreign matter in the mould cavity PC3. Ensure that the correct mould is loaded PC4. Set parameters for the Bag-O-Matic /airbag type Presses (press timer, steam pressure and cure cycle steps), as per job card PC5. Apply mould release agent appropriately PC6. Warm up the press PC7. Follow equipment preparation process as per company requirements PC8. Ensure that no delays are caused as a result of improper preparation and failure to identify problems PC9. Ensure the mainline gauges and pressures are as per specification PC10. Ensure the calibration status of all measuring equipment and instruments and fit to use per quality standards followed by the plant
Raw material appropriateness	PC11. Collect all green tyres required for the batch PC12. Ensure painting of green tyre paintings at inner and outer (if any) has been done properly with no puddles . PC13. Match the batch code of each green tyre with the batch code on the job schedule given by the planning department PC14. Ensure that each material is in the correct quantity PC15. Ensure, by visual inspection, that green tyre is of desired quality (free of contamination etc.) PC16. Ensure that no delays are caused as a result of improper preparation and failure to identify problems
Housekeeping & Safety	PC17. Ensure housekeeping in moulding area PC18. Use hand gloves while working on the moulding press to avoid contact with hot moulds PC19. Ensure that he does not put his hand inside the press while the press is closing PC20. Adhere to all other safety norms (like wearing shoes, gloves, safety goggles etc) PC21. Comply with health, safety, environment guidelines, regulations etc in accordance with organizational SOP

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Operation of Tyre curing Press , both BOM and Platen type KA2. Implications of poorly prepared equipment, power failure etc KA3. Importance of identifying non-conforming material and storage of the same KA4. Risk and impact of not following defined procedures/work instructions KA5. Escalation matrix for reporting identified problems KA6. Types of documentation in organization and importance of the same KA7. Records to be maintained and implications of non-maintenance of the same KA8. Importance of housekeeping & good shopfloor practices KA9. Health, Safety and Environment guidelines, legislation and regulations as applicable KA10. Impact of poor practices on health, safety and environment KA11. Potential hazards and actions to minimize the same KA12. Escalation matrix and escalation procedure for reporting hazards
B. Technical Knowledge	To be competent, the user/individual on the job must be able to KB1. Handling of the Bag-O-Matic Press KB2. Implications of not adhering to sequence of activities and operations KB3. Implications of delays in preparation process KB4. Types of defects leading to rejections. KB5. Potential problems in preparation process KB6. Indicators and reasons of potential problems KB7. Appropriate solutions to the problems encountered KB8. Cleanliness and safety requirements for commencing a pneumatic tyre moulding operation KB9. Units of measurement KB10. Response to emergencies e.g. Power failures ,fire and system failures KB11. The use of different type of fire extinguishers
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes **Reading Skills** SA5. Read and understand manuals, health and safety instructions, memos, reports,

	job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills
	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues, or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively, rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity

	SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Clean mould cavity properly SB11. Organize all the required tools at safe location SB12. Plan work as per schedule
	Customer Centricity
	The individual needs to know and understand how to: SB13. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB14. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB15. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB16. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB17. Work towards fulfilling the customers requirement as per their demand. SB18. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB19. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB20. Maintain good/cordial relation with customers. SB21. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB22. Interpret quality of product SB23. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB24. Diagnose common problems in the machine based on visual inspection, sound, temperature etc SB25. Suggest improvements(if any) in process based on experience
	Critical Thinking
	SB26. Handle equipment safely. SB27. Apply problem-solving approaches in different situations SB28. Refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC/N1101**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**29/04/2016**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**17/05/2017**
Occupation	**Moulding/Curing**	**Next review date**	**17/05/2021**

Back to QP

National Occupational Standard

Overview

This unit is about performing tyre moulding operation.

National Occupational Standard

Unit Code	RSC/N1102
Unit Title (Task)	**Perform pneumatic tyre moulding operation**
Description	This unit is about performing tyre moulding operation.
Scope	This unit/task covers the following: • Ensure the appropriateness of raw material • Operate the machine/press and remove the cured tyre • Ensure housekeeping and safety in work area
Performance Criteria (PC) w.r.t. the Scope	
Element	**Criteria**
Raw material appropriateness	To be competent, the user/individual on the job must be able to PC1. Ensure, by visual inspection, that green tyre is of desired quality (free of contamination, uniformly painted with inside and outside paints and localized in the area where the painting is required etc.) PC2. Ensure that batch size of green tyre is as per specified quantity
Operations	PC3. Plan batch sequence in shifts based on raw material availability/rejection to maximize output PC4. Check the green tyre – size, ply rating (PR), inner / outer painting etc PC5. Apply mould release agent , as required PC6. Load the "green" tyre in the mould with Center Post in position (in case of BOM Press) PC7. Place Serial No., PR strip (if any) in the mould cavity at particular location as the case may be PC8. Switch-on the press for cycle operation and ensure that press starts closing correctly PC9. Ensure that bladder starts blowing simultaneously while press is closing ,thus pressing the tyre on the mould wall (in case of BOM Press) PC10. Ensure that cure cycle has correct low, high , hot water and cold water pressure PC11. Drain steam followed by hot water, hold and then cold water (in case of BOM Press/Nylon Carcass). PC12. In the case of air bag type curing the positioning of tyre is a must to ensure the correct location of airbag valve to facilitate the joining of steam line for filling steam inside airbag . PC13. Ensure that material wastage is within tolerance limits PC14. Ensure that no rework or rejection is generated. PC15. Match the quality of output to company's product requirements PC16. Meet production quantity targets set for the operation PC17. Follow work instructions as laid down by the company
Housekeeping & Safety	PC18. Avoid skin contact with hot tyres and moulds PC19. Handle the hot tyre coming out of the press appropriately PC20. Ensure that he does not put his hand inside the press while the press is closing PC21. Use hand gloves while working on the moulding press

	PC22. Adhere to all other safety norms (like wearing shoes, gloves, safety goggles etc) PC23. Comply with health, safety, environment guidelines, regulations etc in accordance with organizational SOP
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Use of instruments to check dimensions KA2. Implications of poorly prepared material, power failure etc KA3. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure KA4. Difference between airbag /bag-o-matic type curing KA5. Ensured to carry out quality and damage checks KA6. Importance of identifying non-conforming products and storage KA7. Risk and impact of not following defined procedures/work instructions KA8. Escalation matrix for reporting identified issues KA9. Types of documentation in organization and there importance KA10. Records to be maintained and implications of non-maintenance KA11. Importance of housekeeping & good shopfloor practices KA12. Health, Safety and Environment guidelines, legislation and regulations as applicable KA13. Impact of poor practices on health, safety and environment KA14. Potential hazards and actions to minimize the same KA15. Escalation matrix and escalation procedure for reporting hazards
B. Technical Knowledge	To be competent, the user/individual on the job must be able to KB1. Bag-O-Matic press & its operation(possible setting levels, typical process followed for different batches) KB2. Compression moulding operation KB3. Handling of steam or electrical heating system KB4. State of curing – undercuring and overcuring KB5. Tolerance levels for various parameters (temperature, pressure and weight) KB6. Cleanliness and safety requirements for operating an moulding machine KB7. Troubleshooting for loading/unloading without damaging the product KB8. Effect of improper processing on properties of rubber product KB9. Implications of not adhering to sequence of activities and operations KB10. Implications of delays in production process KB11. The process and importance of quality check ,including visual inspection and dimensional checks KB12. Types of defects leading to rejections. KB13. Potential problems in the tyre moulding operation

	KB14. Indicators and reasons of potential problems KB15. Appropriate solutions to the problems encountered KB16. Impact of poor practices on health, safety and environment KB17. Units of measurement KB18. Response to emergencies e.g. Power failures ,fire and system failures KB19. The use of different type of fire extinguishers
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes
	Reading Skills
	SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills

	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Load the tyre SB11. Apply mould release agent as per requirement SB12. Report repair and maintenance requirement to the Supervisor

	Customer Centricity
	SB13. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB14. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB15. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB16. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB17. Work towards fulfilling the customers requirement as per their demand. SB18. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB19. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB20. Maintain good/cordial relation with customers. SB21. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB22. Interpret quality of product prepared SB23. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB24. Diagnose common problems in the machine based on visual inspection, sound , temperature etc SB25. Suggest improvements(if any) in process based on experience
	Critical Thinking
	SB26. Seek clarification on problems from others SB27. Apply problem-solving approaches in different situations SB28. Refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC/N1102**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**29/04/2016**
Industry Sub-sector	**Tyre Manufacturing**	**Last reviewed on**	**17/05/2017**
Occupation	**Moulding/Curing**	**Next review date**	**17/05/2021**

Back to QP

National Occupational Standard

Overview

This unit is about performing post – pneumatic tyre moulding operation activities.

National Occupational Standard

Unit Code	RSC/N1103
Unit Title (Task)	**Perform post - pneumatic tyre moulding operation activities**
Description	This unit is about performing post-tyre moulding operation activities
Scope	This unit/task covers the following: • Carry out operation to remove cured tyre • Disposal of waste material • Form appropriate batches and mark the batch for proper identification in further processing • Sampling • Ensure housekeeping and safety in work area

Performance Criteria (PC) w.r.t. the Scope	
Element	**Criteria**
Operations	To be competent, the user/individual on the job must be able to PC1. Follow work instructions as laid down by the company PC2. Remove the tyre manually, if on completion of cure cycle, the tyre does not pop up automatically out of the press PC3. Roll the tyre and put on PCI Unit, apply air pressure and cool it for specified time pressure PC4. Remove tyre from PCI rings after required PCI time is over PC5. Inspect tyre for any visual defect PC6. Trim the vents and flashes of the tyre if required PC7. Handover the equipment to the next operator in clean and good condition
Material disposal	PC8. Dispose off waste material as per waste disposal procedures laid down by the company PC9. Carry out disposal of waste material safely
Batch Marking	PC10. Form batch size as per company specifications PC11. Carry out batch marking for the tyres removed out the PCI unit PC12. Carry out batch marking as per instructions laid down by the company (in terms of weight, colour etc).
Sampling	PC13. Send sample of specified product to lab for testing, if warranted PC14. Send sample in specified quantity to lab for testing PC15. Send sample in the specified form to lab for testing PC16. Send the remaining material to the designated storage area
Housekeeping & Safety	PC17. Ensure housekeeping in moulding area PC18. Avoid skin contact with hot tyres and other moulds PC19. Handle the hot tyre coming out of the press appropriately PC20. Use hand gloves while working on the moulding press PC21. Ensure that he does not put his hand inside the press while the press is closing PC22. Adhere to all other safety norms (like wearing shoes, gloves, safety goggles etc)

	PC23. Comply with health, safety, environment guidelines, regulations etc in accordance with organizational SOP
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Implications of poorly prepared equipment, power failure etc KA2. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure KA3. Significance of batch marking KA4. Importance of identifying non-conforming product and storage of the same KA5. Risk and impact of not following defined procedures/work instructions KA6. Escalation matrix and procedure for reporting identified problems KA7. Types of documentation in organization and importance of the same KA8. Records to be maintained and implications of non-maintenance of the same KA9. Importance of housekeeping & good shopfloor practices KA10. Health, Safety and Environment guidelines, legislation and regulations as applicable KA11. Potential hazards and actions to minimize the same KA12. Impact of poor practices on health, safety and environment KA13. Escalation matrix and procedure for reporting hazards
B. Technical Knowledge	To be competent, the user/individual on the job must be able to KB1. Implications of not adhering to sequence of activities and operations KB2. Batch marking techniques KB3. Implications of incorrect batch marking KB4. Implications of inappropriate waste disposal KB5. Type of defects leading to rejections. KB6. Indicators and reasons of problems encountered KB7. Units of measurement KB8. Colour and colour coding KB9. Responding to emergencies e.g. Power failures ,fire and system failures KB10. Use of instruments to check dimensions etc KB11. The use of different type of fire extinguishers
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as

	estimation and approximation, for practical purposes
	Reading Skills
	SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills
	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process.

	SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Carry out waste collection in proper way SB11. Organize moulded tyres SB12. Plan the maintenance of tools and equipments used
	Customer Centricity
	The individual needs to know and understand how to: SB13. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB14. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB15. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB16. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB17. Work towards fulfilling the customers requirement as per their demand. SB18. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB19. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB20. Maintain good/cordial relation with customers. SB21. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB22. Interpret quality of prepared products SB23. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB24. Diagnose common problems in the machine based on visual inspection, sound , temperature etc SB25. Suggest improvements(if any) in process based on experience
	Critical Thinking
	SB26. Seek clarification on problems from others SB27. Apply problem-solving approaches in different situations SB28. Refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC/N1103**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**29/04/2016**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**17/05/2017**
Occupation	**Moulding/Curing**	**Next review date**	**17/05/2021**

Back to QP

National Occupational Standard

Overview

This unit is about carrying out housekeeping

National Occupational Standard

Unit Code	RSC/N5001
Unit Title (Task)	**Carry out housekeeping in rubber product manufacturing**
Description	This unit is about carrying out housekeeping activities
Scope	This unit/task covers the following: • Preparing for housekeeping activities • Carry out housekeeping activities • Post housekeeping activities
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Pre housekeeping activities	To be competent, the user/individual on the job must be able to PC1. Inspect the area while taking into account various surfaces PC2. Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain PC3. Ensure that the cleaning equipment is in proper working condition PC4. Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person PC5. Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces PC6. Inform the affected people about the cleaning activity PC7. Display the appropriate signage for the work being conducted PC8. Ensure that there is adequate ventilation for the work being carried out PC9. Wear the personal protective equipment required for the cleaning method and materials being used
Carry out housekeeping activities	PC10. Use the correct cleaning method for the work area, type of soiling and surface PC11. Carry out cleaning activity without disturbing others PC12. Deal with accidental damage, if any, caused while carrying out the work PC13. Report to the appropriate person any difficulties in carrying out your work PC14. Identify and report to the appropriate person any additional cleaning required that is outside one's responsibility or skill

Post housekeeping activities	PC15. Ensure that there is no oily substance on the floor to avoid slippage PC16. Ensure that no scrap material is lying around PC17. Maintain and store housekeeping equipment and supplies PC18. Follow workplace procedures to deal with any accidental damage caused during the cleaning process PC19. Ensure that, on completion of the work, the area is left clean and dry and meets requirements PC20. Return the equipment, materials and personal protective equipment that were used to the right places making sure they are clean, safe and securely stored PC21. Dispose the waste garnered from the activity in an appropriate manner PC22. Dispose of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly PC23. Maintain schedules and records for housekeeping duty PC24. Replenish any necessary supplies or consumables
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	To be competent, the user/individual on the job must be able to KB1. The levels of hygiene required by workplace and why it is important to maintain them during your work

	KB2. How to inspect a work area to decide what cleaning it needs KB3. Methods and materials that used for cleaning variety of surfaces KB4. The types of cleansing agents that are not to be mixed together KB5. The correct method for cleaning equipment and/or machinery used during your work KB6. The importance of personal protective equipment KB7. Appropriate personal protective equipment for the work area,cleaning equipment, tools, materials and chemicals used KB8. The correct sequence for cleaning the work area KB9. The time taken by the treatment to work KB10. The importance of following manufacturer's instructions on cleaning agents KB11. The most appropriate place to carry out test cleans and why this should be done before applying treatments KB12. The importance of applying treatments evenly and the effect of not doing this KB13. Process of cleaning the surfaces without causing injury or damage KB14. The method to check the treated surface and equipment on completion of cleaning KB15. Procedures for reporting any unidentified soiling KB16. Procedures for disposing off waste KB17. Procedures for disposing off or storing personal protective equipment KB18. Escalation procedures for soils or stains that could not be removed
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes
	Reading Skills SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication

	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills
	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to

	facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	The individual needs to know and understand how to: SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC/N5001**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**29/04/2016**
Industry Sub-sector	**Tyre and Non- tyre**	**Last reviewed on**	**17/05/2017**
Occupation	**Moulding/Curing**	**Next review date**	**17/05/2021**

Back to QP

National Occupational Standard

Overview

This unit is about reporting and documentation

National Occupational Standard

Unit Code	RSC/N5002
Unit Title (Task)	**Carry out reporting and documentation**
Description	This unit is about carrying out reporting and documentation
Scope	This unit/task covers the following:) Reporting of data/problem/incidents etc) Documentation) Information Security
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Reporting	To be competent, the user/individual on the job must be able to PC1. Report data/problems/incidents as applicable in a timely manner PC2. Report to the appropriate authority as laid down by the company PC3. Follow reporting procedures as prescribed by the company
Documentation	PC4. Identify documentation to be completed relating to one's role PC5. Record details accurately an appropriate format PC6. Complete all documentation within stipulated time according to company procedure PC7. Ensure that the final document meets with the requirements of the persons who requested it or make any amendments accordingly PC8. Make sure documents are available to all appropriate authorities to inspect
Information Security	PC9. Respond to requests for information in an appropriate manner whilst following organizational procedures PC10. Inform the appropriate authority of requests for information received
Knowledge and Understanding (K)	
A.Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources

	KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical knowledge	To be competent, the user/individual on the job must be able to KB1. Different methods of recording information KB2. Various documents that need to be maintained KB3. Company procedure for filling/maintaining up the documents KB4. Procedures for reporting to the appropriate authority KB5. Procedures for recording damage, breakages etc KB6. Reporting incidents where standard operating procedures are not followed KB7. The importance of complete and accurate documentation KB8. How to maintain complete documentation accurately and within agreed timescales KB9. The importance of ensuring that the documents are correct KB10. The actions to be taken if the documents are not correct KB11. The importance of maintaining the security and confidentiality of recorded information KB12. Procedures to maintain confidentiality of information KB13. The appropriate method for responding to requests for information KB14. The reporting procedures to followed before disclosing information to any outside party
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes
	Reading Skills

	SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills
	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant

	management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager

NOS Version Control

NOS Code	RSC/N5002		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	29/04/2016
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	17/05/2017
Occupation	Moulding/Curing	Next review date	17/05/2021

National Occupational Standard

Overview

This unit is about carrying out quality checks

National Occupational Standard

Unit Code	RSC/N5003
Unit Title (Task)	Carry out quality checks
Description	This unit is about carrying out quality control activities
Scope	This unit/task covers the following: • Carrying out Inspection & quality checks to identify problems • Analysis and take corrective actions • Reporting the results
Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Inspection	To be competent, the user/individual on the job must be able to PC1. Ensure that total range of checks are regularly and consistently performed PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required
Analysis	PC3. Identify non-conformities to quality assurance standards PC4. Identify potential causes of non-conformities to quality assurance standards PC5. Identify impact on final product due to non-conformance to company standards PC6. Evaluating the need for action to ensure that problems do not recur PC7. Suggest corrective action to address problem PC8. Review effectiveness of corrective action
Reporting	PC9. Interpret the results of the quality check correctly PC10. Take up results of the findings with QC in charge/appropriate authority. PC11. Take up the results of the findings within stipulated time PC12. Record of results of action taken PC13. Record adjustments not covered by established procedures for future reference PC14. Review effectiveness of action taken PC15. Follow reporting procedures where the cause of defect cannot be identified
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the

	organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	To be competent, the user/individual on the job must be able to KB1. The importance of quality control procedures KB2. Relevance and importance of activities and how they contribute to the achievement of the quality objectives, KB3. Proper procedure for selecting the material/product and performing quality checks without affecting the material KB4. Availability of work instructions, as necessary, KB5. Characteristics of the product/material KB6. Use of suitable equipment KB7. Availability and use of monitoring and measuring devices, KB8. Requirements of records KB9. Importance of maintaining accurate up-to-date records KB10. The need to report within the stipulated time KB11. Implications of inaccurate measuring and testing instruments and equipment KB12. The cost of non-conformance to quality standards KB13. Implications (impact on internal/external customers) of defective products, materials or components
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes

	Reading Skills
	SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills
	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble

	shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others

	SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager

NOS Version Control

NOS Code	RSC/N5003		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	29/04/2016
Industry Sub-sector	Tyre and Non- tyre	Last reviewed on	17/05/2017
Occupation	Moulding/Curing	Next review date	17/05/2021

Back to QP

National Occupational Standard

Overview

This unit is about problem identification and escalation

National Occupational Standard

Unit Code	RSC/N5004
Unit Title (Task)	Carry out problem identification and escalation
Description	This unit is about problem identification and escalation
Scope	This unit/task covers the following: • Identify problems across: o Raw materials o Compounds o Product o Equipment o Others • Identify solutions to problems and take necessary corrective action • Escalation of unresolved identified problems

Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Problem Identification	To be competent, the user/individual on the job must be able to PC1. Identify defects/indicators of problems PC2. Identify any wrong practices that may lead to problems PC3. Identify practices that may impact the final product quality PC4. Identify if the problem has occurred before PC5. Identify other operations that might be impacted by the problem PC6. Ensure that no delays are caused as a result of failure to escalate problems
Necessary Action	PC7. Take appropriate materials and sample, conduct tests and evaluate results to establish reasons to confirm suspected reasons for non-conformance (where required) PC8. Consider possible reasons for identification of problems PC9. Consider applicable corrections and formulate corrective action PC10. Formulate action in a timely manner PC11. Communicate problem/remedial action to appropriate parties PC12. Take corrective action in a timely manner PC13. Take corrective action for problems identified according to the company procedures PC14. Report/document problem and corrective action in an appropriate manner PC15. Monitor corrective action PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved PC17. Ensure that corrective action selected is viable and practical PC18. Ensure that correct solution is identified to an identified problem PC19. Take corrective action for problems identified according to the company procedures PC20. Ensure that no delays are caused as a result of failure to take necessary action

Problem Escalation	PC21. Escalate problem as per laid down escalation matrix PC22. Escalate the problem within stipulated time PC23. Escalate the problem in an appropriate manner PC24. Ensure that no delays are caused as a result of failure to escalate problems
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	To be competent, the user/individual on the job must be able to KA1. Importance of learning proper procedures and techniques KA2. Implications of not following the organizational requirement for approval for undertaking the specific task KA3. Importance of completing the activities as per the schedule KA4. Implications of not following the defined procedures/work instructions KA5. Importance of team work KA6. Health, Safety and Environment guidelines, legislation and regulations as applicable KA7. Actions to be taken in case of non-conformity to behavioral standards of the organization KA8. Impact of poor practices on the individual's and organization's performance KA9. Importance of optimal utilization of resources KA10. Importance of providing feedback for improvement KA11. Importance of indigenous knowledge for evolving/adopting operation specific practices KA12. Rectification/solution of problems/conflicts for the smooth functioning of the organization KA13. Importance of documentation/reporting as per guidelines and procedures KA14. Knowledge of do's and don'ts (company's HR instructions) KA15. Importance of attending trouble shooting KA16. Importance of subject learning/ training KA17. Importance of Product and its application
B. Technical Knowledge	To be competent, the user/individual on the job must be able to KB1. Indicators of problems KB2. The working of the equipment and accessories(if applicable) KB3. The impact of operations on the user and equipment(if applicable) KB4. The impact of operations on the final product (if applicable) KB5. The effect of not rectifying the problems identified KB6. The reason for the occurrence of previous problems KB7. Measures and steps that have been taken to address the previous problems KB8. Possible solutions for various problems KB9. The correct method for carrying out corrective actions outlined for each problem KB10. The impact of not carrying out the corrective actions

	KB11. The documentation procedure for recording such problems, as per company norms KB12. The escalation matrix for reporting problems KB13. Escalation matrix for reporting unresolved problems KB14. The time frame within which in which each problem needs to be escalated KB15. Manner in which each problem needs to be escalated
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	To be competent, the user/individual on the job must be able to SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company SA3. Write simple letters, mails, etc SA4. Perform functional mathematical operations, including apply basic mathematical principles, such as numbers and space, and techniques such as estimation and approximation, for practical purposes
	Reading Skills
	SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc SA6. Read images, graphs, diagrams SA7. Understand the various coding systems as per company norms
	Oral Communication
	SA8. Express statements, opinions or information clearly so that others can hear and understand SA9. Respond appropriately to any queries SA10. Communicate with supervisor SA11. Communicate with upstream and downstream teams SA12. Communicate with people in a form and manner and using language that is open and respectful
	Life Skills
	Integrity SA13. Practice honesty with respect to company property and time SA14. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust **Motivation** SA15. Take responsibility for completing one's own work assignment SA16. Take initiative to enhance/learn skills in ones's area of work SA17. The capacity to learn from experience in a range of settings and scenarios and

	the capacity to reflect on and analyse one's learning. SA18. Is open to new ways of doing things SA19. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. **Reliability** SA20. Avoid absenteeism SA21. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA22. Work in disciplined factory environment SA23. Be punctual
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take a decision for any change/issue based on earlier successes (documented previous history) on similar issues SB2. Work out changes in case a new improved machine/equipment is added in the process or any new material /chemical is developed replacing existing one. SB3. Make changes in cycle time due to improved process. SB4. Use the standard operating procedure or trouble shooting manuals for trouble shooting and other reference documents approved by plant management SB5. Consult the peer group and superiors to arrive at a favourable decision. SB6. Use of standard available problem solving techniques for decision making SB7. Review and analyze the process steps to check on system non adherence and non conformity SB8. Review the current SOP and other standards for continuous improvement to facilitate decision making SB9. Take a calculated risk with minimum losses
	Plan and Organize
	SB10. Plan and organize the factors of production to execute the business plan SB11. Fix up tasks and allotment of the same SB12. Assign tasks to suitable persons SB13. Motivate them for better output and time bound completion of tasks
	Customer Centricity
	SB14. Match customer needs/specification by adjusting the processing conditions (interact with customer in case any clarification required) SB15. Ensure that performance of his action/operation/activity does not lead to any divergence from the specified quality of the final product as required by the customer. SB16. Complete the assigned task in timely manner so that the final product is delivered in the timeline given by the customer. SB17. Communicate effectively to the superior/customer for any delay in supplies to

	the clients. SB18. Work towards fulfilling the customers requirement as per their demand. SB19. In case of any complaint, ensure its timely resolution if the problem is emanating at his level SB20. Communicate effectively to the superior/customer for any delay in resolving the problem faced by the customer. SB21. Maintain good/cordial relation with customers. SB22. Work on the feedback received from customer regarding the product.
	Problem Solving
	SB23. Interpret quality for sheet SB24. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	SB25. Proper collection of waste material SB26. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	SB27. Seek clarification on problems from others SB28. Apply problem-solving approaches in different situations SB29. Refer anomalies to the line manager

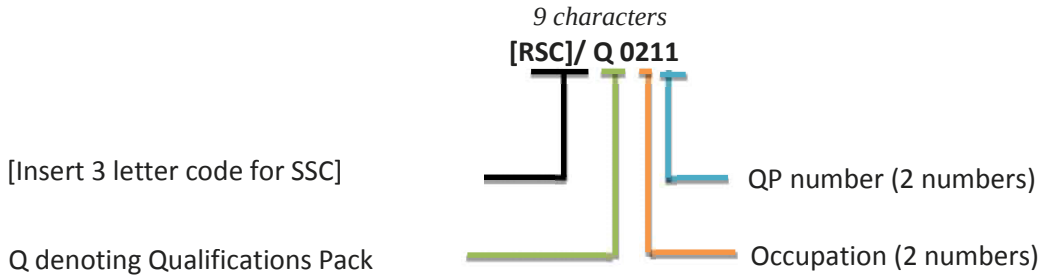
NOS Version Control

NOS Code	RSC/N5004		
Credits(NSQF)	TBD	Version number	1.0
Industry	Rubber Manufacturing	Drafted on	29/04/2016
Industry Sub-sector	Tyre and Non Tyre	Last reviewed on	17/05/2017
Occupation	Moulding/Curing	Next review date	17/05/2021

Annexure

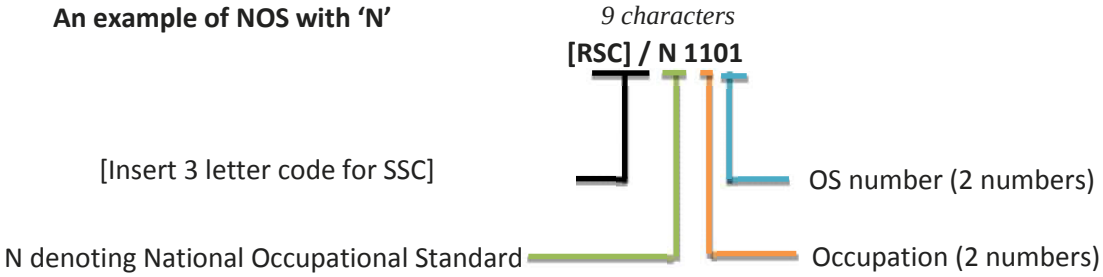
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Back to top…

The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Latex	**02-34**
Non-tyre	**12-12**
Rubber Manufacturing	**28-28**
Tyre	**02-36**
Tyre & Non -Tyre	**01-37**

Sequence	Description	Example
Three letters	Industry name	[RSC]
Slash	/	/
Next letter	Whether **Q**P or NOS	N
Next two numbers	Occupation code	02
Next two numbers	OS number	01

Criteria For Assessment Of Trainees

Job Role: Pneumatic Tyre Moulding Operator
Qualification Pack Code: RSC/Q0211
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 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. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS **Total Marks: 800**				**Marks Allocation**	
Assessment outcomes	**Assessment Criteria for outcomes**	**Total Marks**	**Out Of**	**Theory**	**Skills Practical**
RSC/N1101 Prepare pneumatic tyre moulding machine	PC1. Ensure that press is clean	100	3	0	3
	PC2. Blow air to remove any condensate and foreign matter in the mould cavity		7	6	1
	PC3. Ensure that the correct mould is loaded		3	0	3
	PC4. Set parameters for the Bag-O-Matic /airbag type Presses (press timer, steam pressure and cure cycle steps) , as per job card		7	6	1
	PC5. Apply mould release agent appropriately		7	6	1
	PC6. Warm up the press		3	0	3
	PC7. Follow equipment preparation process as per company requirements		7	6	1
	PC8. Ensure that no delays are caused as a result of improper preparation and failure to identify problems		2	0	2
	PC9. Ensure the mainline gauges and pressures are as per specification		2	0	2
	PC10. Ensure the calibration status of all measuring equipment and instruments and fit to use per quality standards followed		2	0	2

	by the plant				
	PC11. Collect all green tyres required for the batch		6	5	1
	PC12. Ensure painting of green tyre paintings at inner and outer (if any) has been done properly with no puddles .		4	0	4
	PC13. Match the batch code of each green tyre with the batch code on the job schedule given by the planning department		7	6	1
	PC14. Ensure that each material is in the correct quantity		3	0	3
	PC15. Ensure, by visual inspection, that green tyre is of desired quality (free of contamination etc.)		3	0	3
	PC16. Ensure that no delays are caused as a result of improper preparation and failure to identify problems		7	5	2
	PC17. Ensure housekeeping in moulding area		7	5	2
	PC18. Use hand gloves while working on the moulding press to avoid contact with hot moulds		7	5	2
	PC19. Ensure that he does not put his hand inside the press while the press is closing		3	0	3
	PC20. Adhere to all other safety norms (like wearing shoes, gloves, safety goggles etc)		5	5	0
	PC21. Comply with health, safety, environment guidelines, regulations etc in accordance with organizational SOP		5	5	0
	Total	**100**	**100**	**60**	**40**
RSC/N1102 Perform pneumatic tyre moulding operation	PC1. Ensure, by visual inspection, that green tyre is of desired quality (free of contamination, uniformly painted with inside and outside paints and localized in the area where the painting is required etc.)	100	8	6	2
	PC2. Ensure that batch size of green tyre is as per specified quantity		8	6	2
	PC3. Plan batch sequence in shifts based on raw material availability/rejection to maximize output		3	1	2
	PC4. Check the green tyre – size, ply rating (PR), inner / outer painting etc		3	1	2
	PC5. Apply mould release agent , as required		5	2	3
	PC6. Load the “green” tyre in the mould with Center Post in position (in case of BOM Press)		5	2	3
	PC7. Place Serial No., PR strip (if any) in the mould cavity at particular location as the case may be		3	1	2
	PC8. Switch-on the press for cycle operation and ensure that press starts closing correctly		3	1	2
	PC9. Ensure that bladder starts blowing simultaneously while press is closing ,thus pressing the tyre on the mould wall (in case of BOM Press)		3	1	2
	PC10. Ensure that cure cycle has correct low, high , hot water and cold water pressure (LPS, HPS, HW & CW)		4	1	3
	PC11. Drain steam followed by hot water, hold and then cold water (in case of BOM Press/Nylon Carcass).		5	2	3
	PC12. In the case of air bag tupe curing the positioning of tyre		6	2	4

	is a must to ensure the correct location of airbag valve to facilitate the joining of steam line for filling steam inside airbag .				
	PC13. Ensure that material wastage is within tolerance limits		2	0	2
	PC14. Ensure that no rework or rejection is generated.		2	0	2
	PC15. Match the quality of output to company's product requirements		3	1	2
	PC16. Meet production quantity targets set for the operation		3	1	2
	PC17. Follow work instructions as laid down by the company		3	1	2
	PC18. Avoid skin contact with hot tyres and moulds		6	4	2
	PC19. Handle the hot tyre coming out of the press appropriately		6	4	2
	PC20. Ensure that he does not put his hand inside the press while the press is closing		7	3	4
	PC21. Use hand gloves while working on the moulding press		5	3	2
	PC22. Adhere to all other safety norms (like wearing shoes, gloves, safety goggles etc)		4	4	0
	PC23. Comply with health, safety, environment guidelines, regulations etc in accordance with organizational SOP		3	3	0
	Total	**100**	**100**	**50**	**50**
RSC/N1103 Perform post-pneumatic tyre moulding operation activities	PC1. Follow work instructions as laid down by the company	100	3	1	2
	PC2. Remove the tyre manually, if on completion of cure cycle, the tyre does not pop up automatically out of the press		3	1	2
	PC3. Roll the tyre and put on PCI Unit, apply air pressure and cool it for specified time pressure		5	2	3
	PC4. Remove tyre from PCI rings after required PCI time is over		5	2	3
	PC5. Inspect tyre for any visual defect		3	1	2
	PC6. Trim the vents and flashes of the tyre if required		5	3	2
	PC7. Handover the equipment to the next operator in clean and good condition		4	2	2
	PC8. Dispose off waste material as per waste disposal procedures laid down by the company		5	3	2
	PC9. Carry out disposal of waste material safely		5	3	2
	PC10. Form batch size as per company specifications		5	3	2
	PC11. Carry out batch marking for the tyres removed out the PCI unit		6	3	3
	PC12. Carry out batch marking as per instructions laid down by the company (in terms of weight, colour etc).		6	3	3
	PC13. Send sample of specified product to lab for testing, if warranted		5	3	2
	PC14. Send sample in specified quantity to lab for testing		5	3	2
	PC15. Send sample in the specified form to lab for testing		5	3	2
	PC16. Send the remaining material to the designated storage		5	3	2

	area				
	PC17. Ensure housekeeping in moulding area		2	0	2
	PC18. Avoid skin contact with hot tyres and other moulds		4	2	2
	PC19. Handle the hot tyre coming out of the press appropriately		3	1	2
	PC20. Use hand gloves while working on the moulding press		4	2	2
	PC21. Ensure that he does not put his hand inside the press while the press is closing		4	2	2
	PC22. Adhere to all other safety norms (like wearing shoes, gloves, safety goggles etc)		4	2	2
	PC23. Comply with health, safety, environment guidelines, regulations etc in accordance with organizational SOP		4	2	2
	Total	**100**	**100**	**50**	**50**
RSC/N5001 Carry out housekeeping in rubber product manufacturing	PC1. Inspect the area while taking into account various surfaces	100	3	3	0
	PC2. Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain		3	3	0
	PC3. Ensure that the cleaning equipment is in proper working condition		3	3	0
	PC4. Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person		3	3	0
	PC5. Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces		3	3	0
	PC6. Inform the affected people about the cleaning activity		2	2	0
	PC7. Display the appropriate signage for the work being conducted		3	3	0
	PC8. Ensure that there is adequate ventilation for the work being carried out		3	3	0
	PC9. Wear the personal protective equipment required for the cleaning method and materials being used		3	3	0
	PC10. Use the correct cleaning method for the work area, type of soiling and surface		3	3	0
	PC11. Carry out cleaning activity without disturbing others		3	3	0
	PC12. Deal with accidental damage, if any, caused while carrying out the work		3	3	0
	PC13. Report to the appropriate person any difficulties in carrying out your work		3	3	0
	PC14. Identify and report to the appropriate person any additional cleaning required that is outside one's responsibility or skill		3	3	0
	PC15. Ensure that there is no oily substance on the floor to avoid slippage		9	3	6
	PC16. Ensure that no scrap material is lying around		9	3	6
	PC17. Maintain and store housekeeping equipment and supplies		3	3	0
	PC18. Follow workplace procedures to deal with any accidental damage caused during the cleaning process		3	3	0

	PC19. Ensure that, on completion of the work, the area is left clean and dry and meets requirements		8	2	6
	PC20. Return the equipment, materials and personal protective equipment that were used to the right places making sure they are clean, safe and securely stored		3	3	0
	PC21. Dispose the waste garnered from the activity in an appropriate manner		9	3	6
	PC22. Dispose of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly		9	3	6
	PC23. Maintain schedules and records for housekeeping duty		3	3	0
	PC24. Replenish any necessary supplies or consumables		3	3	0
	Total	**100**	**100**	**70**	**30**
RSC/N5002 Carry Out Reporting And Documentation	PC1. Report data/problems/incidents as applicable in a timely manner	100	12	8	4
	PC2. Report to the appropriate authority as laid down by the company		12	8	4
	PC3. Follow reporting procedures as prescribed by the company		12	8	4
	PC4. Identify documentation to be completed relating to one's role		10	6	4
	PC5. Record details accurately an appropriate format		16	6	10
	PC6. Complete all documentation within stipulated time according to company procedure		14	4	10
	PC7. Ensure that the final document meets with the requirements of the persons who requested it or make any amendments accordingly		6	4	2
	PC8. Make sure documents are available to all appropriate authorities to inspect		6	4	2
	PC9. Respond to requests for information in an appropriate manner whilst following organizational procedures		6	6	0
	PC10. Inform the appropriate authority of requests for information received		6	6	0
	Total	100	100	60	40
RSC/N5003 Carry Out Quality Checks	PC1. Ensure that total range of checks are regularly and consistently performed	100	24	10	14
	PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required		24	10	14
	PC3. Identify non-conformities to quality assurance standards		6	4	2
	PC4. Identify potential causes of non-conformities to quality assurance standards		5	3	2
	PC5. Identify impact on final product due to non-conformance to company standards		5	3	2
	PC6. Evaluating the need for action to ensure that problems do not recur		6	4	2
	PC7. Suggest corrective action to address problem		5	3	2
	PC8. Review effectiveness of corrective action		5	3	2
	PC9. Interpret the results of the quality check correctly		4	4	0

	PC10. Take up results of the findings with QC in charge/appropriate authority.		3	3	0
	PC11. Take up the results of the findings within stipulated time		3	3	0
	PC12. Record of results of action taken		3	3	0
	PC13. Record adjustments not covered by established procedures for future reference		3	3	0
	PC14. Review effectiveness of action taken		2	2	0
	PC15. Follow reporting procedures where the cause of defect cannot be identified		2	2	0
	Total	**100**	**100**	**60**	**40**
RSC/N5004 Carry Out Problem Identification And Escalation	PC1. Identify defects/indicators of problems	100	7	4	3
	PC2. Identify any wrong practices that may lead to problems		6	3	3
	PC3. Identify practices that may impact the final product quality		6	3	3
	PC4. Identify if the problem has occurred before		5	3	2
	PC5. Identify other operations that might be impacted by the problem		6	4	2
	PC6. Ensure that no delays are caused as a result of failure to escalate problems		5	3	2
	PC7. Take appropriate materials and sample, conduct tests and evaluate results to establish reasons to confirm suspected reasons for non-conformance (where required)		8	5	3
	PC8. Consider possible reasons for identification of problems		8	5	3
	PC9. Consider applicable corrections and formulate corrective action		3	3	0
	PC10. Formulate action in a timely manner		3	3	0
	PC11. Communicate problem/remedial action to appropriate parties		7	5	2
	PC12. Take corrective action in a timely manner		2	2	0
	PC13. Take corrective action for problems identified according to the company procedures		2	2	0
	PC14. Report/document problem and corrective action in an appropriate manner		8	5	3
	PC15. Monitor corrective action		2	2	0
	PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved		2	2	0
	PC17. Ensure that corrective action selected is viable and practical		2	2	0
	PC18. Ensure that correct solution is identified to an identified problem		2	2	0
	PC19. Take corrective action for problems identified according to the company procedures		1	1	0
	PC20. Ensure that no delays are caused as a result of failure to take necessary action		1	1	0
	PC21. Escalate problem as per laid down escalation matrix		4	3	1
	PC22. Escalate the problem within stipulated time		4	3	1
	PC23. Escalate the problem in an appropriate manner		3	2	1

	PC24. Ensure that no delays are caused as a result of failure to escalate problems		3	2	1
	Total	100	100	70	30

SSC	QPCode	Name of the QP	NSQF Level	Equipment Name	Min. no. of Equipment required (per batch of 30 trainees)	Unit Type	Is this a mandatory Equipment to be Training Center (Yes/No)	Dimension/Specification/Description of the Equipment/ ANY OTHER REMARK
Rubber	RSC/Q 0211	Pneumatic Tyre Moulding Operator	4	Tyre Curing Press (Bom) Of Tyre Moulds	1	Unit	No	It is difficult to specify dimensions as it depends on the equipment to be used for training
Rubber	RSC/Q 0211	Pneumatic Tyre Moulding Operator	4	Safety Equipments	2	Unit	Yes	Gloves, Safety shoes, Mask & other safety equipments
Rubber	RSC/Q 0211	Pneumatic Tyre Moulding Operator	4	Tools Used To Operate Tyre Curing Press	2	Unit	Yes	PCI unit , tyre loaders /unloaders