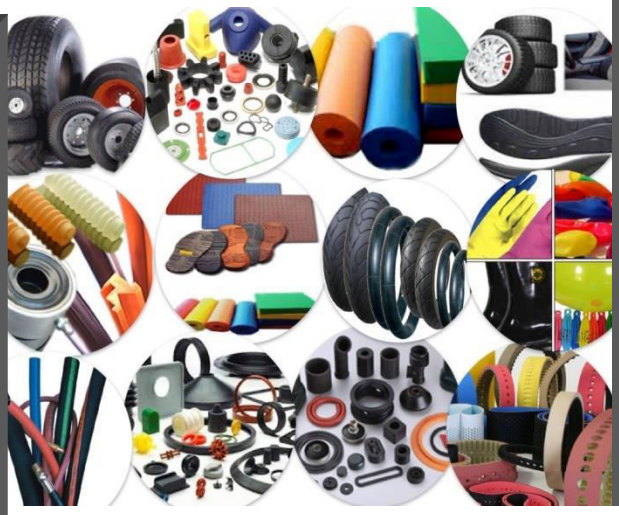
QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR RUBBER INDUSTRY



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- Radial Building Operator

SECTOR: RUBBER INDUSTRY

SUB-SECTOR: Tyre

OCCUPATION: Tyre building

REFERENCE ID: RSC/ Q 0520

ALIGNED TO: NCO-2004/8231.80

Brief Job Description: The role of Radial building operator involves making a pneumatic tyre.

Personal Attributes: This job requires the individual to work independently. The operator must have an eye for detail, should be an analytical thinker and be able to troubleshoot problems.The individual must be physically fit for working in the factory environment and be willing to do labourious jobs.

Job Details

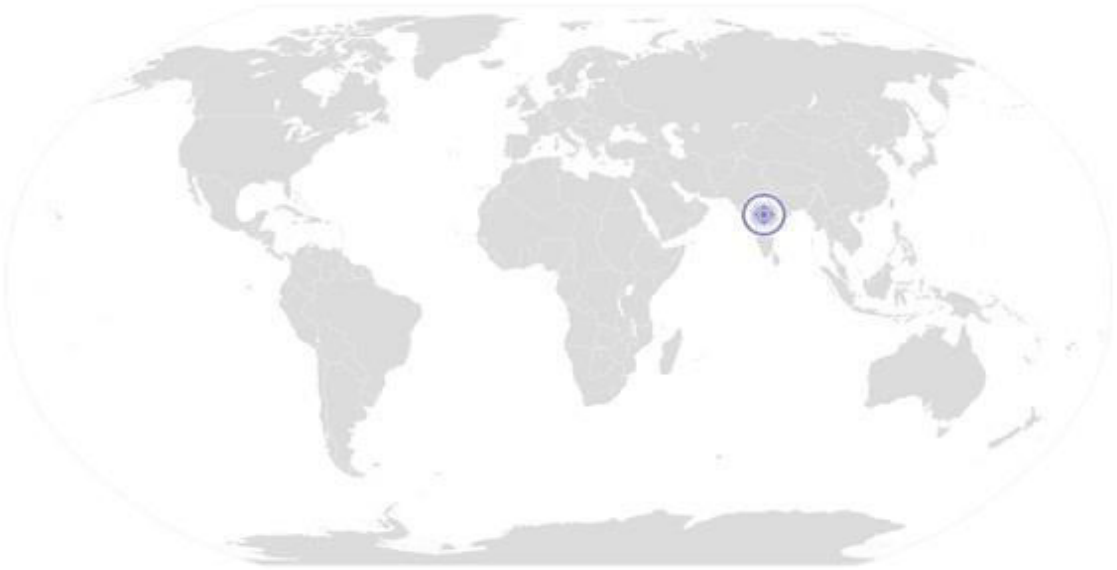
Qualifications Pack Code	**RSC/ Q 0520**		
Job Role	**Radial Building Operator**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Sector	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/15**
NSQC Clearnace on	**20/07/2015**		

Job Role	**Radial Building Operator**
Role Description	The Radial Building Operator involves making a pneumatic tyre
NVEQF/NVQF level **Minimum Educational Qualifications*** **Maximum Educational Qualifications***	4 Class X ITI/Graduate
Training (Suggested but not mandatory)	Training on operation of machinery
Minimum Job Entry Age	18 years
Experience	In lieu of minimum qualification the employee has worked as a semi-skilled helper for minimum 6 months in the same role.
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. RSC/ N2001 (Prepare tyre building) 2. RSC/ N2002 (Build radial pneumatic tyre) 3. RSC/ N2003 (Post tyre building activities for radial tyre) 4. RSC/ N5001 (To carry out housekeeping) 5. RSC/ N5002 (To carry out reporting and documentation) 6. RSC/ N5003 (To carry out quality checks) 7. RSC/ N5004 (To carry out problem estimation and escalation) **Optional:** 8. NA
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.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
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.
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.
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



Overview

This unit is about preparing tyre building machine and collecting all tyre Components for Radial Tyre Building

National Occupational Standard

Unit Code	RSC / N 2001
Unit Title (Task)	**Prepare tyre building machine**
Description	This unit is about preparing tyre building machine and collecting all tyre components for Radial Tyre Building
Scope	This unit/task covers the following: • Preparing Radial first stage and second stage tyre building machine • Collecting all components required for tyre building
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 tyre building machine is clean PC2. Ensure that building drum is clean PC3. Ensure that building drum of the correct size is in place PC4. Set parameters for the building machine as per job card PC5. Follow equipment preparation process as per company requirements PC6. Ensure that no delays are caused as a result of improper preparation and failure to identify problems. PC7. Keep other building materials & tools such as drum cement, inner liner, sidewall, plies, bead, tyre chord, belts, stitchers, knife and tread ready
Raw material appropriateness	PC8. Ensure that material to be fed is approved by laboratory PC9. Collect all materials required for the batch PC10. Match the batch code of each material with the batch code on the job schedule given by the planning department PC11. Ensure that components such as bead, freshening solvent and swab are ready PC12. Ensure that other materials are in the correct quantity PC13. Ensure, by visual inspection, that raw material is of desired quality (free of contamination etc.) PC14. Ensure that no delays are caused as a result of improper preparation and failure to identify problems
Health & Safety	PC15. Housekeeping and Safety in Tyre Building are PC16. Do not wear loose and torn clothes during working hours PC17. Ensure no spillage of Naphtha or Solvent PC18. Use Forklift / Trolleys etc. while lifting heavy materials such as heavy

	finished tyres to avoid physical injury. PC19. Ensure use of personal protective equipment like wearing protective gloves, safety shoes, Safety Glasses, safety mask etc PC20. Adhere to all the other safety norms (like wearing protective gloves etc) PC21. Comply with other health, safety, environment guidelines, regulations etc in accordance with company procedure
Knowledge and Understanding (K)	
A. Organizational Context (KA) (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. Implications of poorly prepared equipment, power failure etc KA2. Importance of identifying non-conforming material and storage of the same KA3. Risk and impact of not following defined procedures/work instructions KA4. Escalation matrix for reporting identified problems KA5. Types of documentation in organization and importance of the same KA6. Records to be maintained and implications of non-maintenance of the same KA7. Importance of housekeeping KA8. Health, Safety and Environment guidelines, legislation and regulations applicable KA9. Personal protection(Which protective equipment to be used and how) 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 (KB)	The user/individual on the job needs to know and understand: KB1. Importance of various components (like bead, ply, tread, sidewall etc) on subsequent process and performance of the product KB2. Importance of process parameters (time, temperature, pressure, humidity, drum rotation rpm etc) and their impact KB3. Ability to take measurement using gauges and balance (for thickness, width and weight) KB4. Cleanliness and safety requirements for commencing a tyre building operation KB5. Health hazard due to inhalation of solvent KB6. Fire hazard due to flammable solvent KB7. The role of protective railing, light barriers, safety mats and scanners which are present for the protection of operator and complete tyre building machinery. KB8. Effect of improper tyre building on performance of tyre KB9. Implications of delays in preparation process

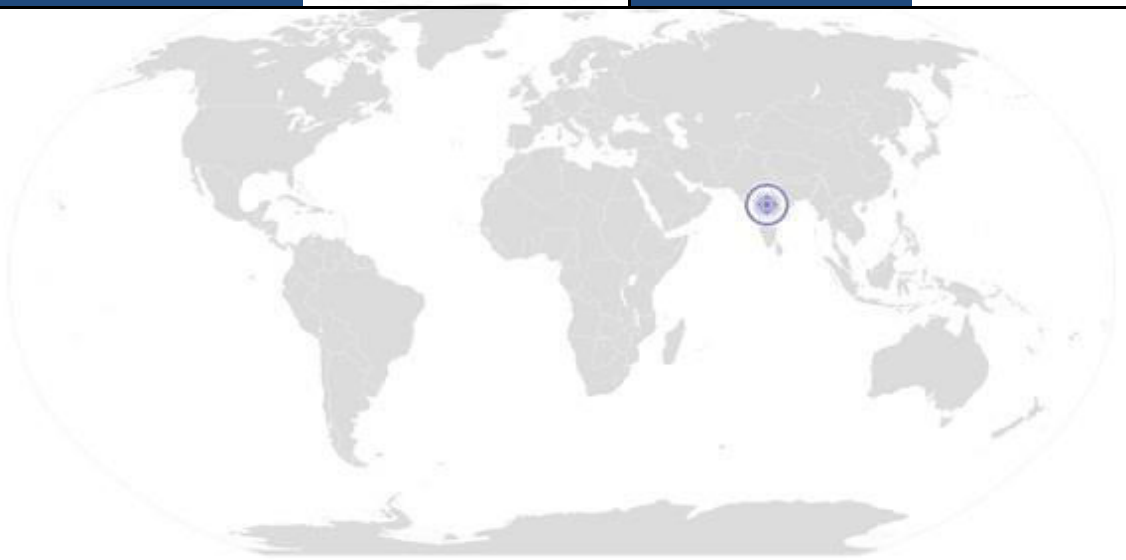
	KB10. Types of defects leading to rejections. KB11. Potential problems in preparation process KB12. Indicators and reasons of potential problems KB13. Appropriate solutions to the problems encountered KB14. Units of measurement KB15. Response to emergencies e.g. Power failures ,fire and system failures KB16. The usage of different fire extinguishers
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how 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
	The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust SA16. Take responsibility for completing one's own work assignment

	SA17. Take initiative to enhance/learn skills in ones's area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods. SB1. Handle internal mixer, accessories SB2. Handle rubber compound SB3. Handle chemicals SB4. Handling of various types of material handling equipment like forklifts, trolleys SB2. The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: S7. seek clarification on problems from others SB8. apply problem-solving approaches in different situations SB9. refer anomalies to the line manager
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 10. Interpret quality for sheet SB 11. Suggest improvements(if any) in process/product/materials based on results and experience

	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB12. Proper collection of waste material SB13. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience SB14. Diagnose common problems in the machine based on visual inspection, sound , temperature etc SB15. Suggest improvements(if any) in process based on experience
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB16. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB17. apply problem-solving approaches in different situations SB18. refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC / N 2001**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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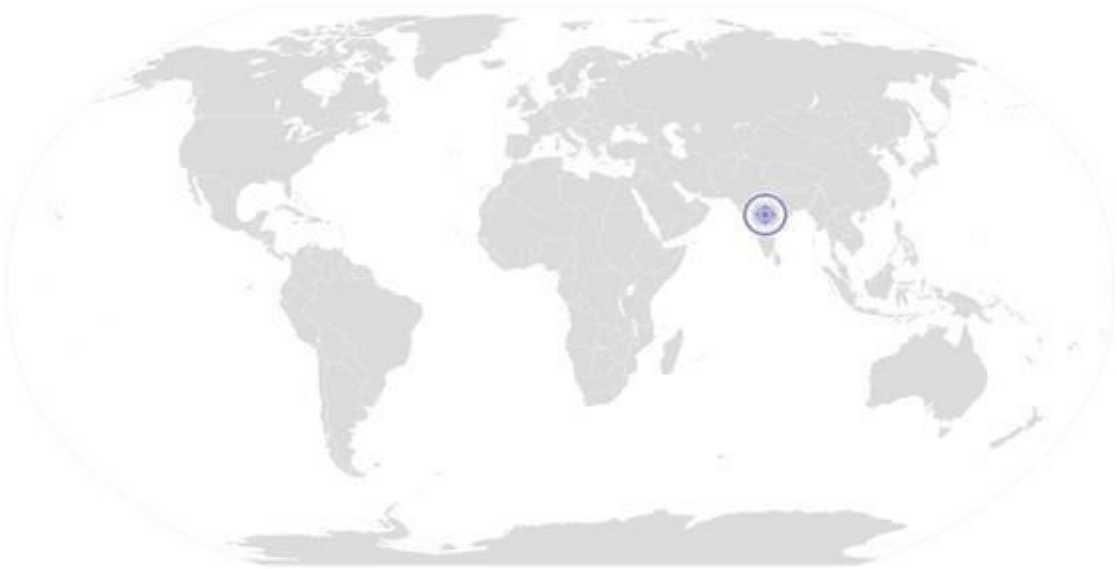
National Occupational Standard



Overview

This unit is about building radial pneumatic tyres

National Occupational Standard

Unit Code	RSC / N 2002
Unit Title (Task)	**Build radial pneumatic tyre**
Description	This unit is about building Radial pneumatic tyre
Scope	This unit/task covers the following: • Building radial tyre – 1st stage • Building radial tyre – 2nd stage
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 tyre building material is of desired quality (free of contamination etc.) PC2. Ensure that batch size of tyre building material is as per specified quantity
Operation	<u>Perform First Stage Activities</u> PC3. Plan batch sequence in shifts based on raw material availability/rejection to maximize output PC4. Position bead joint correctly for proper tyre balance. PC5. Set inner liner at the drum and rotate around the drum one turn PC6. Cut joint with a hot knife PC7. Set inner liner end to end so that the diagonal cutting seam is at the top PC8. Fasten the ends together manually PC9. Set cord ply ends at the drum and rotate the drum one turn. PC10. Cut the cord ply manually and join with 2 - 5 overlapping cords PC11. Press the joint carefully at the edges PC12. Mount bead wire and turn-up is done automatically. PC13. Turn edges with bladders over the beads and stitch tightly. PC14. Set sidewall ends at the drum and rotate around the drum one turn. PC15. Set sidewall end to end and fasten the seam together manually. <u>Perform Second Stage Activities</u> PC16. Tread Package Manufacturing: Join belt by cutting it with a hot knife and setting the ends together at the belt drum. PC17. Set end of the nylon bandage at the drum at the middle of the belt. PC18. Wind the bandage on top of the belt 1-2 times and cut with scissors PC19. Set tread end to end and join manually after the machine has pulled tread at the drum automatically PC20. The carcass and tread Package are joined automatically.

	PC21. Set the carcass at the flanges of the carcass drum, apply pressure and fasten to the tread package and stitch together. PC22. Ensure that material wastage is within tolerance limits PC23. Ensure that no rework or rejection is generated. PC24. Match the quality of output to company's product requirements PC25. Meet production quantity targets set for the operation PC26. Follow work instructions as laid down by the company
Health & Safety	PC27. Ensure Housekeeping and Safety in Tyre Building area. PC28. Do not wear loose and torn clothes during working hours PC29. Ensure that personal protective equipment like wearing protective gloves, safety shoes, Safety Glasses, safety mask etc) PC30. Use Forklift / Trolleys etc. while lifting heavy materials such as heavy finished tyres to avoid physical injury. PC31. Comply with other 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)	The user/individual on the job needs to know and understand: KA1. Proper tyre building process KA2. Implications of poorly prepared equipment, power failure etc KA3. Material disposal procedure, importance of appropriate disposal of material and implications of not following the material disposal procedure KA4. Quality and damage checks to be done and importance of the same KA5. Importance of identifying non-conforming material and storage of the same KA6. Risk and impact of not following defined procedures/work instructions KA7. Escalation matrix for reporting identified problems KA8. Types of documentation in organization and importance of the same KA9. Records to be maintained and implications of non-maintenance of the same KA10. Importance of housekeeping (knowledge of 3S & 5S) KA11. Health, Safety and Environment guidelines, legislation and regulations as applicable KA12. Personal protection(Which protective equipment to be used and how) 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	The user/individual on the job needs to know and understand: KB1. Tyre Building Machine (TBM) & its operation KB2. Cleanliness and safety requirements for commencing a tyre building operation

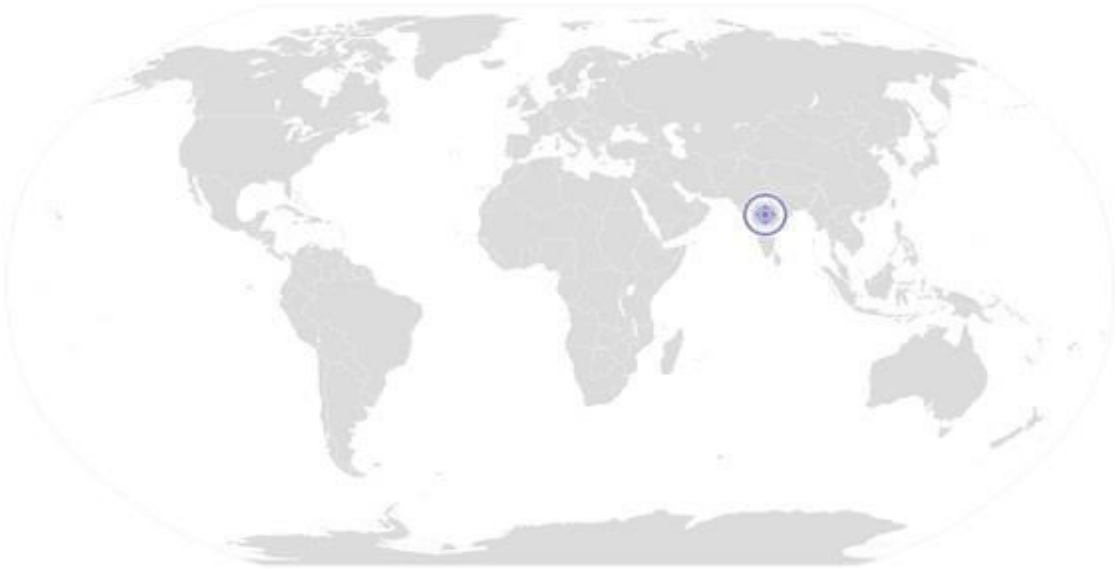
	KB3. Troubleshooting- Knowledge of abnormalities and what response to make in case of abnormalities in equipment performance KB4. Importance of various components (like bead, ply, tread, sidewall etc) KB5. The role of protective railing, light barriers, safety mats and scanners which are present for the protection of operator and complete tyre building machinery. KB6. Health hazard due to inhalation of solvent KB7. Fire hazard due to flammable solvent KB8. Sequence of laying the ply and building the tyre KB9. Importance of process parameters (temperature, pressure etc) and impact KB10. Ability to take measurement using gauges and balance (for thickness, width and weight) KB11. Implications of not adhering to sequence of activities and operations KB12. Implications of delays in production process KB13. The process and importance of quality check ,including visual inspection and dimensional checks KB14. Effect of improper tyre building on performance of tyre KB15. Types of defects leading to rejections. KB16. Potential problems in the tyre building operation KB17. Indicators and reasons of potential problems KB18. Appropriate solutions to the problems encountered KB19. Units of measurement KB20. Response to emergencies e.g. Power failures ,fire and system failures KB21. The usage of different fire extinguishers
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how 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 The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust SA16. Take responsibility for completing one's own work assignment SA17. Take initiative to enhance/learn skills in ones's area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB3. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods. SB5. Handle internal mixer, accessories SB6. Handle rubber compound SB7. Handle chemicals SB8. Handling of various types of material handling equipment like forklifts, trolleys SB4. The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.

	Plan and Organize
	The user/individual on the job needs to know and understand how to: S7. seek clarification on problems from others SB8. apply problem-solving approaches in different situations SB9. refer anomalies to the line manager
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 10. Interpret quality for sheet SB 11. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB12. Proper collection of waste material SB13. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience SB14. Diagnose common problems in the machine based on visual inspection, sound , temperature etc SB15. Suggest improvements(if any) in process based on experience
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB16. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB17. apply problem-solving approaches in different situations SB18. refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC / N 2002**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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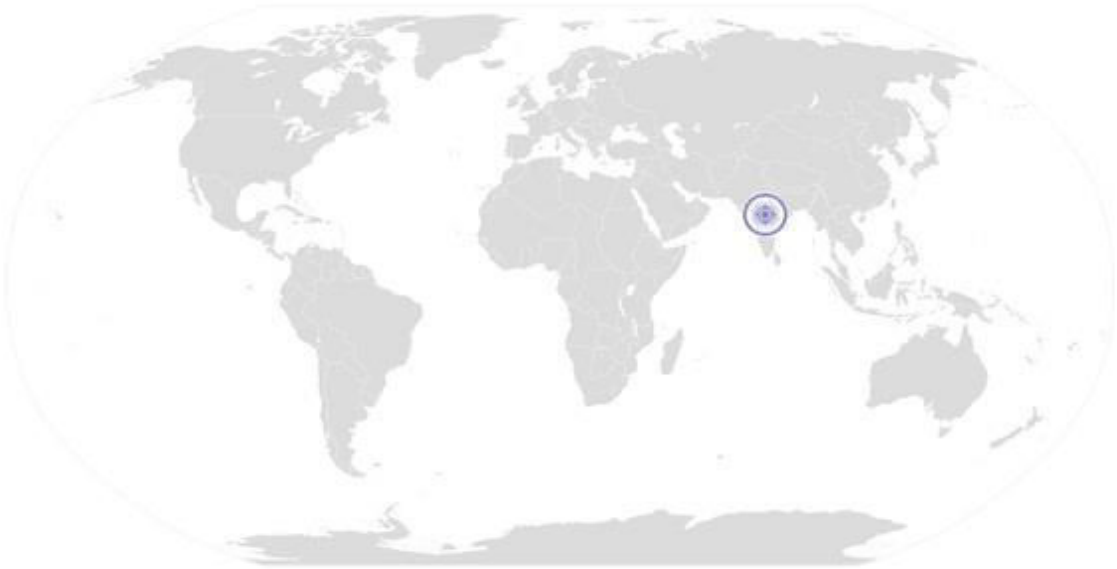


Overview

This unit is about performing post tyre building activities for radial tyres

National Occupational Standard

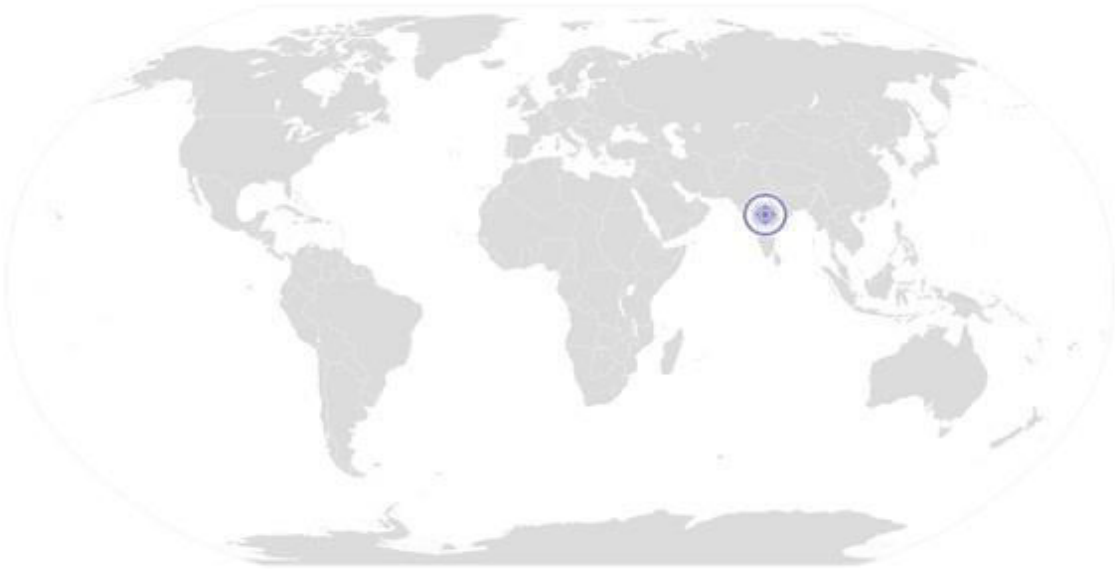
Unit Code	RSC / N 2003
Unit Title (Task)	**Post tyre building activities for radial tyres**
Description	This unit is about performing post tyre building activities for radial tyres
Scope	This unit/task covers the following: • Collecting green tyre/ marking • Preparing tyre for curing • Transporting tyre to painting/curing department
Performance Criteria (PC) w.r.t. the Scope	
Element	**Criteria**
Operation	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 green tyre from the TBM and put on a trolley PC3. Transport tyre to painting section PC4. Spray paint tyre from inside and outside and dry in a hot chamber and allow to cool for definite time PC5. Remove tyre and transport to curing section for tyre curing PC6. Visually inspect tyre for defects 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 organizational SOP
Batch Marking	PC9. Carry out tyre marking as per instructions laid down by the company (in terms of size, weight, colour etc). PC10.
Sampling	PC11. Send sample of specified product/batch number to lab for testing, if warranted PC12. Send sample of specified batch number to lab for testing PC13. Send sample in specified quantity to lab for testing PC14. Send sample in the specified form to lab for testing PC15. Send the remaining material to the designated storage area
Health & Safety	PC16. Ensure Housekeeping and Safety in Tyre Building area PC17. Do not wear loose and torn clothes during working hours PC18. Use Forklift / Trolleys etc. while lifting heavy materials such as heavy finished tyres to avoid physical injury. PC19. Ensure that personal protective equipment like wearing protective gloves,

	safety shoes, Safety Glasses, safety mask etc PC20. Spray paint the tyre safely by using protective equipment to cover the face and other body parts PC21. Comply with other health, safety, environment guidelines, regulations etc in accordance with company procedure
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: 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 KA10. Health, Safety and Environment guidelines, legislation and regulations as applicable KA11. Personal protection(Which protective equipment to be used and how) KA12. Potential hazards and actions to minimize the same KA13. Impact of poor practices on health, safety and environment KA14. Escalation matrix and procedure for reporting hazards
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB15. Importance of various components (like bead, ply, tread, sidewall etc) on subsequent process and performance of the product KB16. Spray painting process for radial tyres. KB17. Implications of improper curing on tyres KB18. Batch marking techniques KB19. Implications of incorrect batch marking KB20. Implications of inappropriate waste disposal KB21. Type of defects leading to rejections. KB22. Indicators and reasons of problems encountered KB23. Units of measurement KB24. Colour and colour coding KB25. Use of instruments to check dimensions etc KB26. Responding to emergencies e.g. Power failures ,fire and system failures KB27. The usage of different fire extinguishers
Skills (S)	
A. Core Skills/	**Writing Skills**

Generic Skills	The user/ individual on the job needs to know and understand how 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
	The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust SA16. Take responsibility for completing one's own work assignment SA17. Take initiative to enhance/learn skills in ones's area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual

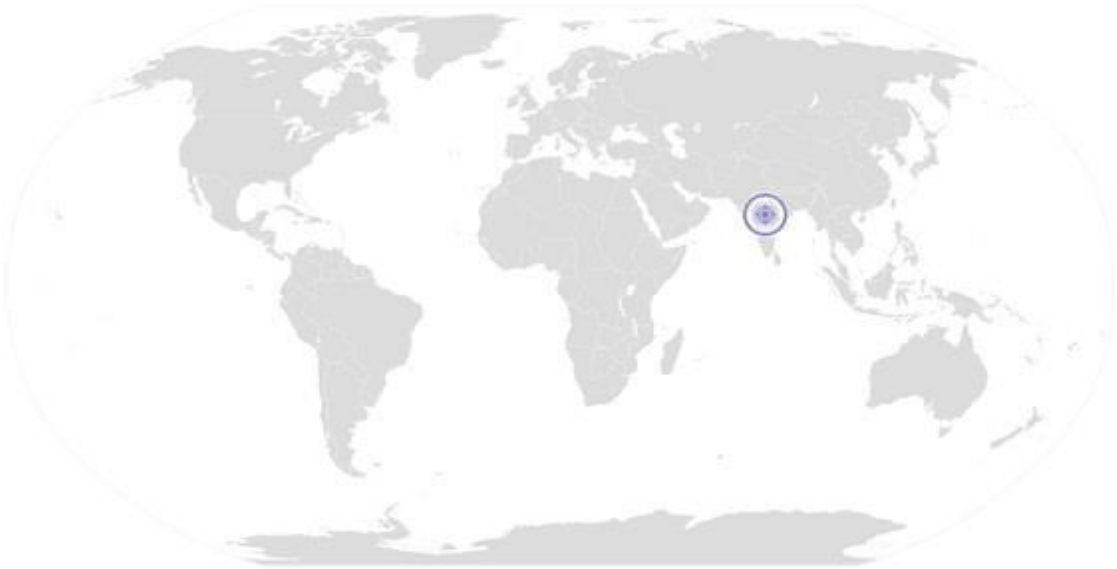
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB5. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods. SB9. Handle internal mixer, accessories SB10. Handle rubber compound SB11. Handle chemicals SB12. Handling of various types of material handling equipment like forklifts, trolleys SB6. The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: S7. seek clarification on problems from others SB8. apply problem-solving approaches in different situations SB9. refer anomalies to the line manager
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 10. Interpret quality for sheet SB 11. Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB12. Proper collection of waste material SB13. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience SB14. Diagnose common problems in the machine based on visual inspection, sound , temperature etc SB15. Suggest improvements(if any) in process based on experience
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB16. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB17. apply problem-solving approaches in different situations

	SB18. refer anomalies to the line manager



NOS Version Control

NOS Code	**RSC / N 2003**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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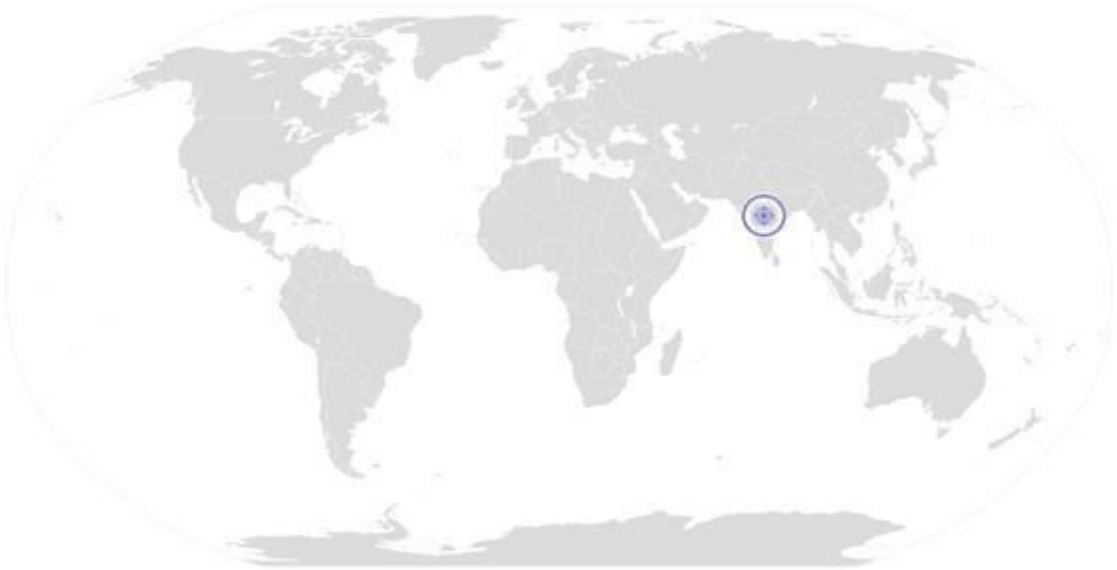


Overview

This unit is about carrying out housekeeping

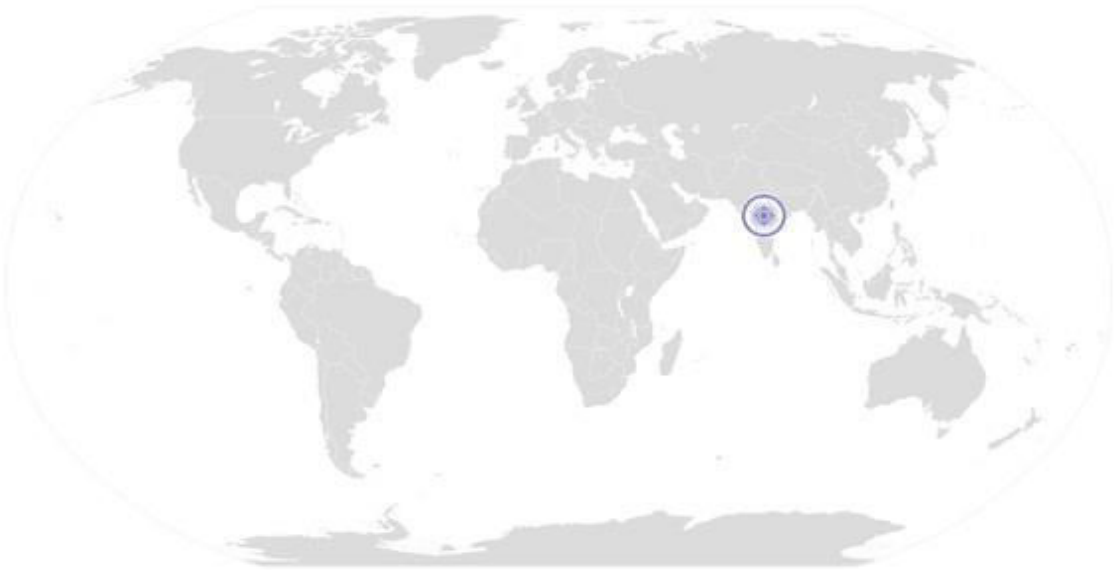
Unit Code	RSC / N 5001
Unit Title (Task)	To carry out housekeeping
Description	This unit is about carrying out housekeeping activities
Scope	This unit/task covers the following: • Preparing for housekeeping activities • Carry out housekeeping activities • Post housekeeping activities
Performance Criteria (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
Operations	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
General	PC23. Maintain schedules and records for housekeeping duty PC24. Replenish any necessary supplies or consumables
Knowledge and Understanding (K)	
A. Technical Knowledge	The user/individual on the job needs to know and understand: KA1. The levels of hygiene required by workplace and why it is important to maintain them during your work KA2. How to inspect a work area to decide what cleaning it needs KA3. Methods and materials that used for cleaning variety of surfaces KA4. The types of cleansing agents that are not to be mixed together KA5. The correct method for cleaning equipment and/or machinery used during your work KA6. The importance of personal protective equipment KA7. Appropriate personal protective equipment for the work area,cleaning equipment, tools, materials and chemicals used KA8. The correct sequence for cleaning the work area KA9. The time taken by the treatment to work KA10. The importance of following manufacturer's instructions on cleaning agents KA11. The most appropriate place to carry out test cleans and why this should be done before applying treatments KA12. The importance of applying treatments evenly and the effect of not doing this KA13. Process of cleaning the surfaces without causing injury or damage KA14. The method to check the treated surface and equipment on completion of cleaning KA15. Procedures for reporting any unidentified soiling KA16. Procedures for disposing off waste

	KA17. Procedures for disposing off or storing personal protective equipment KA18. Escalation procedures for soils or stains that could not be removed
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how 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
	The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust SA16. Take responsibility for completing one's own work assignment SA17. Take initiative to enhance/learn skills in ones's area of work

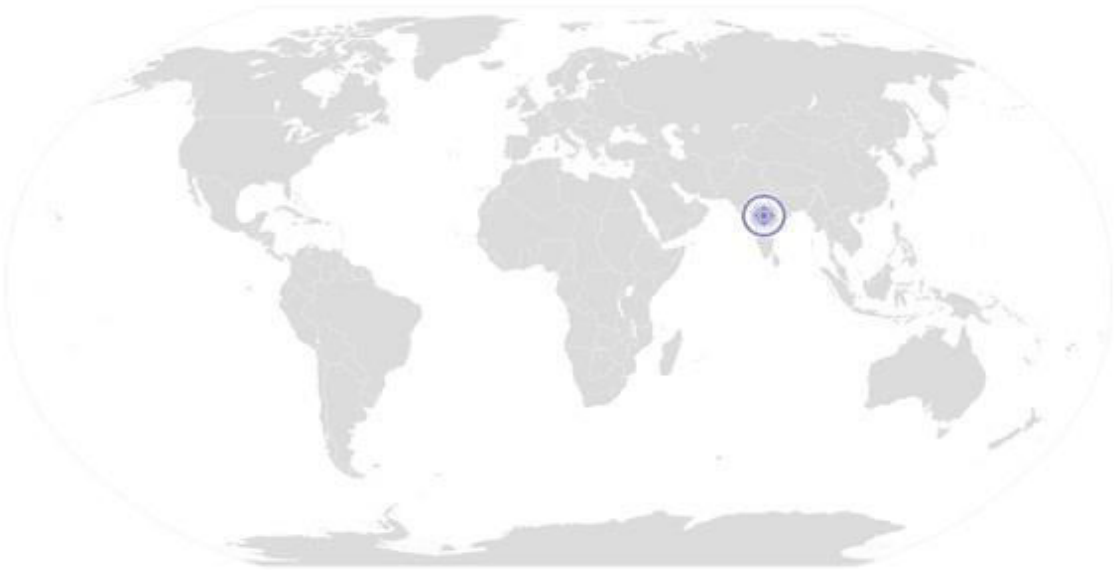
	SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6 . Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems

	from others SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager



NOS Version Control

NOS Code	**RSC / N 5001**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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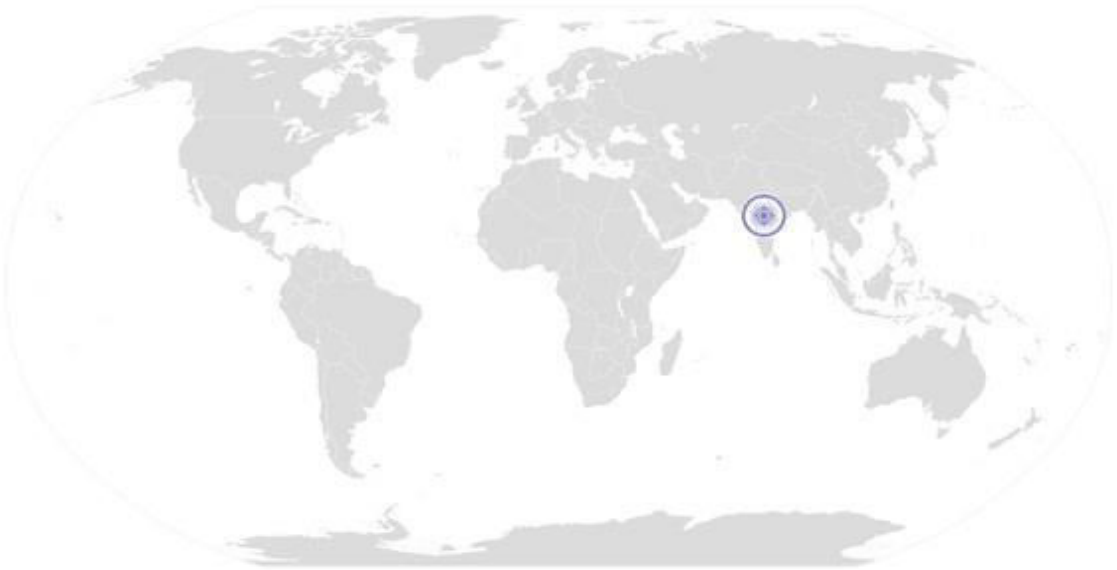


Overview

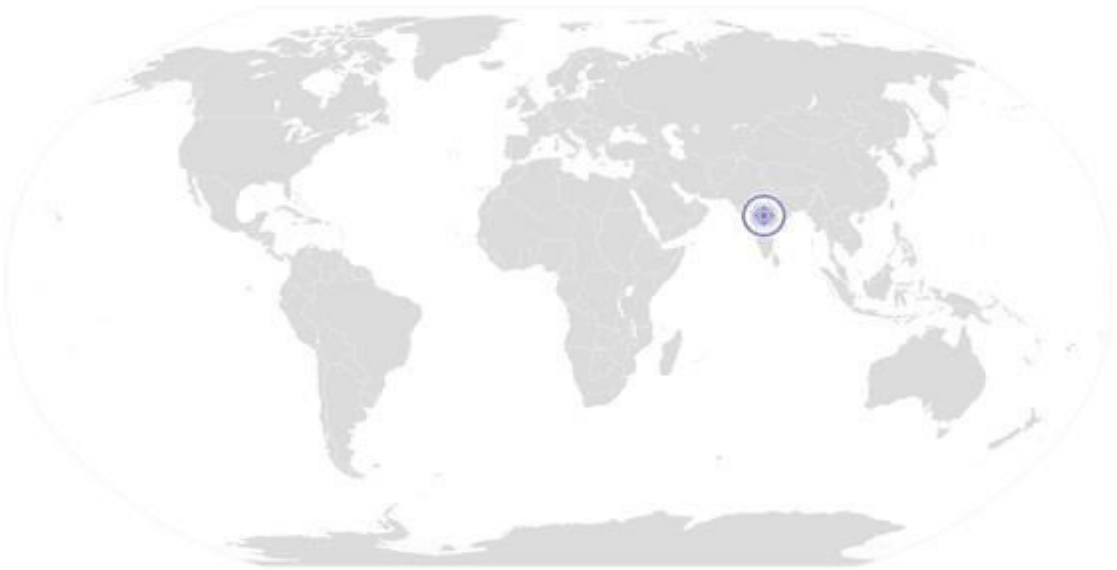
This unit is about reporting and documentation

Unit Code	RSC / N 5002
Unit Title (Task)	To 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
Recording and 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. Reporting	The user/individual on the job needs to know and understand: KA1. Different methods of recording information KA2. Various documents that need to be maintained KA3. Company procedure for filling/maintaining up the documents KA4. Procedures for reporting to the appropriate authority KA5. Procedures for recording damage, breakages etc KA6. Reporting incidents where standard operating procedures are not followed KA7. The importance of complete and accurate documentation KA8. How to maintain complete documentation accurately and within agreed

	timescales KA9. The importance of ensuring that the documents are correct KA10. The actions to be taken if the documents are not correct KA11. The importance of maintaining the security and confidentiality of recorded information KA12. Procedures to maintain confidentiality of information KA13. The appropriate method for responding to requests for information KA14. The reporting procedures to followed before disclosing information to any outside party
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how 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 The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills) The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust

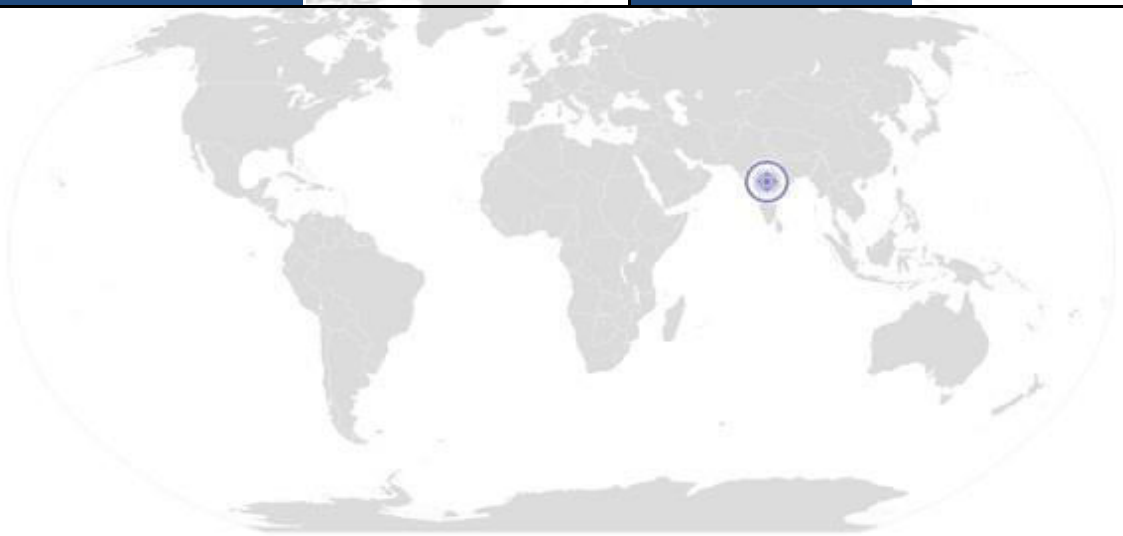
	SA16. Take responsibility for completing one's own work assignment SA17. Take initiative to enhance/learn skills in ones's area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6 . Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking

	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager



NOS Version Control

NOS Code	**RSC / N 5002**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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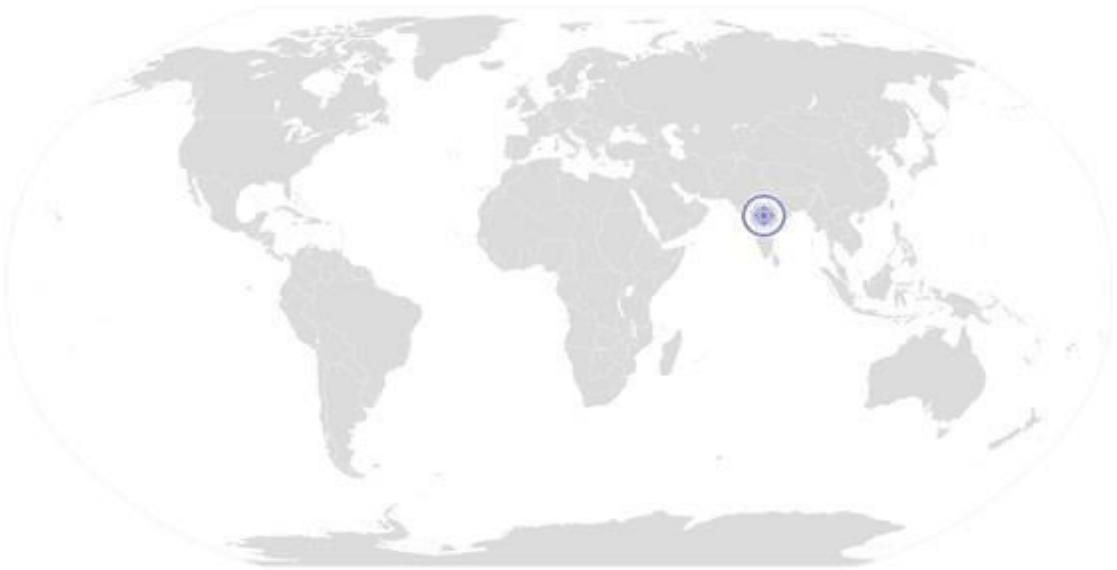


Overview

This unit is about carrying out quality checks

National Occupational Standard

Unit Code	RSC / N 5003
Unit Title (Task)	To carry out quality checks
Description	This unit is about carrying out quality control activities
Scope	This unit/task covers the following: • Carrying out quality checks to identify problems • 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)	

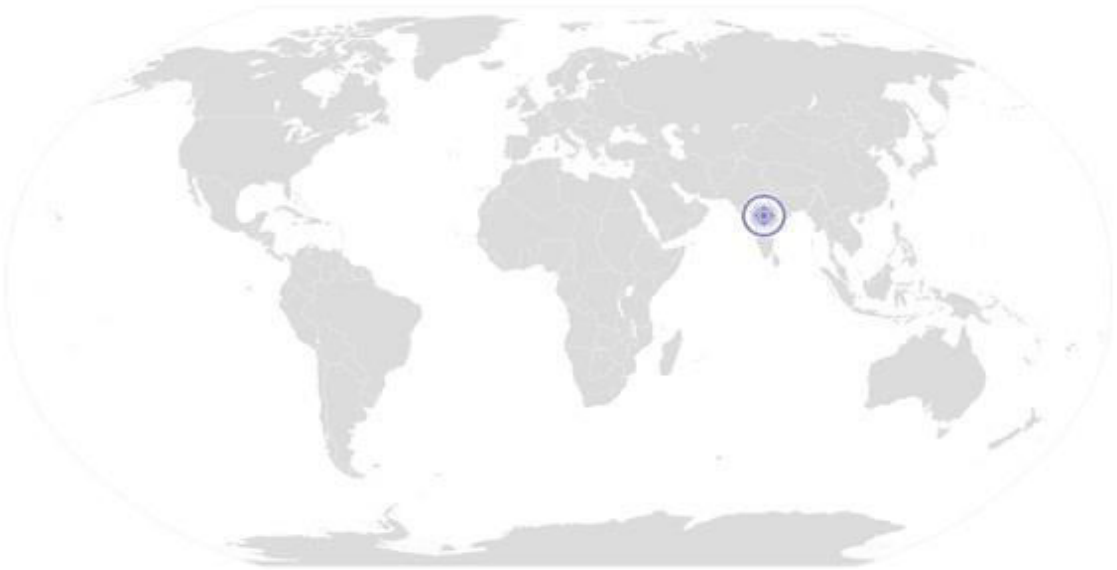
Technical Knowledge	The user/individual on the job needs to know and understand: KA1. The importance of quality control procedures KA2. Relevance and importance of activities and how they contribute to the achievement of the quality objectives, KA3. Proper procedure for selecting the material/product and performing quality checks without affecting the material KA4. Availability of work instructions, as necessary, KA5. Characteristics of the product/material KA6. Use of suitable equipment KA7. Availability and use of monitoring and measuring devices, KA8. Requirements of records KA9. Importance of maintaining accurate up-to-date records KA10. The need to report within the stipulated time KA11. Implications of inaccurate measuring and testing instruments and equipment KA12. The cost of non-conformance to quality standards KA13. Implications (impact on internal/external customers) of defective products, materials or components
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how 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
	The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills)

	The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust SA16. Take responsibility for completing one's own work assignment SA17. Take initiative to enhance/learn skills in ones's area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual
B.Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity

	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6 . Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC / N 5003**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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National Occupational Standard

Overview

This unit is about problem identification and escalation

National Occupational Standard

Unit Code	RSC / N 5004
Unit Title (Task)	**To 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: - Raw materials - Compounds - Product - Equipment - Others • Identify solutions to problems • Take 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

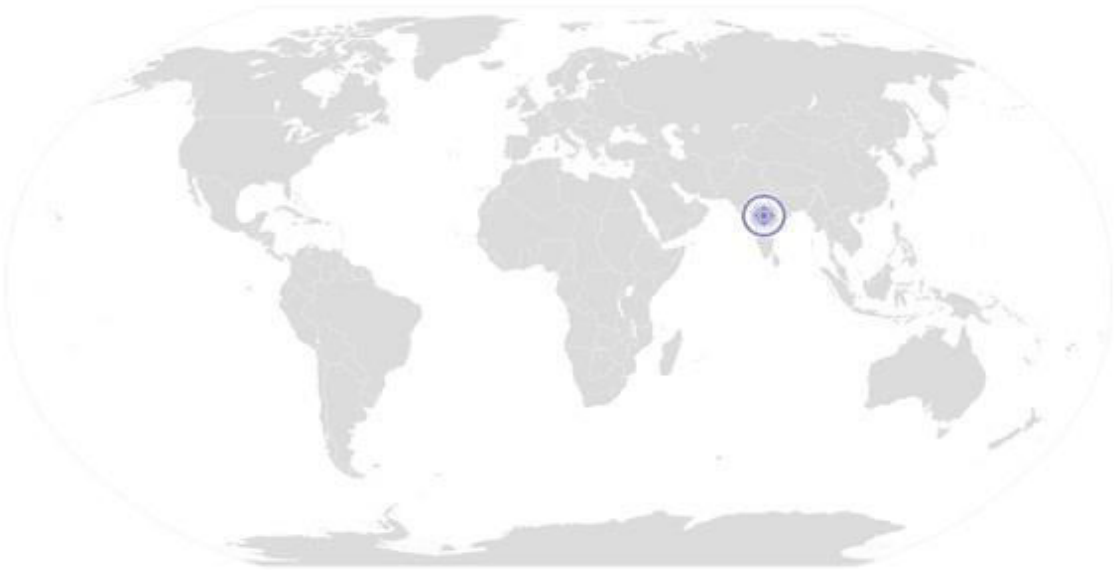
	PC14. Report/document problem and corrective action in an appropriate manner PC15. Monitor corrective action PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved PC17. Ensure that corrective action selected is viable and practical PC18. Ensure that correct 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. Technical Knowledge	The user/individual on the job needs to know and understand: KA1. Indicators of problems KA2. The working of the equipment and accessories(if applicable) KA3. The impact of operations on the user and equipment(if applicable) KA4. The impact of operations on the final product (if applicable) KA5. The effect of not rectifying the problems identified KA6. The reason for the occurrence of previous problems KA7. Measures and steps that have been taken to address the previous problems KA8. Possible solutions for various problems KA9. The correct method for carrying out corrective actions outlined for each problem KA10. The impact of not carrying out the corrective actions KA11. The documentation procedure for recording such problems, as per company norms KA12. The escalation matrix for reporting problems KA13. Escalation matrix for reporting unresolved problems KA14. The time frame within which in which each problem needs to be escalated KA15. Manner in which each problem needs to be escalated
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how 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
	The user/individual on the job needs to know and understand how to: 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 (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: 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. Work in a team and other behavioral skills required to support the small group activities (Quality Circle, Cross Functional Team, Suggestion Scheme) SA13. Practice honesty with respect to company property and time SA14. Communicate with people in a form and manner and using language that is open and respectful SA15. Resolve any difficulties in relationships with colleagues , or get help from an appropriate person, in a way that preserves goodwill and trust SA16. Take responsibility for completing one's own work assignment SA17. Take initiative to enhance/learn skills in ones's area of work SA18. The capacity to learn from experience in a range of settings and scenarios and the capacity to reflect on and analyse one's learning. SA19. Is open to new ways of doing things SA20. The capacity to envisage and articulate personal goals; to develop strategies and take action to achieve them. SA21. Avoid absenteeism SA22. Act objectively , rather than impulsively or emotionally when faced with difficult/stressful or emotional situations SA23. Work in disciplined factory environment SA24. Be punctual
	Decision Making

B.Professional Skills	The user/individual on the job needs to know and understand how to: SB1. Take appropriate decisions regarding processing steps in view of changing quality and availability of raw materials and finished goods.
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. seek clarification on problems from others SB3. apply problem-solving approaches in different situations SB4. refer anomalies to the line manager
	Customer Centricity
	NA
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB 5. Interpret quality for sheet SB 6 . Suggest improvements(if any) in process/product/materials based on results and experience
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB7. Proper collection of waste material SB8. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB9. Handle equipment/rubber sheet SB6. seek clarification on problems from others SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager

NOS Version Control

NOS Code	**RSC / N 5004**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Industry	**Rubber Manufacturing**	**Drafted on**	**04/06/13**
Industry Sub-sector	**Tyre**	**Last reviewed on**	**29/12/15**
Occupation	**Tyre building**	**Next review date**	**29/12/17**



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CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Radial Building Operator
Qualification Pack Code: RSC/ Q 0520
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. 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 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessment Strategy			Marks Allocation		
NOS	**Elements**	**Performance Criteria**	**Total**	**Theory**	**Practical**
1. RSC / N 2001 Prepare tyre building	Equipment readiness	PC1. Ensure that tyre building machine is clean	3	3	0
		PC2. Ensure that building drum is clean	3	3	0
		PC3. Ensure that building drum of the correct size is in place	3	3	0
		PC4. Set parameters for the building machine as per job card	3	3	0
		PC5. Follow equipment preparation process as per company requirements	3	3	0
		PC6. Ensure that no delays are caused as a result of improper preparation and failure to identify problems.	3	3	0
		PC7. Keep other building materials & tools such as drum cement, inner liner, sidewall, plies, bead, tyre chord, belts, stitchers, knife and tread ready	2	2	0
	Raw material appropriateness	PC8. Ensure that material to be fed is approved by laboratory	6	2	4
		PC9. Collect all materials required for the batch	6	2	4

		PC10. Match the batch code of each material with the batch code on the job schedule given by the planning department	7	3	4
		PC11. Ensure that components such as bead, freshening solvent and swab are ready	6	2	4
		PC12. Ensure that other materials are in the correct quantity	6	2	4
		PC13. Ensure, by visual inspection, that raw material is of desired quality (free of contamination etc.)	4	2	2
		PC14. Ensure that no delays are caused as a result of improper preparation and failure to identify problems	2	2	0
	Health & Safety	PC15. Housekeeping and Safety in Tyre Building are	6	2	4
		PC16. Do not wear loose and torn clothes during working hours	6	2	4
		PC17. Ensure no spillage of Naphtha or Solvent	6	2	4
		PC18. Use Forklift / Trolleys etc. while lifting heavy materials such as heavy finished tyres to avoid physical injury.	6	2	4
		PC19. Ensure use of personal protective equipment like wearing protective gloves, safety shoes, Safety Glasses, safety mask etc	7	3	4
		PC20. Adhere to all the other safety norms (like wearing protective gloves etc)	6	2	4
		PC21. Comply with other health, safety, environment guidelines, regulations etc in accordance with company procedure	6	2	4
			100	50	50
2. RSC / N 2002 Build radial pneumatic tyre	Raw material appropriateness	PC1. Ensure, by visual inspection, that tyre building material is of desired quality (free of contamination etc.)	2	2	0
		PC2. Ensure that batch size of tyre building material is as per specified quantity	2	2	0

		PC3. Plan batch sequence in shifts based on raw material availability/rejection to maximize output	2	2	0
		PC4. Position bead joint correctly for proper tyre balance.	4	2	2
		PC5. Set inner liner at the drum and rotate around the drum one turn	4	2	2
		PC6. Cut joint with a hot knife	4	2	2
		PC7. Set inner liner end to end so that the diagonal cutting seam is at the top	4	2	2
		PC8. Fasten the ends together manually	4	2	2
		PC9. Set cord ply ends at the drum and rotate the drum one turn.	4	2	2
		PC10. Cut the cord ply manually and join with 2 - 5 overlapping cords	4	2	2
		PC11. Press the joint carefully at the edges	4	2	2
	Operation	PC12. Mount bead wire and turn-up is done automatically.	4	2	2
		PC13. Turn edges with bladders over the beads and stitch tightly.	4	2	2
		PC14. Set sidewall ends at the drum and rotate around the drum one turn.	4	2	2
		PC15. Set sidewall end to end and fasten the seam together manually.	4	2	2
		PC16. Tread Package Manufacturing: Join belt by cutting it with a hot knife and setting the ends together at the belt drum.	4	2	2
		PC17. Set end of the nylon bandage at the drum at the middle of the belt.	4	2	2
		PC18. Wind the bandage on top of the belt 1-2 times and cut with scissors	4	2	2
		PC19. Set tread end to end and join manually after the machine has pulled tread at the drum	4	2	2

		automatically			
		PC20. The carcass and tread Package are joined automatically.	4	2	2
		PC21. Set the carcass at the flanges of the carcass drum, apply pressure and fasten to the tread package and stitch together.	4	2	2
		PC22. Ensure that material wastage is within tolerance limits	4	2	2
		PC23. Ensure that no rework or rejection is generated.	4	2	2
		PC24. Match the quality of output to company's product requirements	2	2	0
		PC25. Meet production quantity targets set for the operation	2	2	0
		PC26. Follow work instructions as laid down by the company	2	2	0
	Health & Safety	PC27. Ensure Housekeeping and Safety in Tyre Building area.	2	2	0
		PC28. Do not wear loose and torn clothes during working hours	2	2	0
		PC29. Ensure that personal protective equipment like wearing protective gloves, safety shoes, Safety Glasses, safety mask etc)	2	2	0
		PC30. Use Forklift / Trolleys etc. while lifting heavy materials such as heavy finished tyres to avoid physical injury.	1	1	0
		PC31. Comply with other health, safety, environment guidelines, regulations etc in accordance with organizational SOP	1	1	0
			100	60	40
3. RSC / N 2003 Post tyre building activity for radial tyre	Operation	PC1. Follow work instructions as laid down by the company	4	4	0
		PC2. Remove green tyre from the TBM and put on a trolley	14	4	10
		PC3. Transport tyre to painting section	14	4	10
		PC4. Spray paint tyre from inside and outside and dry in a hot chamber and allow to cool for definite time	14	4	10

		PC5. Remove tyre and transport to curing section for tyre curing	2	2	0
		PC6. Visually inspect tyre for defects	2	2	0
		PC7. Handover the equipment to the next operator in clean and good condition	2	2	0
	Material disposal	PC8. Dispose off waste material as per waste disposal procedures laid down by the organizational SOP	3	3	0
	Batch Marking	PC9. Carry out tyre marking as per instructions laid down by the company (in terms of size, weight, colour etc).	3	3	0
		PC10.	0	0	0
	Sampling	PC11. Send sample of specified product/batch number to lab for testing, if warranted	2	2	0
		PC12. Send sample of specified batch number to lab for testing	2	2	0
		PC13. Send sample in specified quantity to lab for testing	2	2	0
		PC14. Send sample in the specified form to lab for testing	2	2	0
		PC15. Send the remaining material to the designated storage area	2	2	0
	Health & Safety	PC16. Ensure Housekeeping and Safety in Tyre Building area	2	2	0
		PC17. Do not wear loose and torn clothes during working hours	6	2	4
		PC18. Use Forklift / Trolleys etc. while lifting heavy materials such as heavy finished tyres to avoid physical injury.	6	2	4
		PC19. Ensure that personal protective equipment like wearing protective gloves, safety shoes, Safety Glasses, safety mask etc	6	2	4
		PC20. Spray paint the tyre safely by using protective equipment to cover the face and other body parts	6	2	4
		PC21. Comply with other health, safety, environment guidelines,	6	2	4

		regulations etc in accordance with company procedure			
			100	50	50
4. RSC / N 5001 To Carry Out Housekeeping	Pre housekeeping activities	PC1. Inspect the area while taking into account various surfaces	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
	Operations	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	3	3	0

		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	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
	General	PC23. Maintain schedules and records for housekeeping duty	3	3	0
		PC24. Replenish any necessary supplies or consumables	3	3	0
			100	70	30
5. RSC / N 5002 To Carry Out Reporting And Documentation	Reporting	PC1. Report data/problems/incidents as applicable in a timely manner	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
	Recording and Documentation	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
	Information Security	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
			100	60	40
6. RSC / N 5003 To Carry Out Quality Checks	Inspection	PC1. Ensure that total range of checks are regularly and consistently performed	24	10	14
		PC2. Use appropriate measuring instruments, equipment, tools, accessories etc ,as required	24	10	14
	Analysis	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
	Reporting	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
			100	60	40
7. RSC / N 5004 To Carry Out Problem Identification And Escalation	Problem Identification	PC1. Identify defects/indicators of problems	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
	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)	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	8	5	3

		and corrective action in an appropriate manner			
		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
	Problem Escalation	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
			100	70	30