



APPRENTICESHIP CURRICULUM
for
Tyre Moulding/Curing
under
Rubber, Chemicals and Petrochemicals

1	Program Title: Tyre Moulding/Curing
2	Program Code, if any: RSC/Q0212, RSC/Q0216, RSC/Q0211, RSC/Q1904
3	Duration (hours and months) for theory (Block I): 960 hours (5 months approximately)
4	Duration (hours and months) for On the Job Training (Block II): 5952 hours (31 months approximately with instructions)
5	Certifying body for theory component: RSDC
6	Certifying Body for On the Job training/practical component: Tyre manufacturing companies
7	Minimum eligibility criteria (Educational Qualification and/or technical Qualification and Experience) VIII Pass
8	Trainer's Qualification and Experience (BT and OJT): B.Tech/BE preferably in Rubber, Chemical or Polymer with 5+ Yrs. of experience in Rubber or related industry
9	Basic Training exemption criteria: Graduates
10	<p>Indicative list of training tools required to deliver this qualification (may be attached as Annex A):</p> <ul style="list-style-type: none"> • Tyre building machine • Strip cutter/feeders • Band builders • Bead flipping machines • Sidewall buffers • Guillotine cutters • Slab cutters • Fabric processing machines • Mill aprons • Mill feed conveyors • Mill strip blenders • Air drums • Various equipment used by different organisations in the industry • A sample health and safety policy document • Mock emergency signage in the appropriate areas of the training institute • Cases for study and analysis • Laptop/PC with internet connectivity • Whiteboard and marker • Projector or flipcharts • Blackboard and chalk • Participant handbook • Copies of hand-outs (related to various modules of the course) • Samples of RSS sheets

- Crepe rubber
- TSR rubber
- Synthetic rubber
- Reclaimed rubber
- Rubber product
- Tyre sample with sidewall coding
- Tyre cut sections
- Tyre moulding machine
- Tyre mould
- Green tyre
- Release agent
- Clamp
- Crane
- Machine
- Mould cleaning equipment
- Cured Tyre
- Tyre finishing tools such as flash removing tool, scissors, etc.
- Tyre/Tyres with different moulding defects
- Duster
- Different cleaning equipment
- Samples of relevant documents and reports
- Samples of standard operating procedures and work instructions
- Tyres with different quality defects
- Different inspection tools like vernier callipers, micrometer, rubber hardness tester, measuring tape, tread depth gauge, x-ray machine, etc.
- Samples of PPE (personal protective equipment) such as safety goggle, safety shoes, safety gloves, safety hat, mask, earmuff, etc.
- Sample first aid boxes
- Multi-purpose fire extinguishers
- Hybrid press
- Hydraulic curing press
- Mould heating devices
- Bladder curing press

11 Formal structure of the curriculum

	Modules	Duration of Training-Theory	Duration of Training-Practical	Total duration
Basic Training Program - Mould Cleaning and Inspection Operator Semesters 1-2	Introduction	5	0	5
	Gender and PwD Sensitisation	5	0	5
	Raw material Appropriateness	10	25	35
	Inspection and Material Readiness	10	25	35
	Raw Material and System Appropriateness for Mould Cleaning	10	25	35
	Mould Cleaning Operation	10	20	30
	Health & Safety	5	15	20
	Pre housekeeping activities	5	15	20
	Housekeeping Operation	5	15	20
	Carrying out Reporting, Documentation and Information Security	2	5	7
	Inspection and Analysis for Quality Checks	2	5	7
	Reporting Results of Quality Check	2	5	7
	Problem Identification	2	5	7

	Necessary Action and Problem Escalation	2	5	7
Total		75	165	240
	Modules	Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration
Basic Training Program - Bladder Assembly Operator Semesters 2-3	Introduction	5	0	5
	Gender and PwD Sensitisation	5	0	5
	Equipment readiness	5	10	15
	Material appropriateness	5	10	15
	Safety measures for preparation of materials and tools	5	10	15
	Raw Material appropriateness	5	10	15
	Operations of performing bladder assembly activities	5	10	15
	Bladder Assembly – Safety Measures	5	10	15
	Operations of performing post bladder assembly activities	5	10	15
	Material disposal	5	10	15
	Post Bladder Assembly –	5	10	15

	Safety Measures			
	Pre-housekeeping activities	5	10	15
	Operations of carrying out housekeeping activities	5	10	15
	Post-housekeeping activities	5	10	15
	General responsibilities	2	6	8
	Reporting, Recording and Documentation	2	5	7
	Information Security	2	5	7
	Inspection, Analysis and Reporting of problems while carrying out quality checks	2	5	7
	Problem Identification	2	5	7
	Necessary Action	2	5	7
	Problem Escalation	2	5	7
	Total	84	156	240
	Modules	Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration
Basic Training Program – Pneumatic Tyre Moulding Operator	Introduction to Rubber & Tyre Industry	5	0	5
	Prepare Pneumatic Tyre Moulding Machine	10	30	40

Semesters 4-5	Perform Pneumatic Tyre Moulding Operation	10	30	40
	Preparing Post Pneumatic Tyre Moulding Operation activities	10	30	40
	Carry out housekeeping in rubber product manufacturing	10	20	30
	Carry out reporting and documentation	5	15	20
	Carry Out Quality Checks	5	15	20
	Health and Safety	5	20	25
	Carry out problem identification and escalation	5	15	20
	Total		65	175
	Modules	Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration
Basic Training Program – Retreaded Tyre Curing Operator	Introduction	4	0	4
	Gender and PwD Sensitisation	4	0	4
	Equipment readiness	5	15	20
	Material readiness	5	15	20

Semesters 5-6	Manage Health and Safety	5	15	20
	Material Appropriateness	5	15	20
	Operation of Retreaded Tyre Curing	5	15	20
	Operation of Post-Curing Activities	5	15	20
	Material disposal and Batch Marking	5	15	20
	Pre-housekeeping activities	5	15	20
	Operations To carry out housekeeping	5	10	15
	Post housekeeping activities	5	10	15
	General Responsibility	2	5	7
	Reporting, Recording and Documentation	2	5	7
	Information Security	2	5	7
	Inspection, analysing and reporting	2	5	7
	Problem Identification and Escalation	2	5	7
	Necessary Action	2	5	7
	Total		70	170
Total duration of BT		294	666	960

	Modules	Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration	
On the Job Training Program - Cleaning and Inspection Operator Semesters 1-2	Raw material Appropriateness	4	120	124	
	Inspection and Material Readiness	4	120	124	
	Raw Material and System Appropriateness for Mould Cleaning	4	120	124	
	Mould Cleaning Operation	4	120	124	
	Health & Safety	4	120	124	
	Pre-housekeeping activities	4	120	124	
	Housekeeping Operation	4	120	124	
	Carrying out Reporting, Documentation and Information Security	4	120	124	
	Inspection and Analysis for Quality Checks	4	120	124	
	Reporting Results of Quality Check	4	120	124	
	Problem Identification	4	120	124	
	Necessary Action and Problem Escalation	4	120	124	
	Total		48	1440	1488

	Modules	Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration
On the Job Training Program-Bladder Assembly Operator Semesters 2-3	Equipment readiness	4	74	78
	Material appropriateness	4	74	78
	Safety measures for preparation of materials and tools	4	74	78
	Raw Material appropriateness	4	74	78
	Operations of performing bladder assembly activities	4	74	78
	Bladder Assembly – Safety Measures	4	74	78
	Operations of performing post bladder assembly activities	4	74	78
	Material disposal	4	74	78
	Post Bladder Assembly – Safety Measures	4	74	78
	Pre housekeeping activities	4	74	78
	Operations of carrying out housekeeping activities	4	74	78

	Post housekeeping activities	4	74	78
	General responsibilities	4	74	78
	Reporting, Recording and Documentation	4	74	78
	Information Security	4	74	78
	Inspection, Analysis and Reporting of problems while carrying out quality checks	4	80	84
	Problem Identification	4	74	78
	Necessary Action	4	74	78
	Problem Escalation	4	74	78
Total		76	1412	1488
		Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration
On the Job Training Program- Pneumatic Tyre Moulding Operator Semesters 4-5	Introduction to Rubber & Tyre Industry	8	157	165
	Prepare Pneumatic Tyre Moulding Machine	8	157	165
	Perform Pneumatic Tyre Moulding Operation	8	157	165
	Preparing Post Pneumatic Tyre Moulding	8	157	165

	Operation activities			
	Carry out housekeeping in rubber product manufacturing	8	157	165
	Carry out reporting and documentation	8	157	165
	Carry Out Quality Checks	8	160	168
	Health and Safety	8	157	165
	Carry out problem identification and escalation	8	157	165
	Total	72	1416	1488
	Modules	Duration of Training-Theory (in hours)	Duration of Training-Practical	Total duration
On the Job Training Program-Retreaded Tyre Curing Operator Semesters 5-6	Equipment readiness	4	102	106
	Material readiness	4	102	106
	Operation of Retreaded Tyre Curing	4	102	106
	Operation of Post-Curing Activities	4	102	106
	Material disposal and Batch Marking	4	102	106
	Pre housekeeping activities	4	102	106

	Operations To carry out housekeeping	4	102	106
	Post housekeeping activities	4	102	106
	General Responsibility	4	102	106
	Reporting, Recording and Documentation	4	102	106
	Information Security	4	102	106
	Inspection, analysing and reporting	4	106	110
	Problem Identification and Escalation	4	102	106
	Necessary Action	4	102	106
	Total	56	1432	1488
	Total duration of OJT	252	5700	5952

12 Total Pass marks

	Total and Pass Marks- Theory	Total and Pass Marks- Practical
Basic Training Program	210 out of 300	140 out of 200
On the Job Training Program	210 out of 300	140 out of 200

13 Job description-brief: On completion of the course, the individual has to perform the following job responsibilities:

- Inspect and clean moulds making it ready to use in the rubber products industry
- Fit the bladder in the bladder rings and make it available for curing of tyres.
- Load a green tyre in a curing press fitted with proper tyre mould

	<ul style="list-style-type: none"> • 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 • Cure retreaded tyre using hot process
14	Employment avenues/opportunities: Automotive Industry, Construction, Agriculture, Sport and Leisure Industry
15	Curriculum update version and date: 12.03.2020, 1.0
16	Curriculum revision date: 12.03.2023

Theory components (Block I)

Mould Cleaning and Inspection Operator (Semesters 1-2)

Modules	Topics/Expected Key Learning outcomes
Introduction Theory: 5 hours Practical: 00 hours Corresponding NOS: Bridge module	<ul style="list-style-type: none"> • List the benefits provided by the rubber sector and the tyre industry • Summarise the role and the importance of the rubber sector and the tyre industry • Paraphrase information (evidence, articles, etc.) regarding the rubber sector and the tyre industry • Categorise various services and sub-sectors in the rubber industry • Describe the key emerging trends in the rubber industry • List a few major organisations in the rubber sector • Compare the current and the projected markets, for mould cleaning and inspection operator, in India and abroad • Provide a few examples of current and upcoming trends in mould cleaning and inspection operation • Classify the skills and competencies along with a career path for a mould cleaning and inspection operator
Gender and PwD Sensitisation Theory: 5 hours Practical: 00 hours	<ul style="list-style-type: none"> • Explain the concept of gender identity, roles and expressions of an individual • Recognise the difference and diversity among genders • Devise ways to get rid of discrimination on the basis of gender

<p>Corresponding NOS: Bridge module</p>	<ul style="list-style-type: none"> • Practise using gender-neutral/gender-inclusive terms to make everybody feel important and a part of the organisation • Implement strict laws to prevent sexual harassment towards the opposite gender • Spread the idea of equal payment, opportunities and just appraisal as a norm • Inform about the job roles that can be performed by PwD • Describe proper attitude towards Persons with disability • Prioritise strict laws to prevent workplace bullying, physical, and verbal abuse • Practise using of relevant and assistive technology
<p>Raw Material Appropriateness</p> <p>Theory: 10 hours</p> <p>Practical: 25 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • Summarise the types of chemical needed for cleaning moulds • Determine the availability of the chemicals • Detect the criteria for checking if the chemicals are approved by the technical team • Identify the parameters for approval • Choose appropriate materials to avoid rejection
<p>Inspection and Material Readiness</p> <p>Theory: 10 hours</p> <p>Practical: 25 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • State the importance of clean moulds • Determine the production keeps the last piece cured • Recognise whether the cured pieces need cleaning now or later • Evaluate tools. Hydraulic lift trucks to remove mould from presses • Provide proper space for keeping the moulds in the mould cleaning area • Identify mould cleaning machine • Discover material used for cleaning and the machine is ready with services
<p>Raw Material and System Appropriateness for Mould Cleaning</p>	<ul style="list-style-type: none"> • List different types of chemical needed for cleaning moulds • Identify the availability of the chemicals • Describe the criteria for checking if the chemicals are approved by the technical team

<p>Theory: 10 hours</p> <p>Practical: 25 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • Prepare for trial of cleaning system and materials • Select appropriate materials to avoid rejection
<p>Mould Cleaning Operation</p> <p>Theory: 10 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N0232</p>	<ul style="list-style-type: none"> • Recognise that the mould cleaning machine has the services like pressurised air , vacuum suction device • Explain mounting the mould properly in the mould cleaning machine • Detect if the mounted mould starts rotating 360 degrees • Identify methods of injecting the mould cleaning agent with high pressure air to strike the mould surface to be cleaned • Elaborate the process of cleaning mould machine in between running, if required • State the ways to keep the mould in storage for regular production use • Inspect if there is any damage in the mould • Choose designated location to move damaged mould safely, as per organisational SOP
<p>Health and Safety</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • Discuss handling hand tools, hydraulic lifts, and moulds safely • Inspect that the exhaust is operational to ensure the fine particles out of mould cleaning is not affecting the environment or self or people round the mould • Recognise the reasons to avoid wearing loose shirt • Explain all safety norms (such as wearing protective gloves, masks and earplugs) • Describe handling the prepared product using hand gloves and other safety equipment • Explain LOTO (Lock out, Tag Out) while equipment cleaning • Get rid of recyclable and reusable material at identified location • Elaborate health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards

<p>Pre-housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N 5001</p>	<ul style="list-style-type: none"> • State the importance of Inspection of the area while taking into account various surfaces • Identify the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain • Recognise the importance of cleaning equipment for proper working • Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person • Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces • Cite the necessity of adequate ventilation for the work being carried out • Describe the personal protective equipment required for the cleaning method and materials being used
<p>Housekeeping Operations</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N 5001</p>	<ul style="list-style-type: none"> • Explain the use the correct cleaning method for the work area • Elaborate type of soiling and surface • State the importance of cleaning activity without disturbing others • Recognise accidental damage, if any, caused while carrying out the work • Describe reporting to the appropriate person any difficulties in carrying out your work • Identify any additional cleaning required that is outside one's responsibility or skill • Point out to the appropriate person about the cleaning responsibility outside one's skill • Identify if there is no oily substance on the floor to avoid slippage • Explain the importance of maintaining order and make sure that no scrap is lying around • Maintain housekeeping equipment and supplies • List names of housekeeping equipment and supplies • Elaborate procedures to deal with any accidental damage caused during the cleaning process • State the importance of cleanliness on completion of the work

	<ul style="list-style-type: none"> • Describe the necessity of returning the equipment, materials and personal protective equipment that were used to the right places making sure they are clean, safe and securely stored
<p>Carrying out Reporting, Documentation and Information Security</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • State ways to report data/problems/incidents as applicable in a timely manner • Recognise reporting to the appropriate authority as laid down by the company • Describe reporting procedures as prescribed by the company • Identify documentation to be completed relating to one's role • Plan recording details accurately in an appropriate format • Discuss ways to complete all documentation within stipulated time according to company procedure • Restate the importance of the final document meeting with the requirements of the persons who requested it or making any amendments accordingly • Recognise the ways to respond to requests for information in an appropriate manner • Explain the importance of following organisational procedures • Elaborate ways to ensure secured information • List ways to inform the concerned authority about the information received
<p>Inspection and Analysis for Quality Checks</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Recognise the range of checks regularly and consistently performed • Use appropriate measuring instruments, equipment, tools, accessories etc. as required • Identify non-conformities to quality assurance standards • Detect potential causes of non-conformities to quality assurance standards • State the impact on final product due to non-conformance to company standards • Analyse corrective action to address problem • Assess the effectiveness of corrective action

<p>Reporting Results of Quality Check</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Identify the results of the quality check correctly • State the results of the findings • Analyse the results of the findings within stipulated time • State corrective action to address problem • Assess quality check results • Provide results of the findings to QC in charge/appropriate authority • Explain reporting procedure where the cause of the defect cannot be identified
<p>Problem Identification</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Identify defects/indicators of problems and the causes that may lead to the problem • Recognise practices that may impact the final product quality • State ways to escalate the problem to avoid delay • Explain applicable corrections and formulate corrective action • Communicate problem/remedial action to appropriate parties • Evaluate implementation of corrective action taken to determine if the problem has been resolved • Escalate the problem within stipulated time • Elaborate that no delays are caused as a result of failure to escalate problems
<p>Necessary Action and Problem Escalation</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Explain applicable corrections and formulate corrective action • Communicate problem/remedial action to appropriate parties • Evaluate implementation of corrective action taken to determine if the problem has been resolved • Escalate the problem within stipulated time • Elaborate that no delays are caused as a result of failure to escalate problems

Bladder Assembly Operator (Semesters 2-3)

Modules	Topics/Expected Key Learning outcomes
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<p>Introduction</p> <p>Theory: 5 hours</p> <p>Practical: 00 hours</p> <p>Corresponding NOS: Bridge Module</p>	<ul style="list-style-type: none"> • List the benefits provided by the rubber industry. • Summarise the role and the importance of the rubber industry. • Paraphrase information (evidence, articles, etc.) regarding the rubber industry. • Categorise various services and sub-sectors in the rubber industry. • Describe the key emerging trends in the rubber industry. • List a few major organisations in the rubber sector. • Compare the current and the projected markets, for the rubber industry, in India and abroad. • Provide a few examples of current and upcoming trends in the rubber industry. • Classify the skills and competencies along with a career path for a Bladder Assembly Operator.
<p>Gender and PwD Sensitisation</p> <p>Theory: 5 hours</p> <p>Practical: 00 hours</p> <p>Corresponding NOS: Bridge Module</p>	<ul style="list-style-type: none"> • Explain the concept of gender identity, roles and expressions of an individual • Recognise the difference and diversity among genders • Devise ways to get rid of discrimination on the basis of gender • Practise using gender-neutral/gender-inclusive terms to make everybody feel important and a part of the organisation • Implement strict laws to prevent sexual harassment towards the opposite gender • Spread the idea of equal payment, opportunities and just appraisal as a norm • Inform about the job roles that can be performed by PwD • Describe proper attitude towards Persons with disability • Prioritise strict laws to prevent workplace bullying, physical, and verbal abuse • Practise using of relevant and assistive technology
<p>Equipment readiness</p> <p>Theory: 5 hours</p>	<ul style="list-style-type: none"> • List all the equipment required for bladder assembly • Compare the various features of the different tools • List different types of rings • Provide the functions of all the rings • Identify the cleaning procedure of different tools • Identify the functions of hoist

<p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0222</p>	
<p>Material appropriateness</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0222</p>	<ul style="list-style-type: none"> • List the quality check parameters as relevant for the job role • List the types of defects on bladders • Discuss the process ageing of bladders
<p>Safety measures for preparation of materials and tools</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0222</p>	<ul style="list-style-type: none"> • Discuss the types of injuries involved in handling bladders and rings. • State all safety norms • List all safety gears and their usage • List the health and safety rules and regulations • Identify the national/international or organisational standards for health and safety norms
<p>Raw Material appropriateness</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0223</p>	<ul style="list-style-type: none"> • List the importance of the bladder in assembly • Identify the criteria for testing bladder • List bladder defects

<p>Operations of performing bladder assembly activities</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0223</p>	<ul style="list-style-type: none"> • Describe the implications of wrong fitment of bladder • Discuss the implications of poorly prepared tools • Explain the material disposal procedure
<p>Bladder Assembly – Safety Measures</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0223</p>	<ul style="list-style-type: none"> • List the usage of hoist • State the types of possible injuries while handling a hoist • State all safety norms • Identify all safety gears and their usage • Recognise the health and safety rules and regulations • List the national/international or organisational standards for health and safety norms
<p>Operations of performing post bladder assembly activities</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0224</p>	<ul style="list-style-type: none"> • Discuss the appropriate method for bladder assembling/mounting on rings • Identify the risks and impacts of not following defined work procedures/instructions • List the type of tyre defects due to poor bladder assembly • Discuss the process and importance of quality check process for dimension and appearance

<p>Material disposal</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0224</p>	<ul style="list-style-type: none"> • Discuss the process of waste disposal • Explain the organisation SOP regarding disposal of waste materials • Discuss the implications of inappropriate waste disposal
<p>Post bladder assembly – Safety Measures</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N0224</p>	<ul style="list-style-type: none"> • Discuss the proper handling of materials • Recognise the usage of gloves and other safety equipment • Explain the usage of personal protective gear • Underline the safety guidelines of an organisation
<p>Pre housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Discuss the tasks involved in pre housekeeping activities • Identify the types of surfaces for cleaning • List the various types of materials required for cleaning • Discuss the standards for required for equipment efficiency • Describe the concept of soiling and re-soiling of clean areas • List different signs and their meaning that are used to indicate work in progress/maintenance • Discuss the need for proper ventilation
<p>Operations of carrying out housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p>	<ul style="list-style-type: none"> • Identify correct cleaning method for specific work area • Discuss types of soiling and surfaces • Describe the methods of effective communication • List possible accidental damages and their remedies • Identify the reporting superior • Recognise one's roles and responsibilities

<p>Corresponding NOS: RSC/N5001</p>	
<p>Post housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Describe the methods for making areas oil-proof • Discuss the possible accident that can be caused from stray scrap materials • List the housekeeping equipment and supplies • Identify the workplace procedures for dealing with accidental damages • Identify the cleaning standards/requirements post work • List the PPE required for completion of task • Discuss the types of waste generated
<p>General responsibilities</p> <p>Theory: 2 hours</p> <p>Practical: 6 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Recognise the methods for maintaining schedules and records for housekeeping • Identify the need for necessary supplies or consumables
<p>Reporting, Recording and Documentation</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Identify methods to report data/problems/incidents • Recognise appropriate authority for reporting as laid down by the company • State reporting procedures as prescribed by the company • Identify documentation to be completed relating to one's role • Plan recording details accurately in an appropriate format • Discuss ways to complete all documentation within stipulated time according to company procedure • Recognise the importance of the final documentation and ensure that it meets the requested requirements • Describe the process of making amends to final documentation

<p>Information Security</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • List the ways to respond to requests for information appropriately • Recognise organisational procedures for information security • Explain the importance of following organisational procedures • Describe ways to ensure the received information is secured • Elaborate methods to inform the concerned authority about the information received
<p>Inspection, Analysis and Reporting of problems while carrying out quality checks</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Use appropriate measuring instruments, equipment, tools, accessories etc. as required • Identify non-conformities and its causes to quality assurance standards • Recognise the impact on final product due to non-conformance • State and review corrective action to address problem • Assess quality check results • Explain reporting procedure where the cause of the defect cannot be identified
<p>Problem Identification</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • List defects/indicators of problems • Recognise the wrong practices that may lead to problems • List the impact of malpractices • Recognise practices that may impact the final product quality • Describe operations that might be impacted by the problem
<p>Necessary Action</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p>	<ul style="list-style-type: none"> • List materials and samples required for conducting tests • Compare results to establish reasons for suspected non-conformance • Discuss possible reasons for problems

Corresponding NOS: RSC/N5004	<ul style="list-style-type: none"> • Explain applicable corrections and formulate corrective action • Identify problem/remedial action
Problem Escalation Theory: 2 hours Practical: 5 hours Corresponding NOS: RSC/N5004	<ul style="list-style-type: none"> • Identify the escalation matrix • Escalate the problem within stipulated time • Recognize the appropriate manner for problem escalation • List the possible factors that may result in failure to escalate problems

Pneumatic Tyre Moulding Operator (Semesters 4-5)

Modules	Topics/Expected Key Learning outcomes
Introduction to Rubber & Tyre Industry Theory: 5 hours Practical: 0 hours Corresponding NOS: Bridge Module	<ul style="list-style-type: none"> • Get familiarized with Trainees • Set rules and regulation during program • Brief objectives of training program • Identify your roles and responsibilities • Discuss about Rubber Industry • Explain different sources of Rubber • Discuss about major Rubber Associations • Explain the Tyre History • Discuss the Tyre industry in India • Define all major players of Tyre manufacturer • Identify and define Tyre specifications • Explain the difference between Cross-ply Tyre and Radial Tyre • Define material used in Tyre manufacturing • Discuss and explain Tyre manufacturing • Explain equipment used for Tyre manufacturing • Define Roles and responsibilities for Pneumatic Tyre Moulding Operator

<p>Prepare Pneumatic Tyre Moulding Machine</p> <p>Theory: 10 hours</p> <p>Practical: 30 hours</p> <p>Corresponding NOS: RSC/N1101</p>	<ul style="list-style-type: none"> • Explain construction of Tyre Moulding Machine • Describe the details of Tyre Moulding Machine parts • Prepare Machine for Tyre Moulding • Demonstrate the cleaning process of Tyre moulding machine • Demonstrate the required mould loading in machine • Demonstrate the mould cleaning after loading in machine • Describe the process of arranging 'Green Tyre' for Moulding • Define purpose of Release agent application in mould
<p>Perform Pneumatic Tyre Moulding Operation</p> <p>Theory: 10 hours</p> <p>Practical: 30 hours</p> <p>Corresponding NOS: RSC/N1102</p>	<ul style="list-style-type: none"> • Demonstrate Machine check-up points before Tyre Moulding • Demonstrate Control Panel check-up points before Tyre Moulding • Demonstrate Mould check-up points before Tyre Moulding • Discuss Importance of Mould Cleaning & Maintenance • Describe General operating instruction before Tyre moulding • Explain 'Green tyre' Inspection • Describe preparation points before Tyre Moulding • Explain steps involved in changing mould in Tyre Moulding Machine • Demonstrate the steps for performing Tyre Moulding • Describe the Safety Precautions to be taken during Tyre Moulding. • Discuss Do's and Don'ts for Tyre Moulding Operations
<p>Preparing Post Pneumatic Tyre Moulding Operation activities</p> <p>Theory: 10 hours</p> <p>Practical: 30 hours</p>	<ul style="list-style-type: none"> • Explain Post-Tyre Moulding activities • Describe the Quality issues in Tyre Moulding operation. • Define the Countermeasures to be taken on quality issues related to Tyre Moulding

<p>Corresponding NOS: RSC/N1103</p>	
<p>Carry out housekeeping in rubber product manufacturing</p> <p>Theory: 10 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Explain what is housekeeping • Define importance of Housekeeping • Describe purpose of Housekeeping • Explain benefits of Housekeeping • Explain what is '5S' • Define each 'S' and its meaning
<p>Carry out reporting and documentation</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Explain what is documentation • Describe the importance of Documentation. • Define Purpose of Documentation • Explain Type of Documentation • Describe common Documentation used in Tyre Industry • Explain what is reporting • Describe importance of Reporting • Explain about Government Act and Bylaws • Describe about rules. • Define meaning of Policies and Guidelines • Describe meaning of Procedure • Explain what is work instruction • Define what is communication • Describe communication process • Explain problems in communication • Describe various communication barriers • Explain traits of Active Listening • Discuss points of good writing skill • Explain how to resolve conflict with team member • Discuss Organisational Procedures for Reporting and Documentation • Decide priority of work required to be done • Describe how to select work to do from pending work
<p>Carry Out Quality Checks</p> <p>Theory: 5 hours</p>	<ul style="list-style-type: none"> • Define need of Quality Control in Tyre Moulding • Identify and discuss Measuring equipment for Tyre Inspection • Discuss methodology of Problem solving

<p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Describe implication of Tyre Defects
<p>Health and Safety</p> <p>Theory: 5 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: Bridge Module</p>	<ul style="list-style-type: none"> • Describe the Hazards • Identify Hazard in Tyre Industry • Describe Chemical hazard • Describe Physical hazard • Describe Ergonomic hazard • Explain the health and safety requirements for Tyre Industry • Discuss health and safety procedure of organisation • Explain what is PPEs • Discuss requirement of PPE • Identify different types of PPEs used in Rubber and Tyre Industry • Describe the purpose of various PPEs used in Rubber and Tyre Industry • Demonstrate the Use of different PPEs. • Define what is emergency • Describe various emergency situations in Industry • Describe common injuries in industry • Describe First Aid box and its constituents • Demonstrate how to handle Fire Emergencies • Demonstrate how to use a multi purpose Fire Extinguisher • Describe type and class of Fires • Describe suitable fire extinguisher as per fire type and class
<p>Carry out problem identification and escalation</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Explain what is Problem • Describe how to identify Problem • Define Hierarchies • Discuss Hierarchy in tyre Industry • Explain how to escalate problem • Describe need for escalation

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Retreaded Tyre Curing Operator (Semesters 5-6)

Modules	Topics/Expected Key Learning outcomes
Introduction Theory: 4 hours Practical: 00 hours Corresponding NOS: Bridge Module	<ul style="list-style-type: none"> • List the benefits provided by the Rubber Industry. • Summarise the role and the importance of the Rubber Industry. • Paraphrase information (evidence, articles, etc.) regarding Rubber Industry. • Categorise various services and sub-sectors in the Rubber Industry. • Describe the key emerging trends in the Rubber Industry. • List a few major organisations in the Rubber Industry • Compare the current and the projected markets, in India and abroad. • Provide a few examples of current and upcoming trends in demand for rubber products • Classify the skills and competencies along with a career path for a Tyre Building Operator-Passenger Vehicles
Gender and PwD Sensitisation Theory: 4 hours	<ul style="list-style-type: none"> • Explain the concept of gender identity, roles and expressions of an individual • Recognise the difference and diversity among genders • Devise ways to get rid of discrimination on the basis of gender

<p>Practical: 00 hours</p> <p>Corresponding NOS: Bridge Module</p>	<ul style="list-style-type: none"> • Practise using gender-neutral/gender-inclusive terms to make everybody feel important and a part of the organisation • Implement strict laws to prevent sexual harassment towards the opposite gender • Spread the idea of equal payment, opportunities and just appraisal as a norm • Inform about the job roles that can be performed by PwD • Describe proper attitude towards Persons with disability • Prioritise strict laws to prevent workplace bullying, physical, and verbal abuse • Practise using of relevant and assistive technology
<p>Equipment readiness</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1907</p>	<ul style="list-style-type: none"> • Assess if the curing press is clean and ready to use • Inspect if the tools required for curing operation are ready
<p>Material readiness</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1907</p>	<ul style="list-style-type: none"> • List numbering of all segments

<p>Manage Health and Safety</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1907</p>	<ul style="list-style-type: none"> • Discuss processes of proper safety and maintenance of press • List the certified equipment which are used during curing operation
<p>Material appropriateness</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1908</p>	<ul style="list-style-type: none"> • Discuss how to handle the tyres properly to avoid contamination
<p>Operation of Retreaded Tyre Curing</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1908</p>	<ul style="list-style-type: none"> • Discuss how to Unlock rim and Deflate Air bag • Discuss how to shift the tyre to finishing area after it is cooled at room temperature
<p>Operation of Post-Curing Activities</p>	<ul style="list-style-type: none"> • Discuss how to report repair and maintenance requirement to the Supervisor

<p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1909</p>	
<p>Material disposal and Batch Marking</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N1909</p>	<ul style="list-style-type: none"> • Discuss how to ensure identification and traceability by batch marking/coding for the product as per the instructions laid down by the company
<p>Pre housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • List the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain • Recognise the cleaning equipment is in proper working condition • Discuss the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person • Discuss cleaning activity informing affected people • Recognise if there is adequate ventilation for the work being carried out • List the personal protective equipment required for the cleaning method and materials being used

<p>Operations To carry out housekeeping</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Discuss how to deal with accidental damage, if any, caused while carrying out the work
<p>Post housekeeping Activities</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Identify that there is no oily substance on the floor to avoid slippage • Identify no scrap material is lying around • Discuss maintenance and storage of housekeeping equipment and supplies • Discuss workplace procedures to deal with any accidental damage caused during the cleaning process
<p>General Responsibility</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p>	<ul style="list-style-type: none"> • List the schedules and records for housekeeping duty

<p>Corresponding NOS: RSC/N5001</p>	
<p>Reporting, Recording and Documentation</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Discuss reporting procedures as prescribed by the company • Discuss the completion of documentation which should be completed relating to one's role • Discuss how the final document meets with the requirements of the persons who requested it or make any amendments accordingly • Identify that documents are available to all appropriate authorities to inspect
<p>Information Security</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • List requests for information in an appropriate manner whilst following organizational procedures
<p>Inspection, Analysing and Reporting</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p>	<ul style="list-style-type: none"> • Identify that the total range of checks are regularly and consistently performed • Identify non-conformities to quality assurance standards • Identify potential causes of non-conformities to quality assurance standards • Identify impact on final product due to non-conformance to company standards

<p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Analyse the Record of results of action taken • Analyse effectiveness of action taken • List reporting procedures where the cause of defect cannot be identified
<p>Problem Identification and Escalation</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Identify defects/indicators of problems • Identify any wrong practices that may lead to problems • Identify practices that may impact the final product quality • Identify if the problem has occurred before • Identify other operations that might be impacted by the problem
<p>Necessary Action</p> <p>Theory: 2 hours</p> <p>Practical: 5 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Consider possible reasons for identification of problems • Consider applicable corrections and formulate corrective action • Identify action in a timely manner • Identify corrective action • Consider if corrective action selected is viable and practical • Discuss if correct solution is identified to an identified problem • Discuss that no delays should be caused as a result of failure to take necessary action

I. Practical/On the job Training component (Block II)

Mould Cleaning and Inspection Operator (Semesters 1-2)

Units	Topics/Expected Key Learning outcomes
<p>Raw Material Appropriateness</p> <p>Theory: 5 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • Analyse the types of chemical needed for cleaning moulds • Find out the availability of the chemicals • Examine the approval of the technical team on chemicals for use • Inspect the parameters for approval • Use appropriate materials to avoid rejection • Test the raw materials as per organisation's SOP • Demonstrate the consequences of choosing wrong materials
<p>Inspection and Material Readiness</p> <p>Theory: 8 hours</p> <p>Practical: 17 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • Inspection for dirty moulds on weekend shut downs • Explain production to keep the last piece cured • Distinguish between which cured pieces need cleaning and which does not • Perform mould cleaning with QA/Product assurance to support the decision • Inform production supervisor and get OK to remove mould out of presses for cleaning • Assemble tools, hydraulic lift trucks to remove mould from presses • Practice keeping space in mould cleaning area • Arrange for cleaning as per priority set by supervisor and area manager • Set up the mould cleaning machine • Examine that the machine is ready with services like air pressure, vacuum duct, etc.

<p>Raw Material and System Appropriateness for Mould Cleaning</p> <p>Theory: 5 hours</p> <p>Practical: 17 hours</p> <p>Corresponding NOS: RSC/N0232</p>	<ul style="list-style-type: none"> • Analyse the types of chemical needed for cleaning moulds • Find out the availability of the chemicals • Examine the approval of the technical team on chemicals for use • Inspect the parameters for approval • Use appropriate materials to avoid rejection • Perform trial of cleaning system and materials • Test the raw materials as per organisation's SOP • Demonstrate the consequences of choosing wrong materials
<p>Mould Cleaning Operation</p> <p>Theory: 10 hours</p> <p>Practical: 28 hours</p> <p>Corresponding NOS: RSC/N0232</p>	<ul style="list-style-type: none"> • Set up the mould cleaning machine with appropriate mould cleaning agent, the services like pressurised air, vacuum suction device, etc. • Mount the mould properly in the mould cleaning machine • Practice starting the mould machine and ensure that the mould is rotating 360 degree • Inject the mould cleaning agent with high pressure air to strike the mould surface to be cleaned • Keep the machine running for specified time • Stop the machine and clean the dust off the mould surface , look at the surface for any dirt built up • Repeat the process of cleaning mould machine in between running, if required • Store the mould for regular production use • Report to supervisor if there is any damage to the mould • Move the damaged mould safely, according to organisational SOP

<p>Health and Safety</p> <p>Theory: 14 hours</p> <p>Practical: 33 hours</p> <p>Corresponding NOS: RSC/N0231</p>	<ul style="list-style-type: none"> • Use hand tools, hydraulic lifts and moulds safely • Examine if the exhaust is operational to ensure the fine particles out of mould cleaning is not affecting the environment or self or people round the mould • Practise all safety norms (such as wearing protective gloves, masks and earplugs) • Prepare material and energy audit reports • Check for spills/leakages in various tasks/activities/processes • Prioritise dealing with emergencies, for example, power failures, fire, system failures, spillages and manual intervention to avoid disasters • Collect information on the pattern of electricity and fuel consumption • Carry out routine cleaning of tools, machines and equipment • Replace materials with environment friendly substitutes • Monitor material and water conservation processes • Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards • Report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment • Implement ways to conserve energy
<p>Pre-housekeeping activities</p> <p>Theory: 10 hours</p>	<ul style="list-style-type: none"> • Inspect the area while taking into account various surfaces • Analyse the material requirements for cleaning the areas inspected, by considering risk, time, efficiency and type of stain • Examine if the cleaning equipment is in proper working condition

<p>Practical: 26 hours</p> <p>Corresponding NOS: RSC/N 5001</p>	<ul style="list-style-type: none"> • Practise the selection of suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person • Prepare the sequence for cleaning the area to avoid re-soiling clean areas and surfaces • Devise ways to inform the affected people about the cleaning activity • Display the appropriate signage for the work being conducted • Test if there is adequate ventilation for the work being carried out • Practise wearing the personal protective equipment required for the cleaning method and materials being used
<p>Housekeeping Operations</p> <p>Theory: 12 hours</p> <p>Practical: 32 hours</p> <p>Corresponding NOS: RSC/N 5001</p>	<ul style="list-style-type: none"> • Use the correct cleaning method for the work area • Analyse the type of soiling and surface • Carry out cleaning activity without disturbing others • Practise dealing with accidental damage, if any, caused while carrying out the work • Perform reporting to the appropriate person any difficulties in carrying out your work • Prepare a report describing responsibility that is beyond one's skill to the concerned authority • Examine most appropriate place to carry out test cleans and why this should be done before applying treatments • Modify the operations as per the convenience • Prepare the surface oil-proof to avoid slippage • Report if there are any scrap materials lying around • Maintain housekeeping equipment and supplies

	<ul style="list-style-type: none"> • Practise storage of housekeeping equipment and supplies • Comply with procedures to deal with any accidental damage caused during the cleaning process • Demonstrate ways to make area clean and dry after the completion of work • Return the equipment, materials and personal protective equipment that were used to the right places making sure they are clean, safe and securely stored • Dispose of the waste garnered from the activity in an appropriate manner • Perform proper disposal of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly • Maintain schedules and records for housekeeping duty • Replenish any necessary supplies or consumables
<p>Carrying out Reporting, Documentation and Information Security</p> <p>Theory: 9 hours</p> <p>Practical: 22 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Report data/problems/incidents as applicable in a timely manner • Practise reporting to the appropriate authority as laid down by the company • Compare different methods of recording information • Analyse reporting procedures as prescribed by the company • Evaluate procedures for recording damage, breakages etc. • Prepare documentation to be completed relating to one's role • Assemble details accurately in an appropriate format • Construct all documentation within stipulated time according to company procedure • Examine the final document meets the requirements of the persons who requested it or make any amendments accordingly

	<ul style="list-style-type: none"> • Inspect all the documents before sending it to concerned authorities • Practice ways to respond to requests for information in an appropriate manner • Perform organisational procedures in respect to information security • Use different methods to ensure secured information • Inform the appropriate authority of requests for information received • Interpret the consequences if the procedures are not followed
<p>Inspection and Analysis for Quality Checks</p> <p>Theory: 8 hours</p> <p>Practical: 21 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Perform total range of checks regularly and consistently • Practise the use appropriate measuring instruments, equipment, tools, accessories etc. as required • Manage the maintenance of equipment, measuring instruments, tools, accessories for better results • Point out non-conformities to quality assurance standards • Explain the impact on final product due to non-conformance to company standards • Inspect potential causes of non-conformities to quality assurance standards • Analyse the impact on final product due to non-conformance to company standards • Evaluate the need for action to ensure that problems do not recur • Suggest corrective action to address problem • Review effectiveness of corrective action
<p>Reporting Results of Quality Check</p> <p>Theory: 6 hours</p>	<ul style="list-style-type: none"> • Interpret the results of the quality check correctly • Inform the results of the findings within stipulated time

<p>Practical: 19 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Suggest results of the findings with QC in charge/appropriate authority • Record of results of action taken • Assemble adjustments not covered by established procedures for future reference • Review effectiveness of action taken • Use reporting procedures where the cause of defect cannot be identified
<p>Problem Identification</p> <p>Theory: 6 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Analyse defects/indicators of problems • Inspect any wrong practices that may lead to problems • Perform practices that may impact the final product quality • Examine if the problem has occurred before • Locate other operations that might be impacted by the problem • Modify ways to overcome delay • Test materials and samples for non-conformance and evaluate the results wherever necessary • Practice applicable corrections and formulate corrective action • Formulate action in a timely manner • Communicate problem/remedial action to appropriate parties • Demonstrate corrective action for problems identified according to the company procedures • Report/document problem and corrective action in an appropriate manner • Monitor corrective action • Implement corrective action to resolve problems
<p>Necessary Action and Problem Escalation</p>	<ul style="list-style-type: none"> • Test materials and samples for non-conformance and evaluate the results wherever necessary • Implement reasons for identification of problems

<p>Theory: 9 hours</p> <p>Practical: 24 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Practice applicable corrections and formulate corrective action • Formulate action in a timely manner • Communicate problem/remedial action to appropriate parties • Determine corrective action in a timely manner • Demonstrate corrective action for problems identified according to the company procedures • Report/document problem and corrective action in an appropriate manner • Monitor corrective action • Implement corrective action to resolve problems
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Bladder Assembly Operator (Semesters 2-3)

Units	Topics/Expected Key Learning outcomes
<p>Equipment readiness</p> <p>Theory: 4 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N0222</p>	<ul style="list-style-type: none"> • Determine the availability of all the tools required for bladder availability • Practice safe and correct handling of bladders • Devise a plan so that the appropriate top and bottom rings are available • Clean the rings • Mark the rings with proper ID • Inspect the rings and ensure that they are not damaged • Practice safe and correct handling of cement top and bottom rings • Clean all the tools and maintain them

	<ul style="list-style-type: none"> • Setup the proper functioning of hoist • Place the tools in a safe location • Study the process of handling the hoist
<p>Material appropriateness</p> <p>Theory: 4 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N0222</p>	<ul style="list-style-type: none"> • Check the bladders for defects, if any • Suggest possible remedies and preventive measures • Determine the age of bladders • Identify various abnormalities and suitable response for abnormalities in tools performance.
<p>Safety measures for preparation of materials and tools</p> <p>Theory: 5 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N0222</p>	<ul style="list-style-type: none"> • Practise handling bladders, rings and tools to avoid injuries and accidents. • Demonstrate the application of safety norms such as wearing protective gloves, masks, and shoes. • Comply with the health, safety, and environmental rules and regulations • Ensure that the safety norms are in accordance with the national/international or organisational standards. • Identify the implications of delays in the preparation process • Recognise potential hazards and understand the solutions to mitigate them • Practise cleanliness

	<ul style="list-style-type: none"> • Identify safety requirements for commencing bladder assembly operation
<p>Raw Material appropriateness</p> <p>Theory: 4 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N0223</p>	<ul style="list-style-type: none"> • Check the bladder of defects, if any • Comply with the standards set by the technical team for ensuring that the bladder for assembly is ready for releasing • Explain bladder assembly and its importance
<p>Operations of performing bladder assembly activities</p> <p>Theory: 5 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N0223</p>	<ul style="list-style-type: none"> • Perform bladder assembly operations • Recognise the potential problems in the bladder assembly operation • Inspect the bladder to be fixed/mounted on the rings • Examine the rings for rusts/nick or any damage • Check if the grooves and vent holes are not blocked • Inspect the ID on the ring to confirm the correct ring selection • Organise proper inspection and certification of the rings • Identify the damaged rings that need to be sent to machine shop for repair • Organise further matching the rings with the spec ID number marking • Fix the bladder on the bottom rings • Lift the ring using a hoist and fix the top ring

	<ul style="list-style-type: none"> • Mark the bladder code /date /shift /operator name • Identify the types of defects leading to rejections of the bladders and their indicators, reasons and possible solutions.
<p>Bladder Assembly – Safety Measures</p> <p>Theory: 5 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N0223</p>	<ul style="list-style-type: none"> • Perform correct methods of handling hoists and tools to avoid injuries and accidents. • Implement the application of safety norms such as wearing protective gloves, masks, and shoes. • Interpret the health, safety, and environmental rules and regulations • Analyse whether the safety norms are in accordance with the national/international or organisational standards. • Identify potential problems in bladder assembly operation and understand the solutions to mitigate them • Practise the basic first aid treatment and respond to injuries • Create the optimal standards for material utilisation to reduce wastage
<p>Operations of performing post bladder assembly activities</p> <p>Theory: 5 hours</p>	<ul style="list-style-type: none"> • Perform the post bladder assembly activities • Examine the tools and properly clean them • Perform safe keeping of the tools at designated places after completion of

<p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N0224</p>	<p>bladder assembly operation</p> <ul style="list-style-type: none"> • Organise the sending of assembled bladders to the storage areas safely • Inspect the rings properly for damages • Schedule the delivery of damaged rings to the machine shop for repair • Organise matching of rings with spec ID number marking • Setup the ring handling equipment in proper places • Report all issues regarding materials and tools to the supervisor • Employ the process of handover of the prepared product
<p>Material disposal</p> <p>Theory: 4 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N0224</p>	<ul style="list-style-type: none"> • Arrange disposal of waste material safely according to the organisational SOP • Identify the process of waste disposal • Recognise the implications of inappropriate waste disposal • Compare the type of defects leading to rejections of bladders • Identify the possible indicators, reasons and possible solutions for rejection of bladders
<p>Post bladder assembly – Safety Measures</p> <p>Theory: 5 hours</p>	<ul style="list-style-type: none"> • Practise handling of materials using hand gloves and other safety equipment

<p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N0224</p>	<ul style="list-style-type: none"> • Illustrate the importance of housekeeping and good shop floor practices • Practice health, safety and environment guidelines, legislations and regulations as per organisational policy maintaining national /international • Practise adherence to all safety norms • Practise wearing safety gear like protective gloves, shoes, safety goggles, etc.
<p>Pre housekeeping activities</p> <p>Theory: 4 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Perform pre housekeeping activities • Inspect the areas to be cleaned • Identify material requirements for cleaning • Estimate risk, time, efficiency and type of stain • Inspect the working condition of the cleaning equipment • Select suitable alternatives for cleaning in case of unavailability of materials • Inform the appropriate person in case of unavailability of suitable cleaning equipment • Plan the sequence of cleaning the area to avoid re-soiling clean surfaces • Setup appropriate work in progress signage • Comply with proper ventilation standards • Implement usage of PPE while cleaning

<p>Operations of carrying out housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 20 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Implement correct cleaning methods for specific work areas • Identify the type of soiling and implement its cleaning process • Employ cleaning activities without disturbing others • Organise proper facilities to deal with accidental damages • Report to appropriate superior in case of difficulties • Consult the concerned supervisor if any task is outside one's responsibility or skill
<p>Post housekeeping activities</p> <p>Theory: 4 hours</p> <p>Practical: 15 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Examine the floor for oily substances to avoid spillage • Practice cleaning of scrap materials after use • Comply with maintaining and storing housekeeping equipment and supplies • Analyse the type of accidental damage • Follow workplace procedures to deal with accidental damages • Prepare the working area clean and dry • Collect and return the tools, materials and PPE required for the task • Clean the equipment thoroughly and store them safely • Prepare for disposal of waste generated from housekeeping

	<ul style="list-style-type: none"> • Perform the disposal of used and unused solutions according to manufacturer's instructions
<p>General responsibilities</p> <p>Theory: 2 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Demonstrate the ways of maintaining schedules and records of housekeeping • Arrange for the replenishment of supplies and consumables when necessary
<p>Reporting, Recording and Documentation</p> <p>Theory: 4 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Report data/problems/incidents as applicable in a timely manner • Practise reporting to the appropriate authority • Comply with reporting procedures as per company guidelines • Compare different methods of recording information • Analyse reporting procedures as prescribed by the company • Evaluate procedures for recording damage, breakages etc. • Prepare documentation to be completed relating to one's role • Record details accurately in an appropriate format • Prepare all documentation within stipulated time according to company procedure

	<ul style="list-style-type: none"> • Inspect that the final document meets the requested requirements • Make amendments to final documents if necessary • Inspect all the documents before sending it to concerned authorities
<p>Information Security</p> <p>Theory: 4 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Practise ways to respond to requests for information in an appropriate manner • Comply with organisational procedures regarding information security • Use different methods to ensure secured information • Inform the appropriate authority of requests for information received • Identify the consequences if the procedures are not followed
<p>Inspection, Analysis and Reporting of problems while carrying out quality checks</p> <p>Theory: 4 hours</p> <p>Practical: 14 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Perform total range of checks regularly and consistently • Practise the use appropriate measuring instruments, equipment, tools, accessories etc. as required • Analyse non-conformities to quality assurance standards • Identify potential causes of non-conformities to quality assurance standards • Examine the impact on final product due to non-conformance • Evaluate the need for action to ensure that problems do not recur

	<ul style="list-style-type: none"> • Propose corrective action to address the problem • Devise effectiveness of corrective action • Interpret the results of the quality check correctly • Implement results of the findings with QC in charge/appropriate authority • Examine the results of the findings within stipulated time • Record results of action taken • Underline adjustments not covered by established procedures for future reference • Organise a review for effectiveness of action taken • Implement reporting procedures where the cause of defect cannot be identified
<p>Problem Identification</p> <p>Theory: 4 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Analyse defects/indicators of problems • Judge any wrong practices that may lead to problems • Identify practices that may impact the final product quality • Relate to the problem and identify if it has occurred before • Recognise other operations that might be impacted by the problem • Implement ways to overcome delay

Necessary Action

Theory: 4 hours

Practical: 12 hours

Corresponding NOS: RSC/N5004

- Apply appropriate materials and sample
- Experiment and evaluate results to confirm suspected non-conformance
- Analyze possible reasons for identification of problems
- Formulate corrective action
- Formulate action in a timely manner
- Communicate problem/remedial action to appropriate parties
- Apply corrective action in a timely manner
- Implement corrective action for problems identified according to the company procedures
- Report/document problem and corrective action in an appropriate manner
- Evaluate implementation of corrective action taken to determine if the problem has been resolved
- Propose and ensure that corrective action selected is viable and practical
- Implement the correct solution of an identified problem
- Apply corrective action for problems identified according to the company procedures
- Comply with methods to ensure that no delays are caused as a result of failure to take necessary action

<p>Problem Escalation</p> <p>Theory: 4 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Escalate problem as per laid down escalation matrix • Estimate the time required for problem escalation • Describe the problem in an appropriate manner • Manage and ensure that no delays are caused as a result of failure to escalate problems
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Pneumatic Tyre Moulding Operator (Semesters 4-5)

Units	Topics/Expected Key Learning outcomes
<p>Prepare Pneumatic Tyre Moulding Machine</p> <p>Theory: 16 hours</p> <p>Practical: 47 hours</p> <p>Corresponding NOS: RSC/N1101</p>	<ul style="list-style-type: none"> • Demonstrate construction of Tyre Moulding Machine • Inspect the Tyre Moulding Machine parts • Prepare Machine for Tyre Moulding • Demonstrate the cleaning process of Tyre moulding machine • Demonstrate the required mould loading in machine • Demonstrate the mould cleaning after loading in machine • Arrange 'Green Tyre' for Moulding • Demonstrate the application of release agent in moulding
<p>Perform Pneumatic Tyre Moulding Operation</p>	<ul style="list-style-type: none"> • Demonstrate Machine check-up points before Tyre Moulding

<p>Theory: 11 hours</p> <p>Practical: 27 hours</p> <p>Corresponding NOS: RSC/N1102</p>	<ul style="list-style-type: none"> • Demonstrate Control Panel check-up points before Tyre Moulding • Demonstrate Mould check-up points before Tyre Moulding • Inspect if the Mould Cleaning & Maintenance have been done • Comply with General operating instruction before Tyre moulding • Inspect 'Green tyre' • Demonstrate preparation points before Tyre Moulding • Demonstrate the steps of changing mould in Tyre Moulding Machine • Demonstrate the steps for performing Tyre Moulding • Demonstrate the Safety Precautions to be taken during Tyre Moulding. • Demonstrate the Do's and Don'ts for Tyre Moulding Operations
<p>Preparing Post Pneumatic Tyre Moulding Operation activities</p> <p>Theory: 3 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N1103</p>	<ul style="list-style-type: none"> • Demonstrate Post-Tyre Moulding activities • Inspect the quality issues in Tyre Moulding operation. • Test the Countermeasures of the quality issues related to Tyre Moulding
<p>Carry out housekeeping in rubber product manufacturing</p>	<ul style="list-style-type: none"> • Inspect the area while taking into account various surfaces • Identify the material requirements for cleaning

Theory: 9 hours

Practical: 12 hours

Corresponding NOS: RSC/N5001

the areas inspected, by considering risk, time, efficiency and type of stain

- Use cleaning equipment that are in proper working condition
- Select the suitable alternatives for cleaning the areas in case the appropriate equipment and materials are not available and inform the appropriate person
- Plan the sequence for cleaning the area to avoid re-soiling clean areas and surfaces
- Inform the affected people about the cleaning activity
- Use appropriate signage for the work
- Arrange for proper ventilation system for the work being carried out
- Use personal protective equipment required for the cleaning method and materials being used
- Use the correct cleaning method for the work area, type of soiling and surface
- Set up the cleaning activity without disturbing others
- Implement preventive techniques in case of any accidental damage
- Report any difficulties in carrying out your work
- Identify if any additional cleaning is required that is outside one's responsibility or skill
- Check if there is any oily substance on the floor to avoid slippage

	<ul style="list-style-type: none"> • Check if any scrap material is lying around • Manage housekeeping equipment and supplies • Use workplace procedures to deal with any accidental damage caused during the cleaning process • Check if the area is left clean and dry on completion of the work • Collect the equipment, materials and personal protective equipment that were used and send them back to the right places, making sure they are clean, safe and securely stored • Practice the disposal of the waste garnered from the activity in an appropriate manner • Practice the disposal of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly • Manage schedules and records for housekeeping duty • Assemble the necessary supplies or consumables
<p>Carry out reporting and documentation</p> <p>Theory: 20 hours</p> <p>Practical: 22 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Report data/problems/incidents as applicable in a timely manner • Report to the appropriate authority as laid down by the company • Implement reporting procedures as prescribed by the company

	<ul style="list-style-type: none"> • Identify documentation to be completed relating to one's role • Record details accurately in an appropriate format • Complete all documentation within stipulated time according to company procedure • Determine, if the final document has been amended as per requirements • Arrange for the availability of the documents to all appropriate authorities • Inform the appropriate authority of requests for information received
<p>Carry Out Quality Checks</p> <p>Theory: 11 hours</p> <p>Practical: 12 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Perform regular checks • Use appropriate measuring instruments, equipment, tools, accessories etc. ,as required • Identify non-conformities to quality assurance standards • Identify potential causes of non-conformities to quality assurance standards • Identify impact on final product due to non-conformance to company standards • Evaluate the need for action to ensure that problems do not recur • Use corrective action to address problem • Review effectiveness of corrective action

	<ul style="list-style-type: none"> • Interpret the results of the quality check correctly • Discuss the results of the findings with QC in charge/appropriate authority. • Report the results of the findings within a stipulated time • Record the results of the action • Record adjustments, not covered by established procedures, for future reference • Review effectiveness of action taken • Implement reporting procedures where the cause of defect cannot be identified
<p>Health and Safety</p> <p>Theory: 24 hours</p> <p>Practical: 24 hours</p> <p>Corresponding Bridge Module</p>	<ul style="list-style-type: none"> • Compare various hazards (chemical, physical, ergonomic, etc.) in the tyre industry • Comply with health and safety procedure for the tyre industry • Select appropriate PPE (personal protective equipment) as per requirement • Use the PPE, thus selected, while performing work • Practise dealing with emergency situations at the workplace • Implement need-based first-aid techniques at the workplace • Participate in emergency drills (like fire drills) at the workplace

	<ul style="list-style-type: none"> • Select appropriate fire extinguishers as per the class of fire • Use multi-purpose fire extinguishers
<p>Carry out problem identification and escalation</p> <p>Theory: 4 hours</p> <p>Practical: 6 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Identify defects/indicators of problems • Identify any wrong practices that may lead to problems • Restate the practices that may create an impact on the final product quality • Identify if the problem has occurred before • Analyse other operations that might be impacted by the problem • Check whether any delays are caused as a result of failure to escalate problems • Use appropriate materials and sample, conduct tests and evaluate results to establish reasons to confirm suspected reasons for non-conformance (where required) • Demonstrate possible reasons for identification of problems • Demonstrate applicable corrections and

formulate corrective action

- Formulate action in a timely manner
- Communicate problem/remedial action to appropriate parties
- Implement corrective action in a timely manner
- Implement corrective action for problems identified according to the company's procedures
- Report/document problem and corrective action in an appropriate manner
- Inspect corrective action
- Examine the implementation of corrective action taken to determine whether the problem has been resolved
- Examine that the corrective action selected, is viable and practical
- Provide proper solution to an identified problem
- Apply preventive action for problems identified according to the company procedures
- Escalate problem to the appropriate hierarchy

	<ul style="list-style-type: none"> Escalate the problem appropriately within stipulated time
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Retreaded Tyre Curing Operator (Semesters 5-6)

Units	Topics/Expected Key Learning outcomes
<p>Equipment readiness</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N1907</p>	<ul style="list-style-type: none"> Practise keeping all the accessories (like cooling water, hydraulic system, temperature control unit) ready Practise setting parameters for the equipment (cycle time, temperature, energy and pressure) as per company's SOP Demonstrate the operational status of press timer Demonstrate how the correct mold is placed in the curing press Evaluate the operational status of press safety arm for opening the press in case of emergency
<p>Material readiness</p> <p>Theory: 5 hours</p> <p>Practical: 10 hours</p> <p>Corresponding NOS: RSC/N1907</p>	<ul style="list-style-type: none"> Practise putting Tyre with raw tread in one row size wise Practise selecting Tyre mould segment as per SOP Perform assembling all Segment of the tyre size in outer ring tighten from back side of the segment Practise putting all segment along with outer

	ring and sidewall support plate into autoclave
<p>Manage Health and Safety</p> <p>Theory: 9 hours</p> <p>Practical: 46 hours</p> <p>Corresponding NOS: RSC/N1907</p>	<ul style="list-style-type: none"> • Practise awareness of steam and hot oils leakages in work area • Practise adherence to all safety norms (such as wearing protective gloves, mask and safety shoes) • Demonstrate how to Avoid spillage and in case of spillage occurs , follow safety measures as laid down by safety department • Practise compliance with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards • Practise handling the material using hand gloves and other safety equipment as directed by organizations safety department • Use of safety arm on press in case of any emergency –such as arm or any material inside the press while the press is closing • Demonstrate how to follow the guidance of safety

	<p>department to contain spillages which may affect the health and safety of self or the environment in the curing area</p>
<p>Material appropriateness</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N1908</p>	<ul style="list-style-type: none"> • Demonstrate through visual inspection, that tyre is of desired quality (free of contamination etc.)
<p>Operation of Retreaded Tyre Curing</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N1908</p>	<ul style="list-style-type: none"> • Demonstrate how strictly curing process should be followed as per instructions /SOP • Demonstrate how to lift the tyre from one bead side using hoist and place in the centre of the mould • Perform insertion of air bag / Thick wall tube as per SOP as per size of the tyre • Evaluate required flap as per SOP • Practise putting required rim with lock – Keeping Air bag valve outside • Demonstrate how to inflate Air bag with air as per SOP for pressure • Evaluate if tyre is touching Tread design of the mould • Determine closing of Autoclave and lock • Determine putting steam / cure cycle on as per SOP

	<ul style="list-style-type: none"> • Evaluate if the cycle is over as per SOP open autoclave • Perform removal of rim , Air bag and then Tyre with the help of Hoist – It must be very hot • Demonstrate putting the tyre on ground with side support – Keeping where exhaust is working as a lot of fume will be bleeding out
<p>Operation of Post-Curing Activities</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N1909</p>	<ul style="list-style-type: none"> • Perform inspection of the tyre for defects
<p>Material disposal and Batch Marking</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N1909</p>	<ul style="list-style-type: none"> • Perform disposal of waste material safely, as per organizational SOP

<p>Pre housekeeping activities</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Perform inspection of the area while taking into account various surfaces • Practise the sequence for cleaning the area to avoid re-soiling clean areas and Surfaces • Determine the appropriate signage for the work being conducted
<p>Operations To carry out housekeeping</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Use the correct cleaning method for the work area, type of soiling and surface • Evaluate cleaning activity without disturbing others • Report to the appropriate person any difficulties in carrying out your work • Report through identification to the appropriate person any additional cleaning required that is outside one's responsibility or skill
<p>Post housekeeping Activities</p> <p>Theory: 5 hours</p>	<ul style="list-style-type: none"> • Undertake assurance of completion of work leaving the area clean and dry, meeting requirements • Review the return of equipment, materials and personal protective

<p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<p>equipment that were used to the right places making sure they are clean, safe and securely stored</p> <ul style="list-style-type: none"> • Demonstrate disposal of the waste garnered from the activity in an appropriate manner • Demonstrate disposal of used and un-used solutions according to manufacturer's instructions, and clean the equipment thoroughly
<p>General Responsibility</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5001</p>	<ul style="list-style-type: none"> • Analyse any necessary supplies or consumables
<p>Reporting, Recording and Documentation</p> <p>Theory: 5 hours</p>	<ul style="list-style-type: none"> • Report data/problems/incidents as applicable in a timely manner • Report to the appropriate authority as laid down by the company

<p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Demonstrate the recording of details accurately in an appropriate format
<p>Information Security</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5002</p>	<ul style="list-style-type: none"> • Practise Informing the appropriate authority of requests for information received
<p>Inspection, Analysing and Reporting</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5003</p>	<ul style="list-style-type: none"> • Use appropriate measuring instruments, equipment, tools, accessories etc.as required • Evaluating the need for action to ensure that problems do not recur • Demonstrate corrective action to address problem • Practise effectiveness of corrective action • Interpret the results of the quality check correctly • Use results of the findings with QC in charge/appropriate authority • Use the results of the findings within stipulated time

	<ul style="list-style-type: none"> • Practise adjustments not covered by established procedures for future reference
<p>Problem Identification and Escalation</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Practise no delays as a result of failure to escalate problems • Demonstrate problem as per laid down by escalation matrix • Evaluate the problem within stipulated time • Analyse the problem in an appropriate manner • Evaluate that no delays are caused as a result of failure to escalate problems
<p>Necessary Action</p> <p>Theory: 5 hours</p> <p>Practical: 18 hours</p> <p>Corresponding NOS: RSC/N5004</p>	<ul style="list-style-type: none"> • Use appropriate materials and sample, conduct tests and evaluate results to establish reasons to confirm suspected reasons for non-conformance (where required) • Demonstrate the ways to Communicate problem/remedial action to appropriate parties • Use corrective action in a timely manner • Use corrective action for problems identified according to the company Procedures • Practise reporting/documenting problem and corrective action in an appropriate manner

	<ul style="list-style-type: none">• Evaluate implementation of corrective action taken to determine if the problem has been resolved• Use corrective action for problems identified according to the company procedures
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Assessment strategy (Basic training and On the Job Training):

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criterion (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 provided in the Qualification Packs and Model Curricula for all four job roles.
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.
8. The assessment of candidates will be conducted at NOS level.
9. Assessment criterion has been defined for each NOS and it includes both theoretical and practical skills on which the candidate will be assessed.
10. Practical knowledge is tested through assessor driven evaluation, Situational Judgment Tests and Simulations. A mix of the three is used to evaluate the trainee on his practical knowledge of the QP.

11. The candidate is assessed on skills, knowledge and behavioural aspects.

Annexure A

Attachment: List of Tools and Equipment

- Tyre building machine
- Strip cutter/feeders
- Band builders
- Bead flipping machines
- Sidewall buffers
- Guillotine cutters
- Slab cutters
- Fabric processing machines
- Mill aprons
- Mill feed conveyors
- Mill strip blenders
- Air drums
- Various equipment used by different organisations in the industry
- A sample health and safety policy document
- Mock emergency signage in the appropriate areas of the training institute
- Cases for study and analysis
- Laptop/PC with internet connectivity
- Whiteboard and marker
- Projector or flipcharts
- Blackboard and chalk
- Participant handbook
- Copies of hand-outs (related to various modules of the course)
- Samples of RSS sheets
- Crepe rubber
- TSR rubber
- Synthetic rubber
- Reclaimed rubber
- Rubber product
- Tyre sample with sidewall coding
- Tyre cut sections
- Tyre moulding machine
- Tyre mould
- Green tyre
- Release agent

- Clamp
- Crane
- Machine
- Mould cleaning equipment
- Cured Tyre
- Tyre finishing tools such as flash removing tool, scissors, etc.
- Tyre/Tyres with different moulding defects
- Duster
- Different cleaning equipment
- Samples of relevant documents and reports
- Samples of standard operating procedures and work instructions
- Tyres with different quality defects
- Different inspection tools like vernier callipers, micrometer, rubber hardness tester, measuring tape, tread depth gauge, x-ray machine, etc.
- Samples of PPE (personal protective equipment) such as safety goggle, safety shoes, safety gloves, safety hat, mask, earmuff, etc.
- Sample first aid boxes
- Multi-purpose fire extinguishers
- Hybrid press
- Hydraulic curing press
- Mould heating devices
- Bladder curing press