

Revised Application Documentation: Version 4 /25 May, 2015

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Rubber Skill Development Council

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Name and contact details of individual dealing with the submission

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List of documents submitted in support of the Qualifications File

1. **Qualification Pack – Bladder curing operator (Attached as Annexure 1)**
2. **Occupational Map (Attached as Annexure 2)**
3. **RFP for development of National Occupation Standard (Attached as Annexure 3)**
4. **Composition of NOS Subcommittee (Attached as Annexure 5)**
5. **Industry engagement certificate (Attached as Annexure 6)**
6. **Assessment Process flow (Attached as Annexure 8)**
7. **RSDC assessment Protocol (Attached as Annexure 9)**
8. **Web Link : Reports of Skill Gap study conducted by RSDC**
<http://rsdcindia.in/knowledge-base.html>

QUALIFICATION FILE SUMMARY

Qualification Title	Bladder curing operator - RSC/ Q 0204		
Body/bodies which will assess candidates	RSDC's affiliated assessment agency		
Body/bodies which will award the certificate for the qualification.	Rubber Skill Development Council		
Body which will accredit providers to offer the qualification.	Rubber Skill Development Council		
Occupation(s) to which the qualification gives access	This role gives access in Moulding/Curing process in Tyre manufacturing		
Proposed level of the qualification in the NSQF.	4		
Anticipated volume of training/learning required to complete the qualification.	350 Hrs		
Entry requirements / recommendations.	Class X, Desirable – 18 years		
Progression from the qualification.	Bladder curing Operator is a operator level role which lead supervisory level in Moulding/Curing Process		
International comparability where known:	Not applicable		
Planned arrangements for RPL.	RPL assessment carries out as per normal RSDC assessment process.		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
RSC/ N 0228 (<u>Prepare curing system</u>)	M	50	4
RSC/ N 0229 (<u>Perform bladder curing operation</u>)	M	150	4
RSC/ N 0230 (<u>Perform post-curing activities</u>)	M	50	4
RSC/ N5001 (<u>To carry out housekeeping</u>)	M	25	Common across level (3 to 5)
RSC/ N5002 (<u>To carry out reporting and documentation</u>)	M	25	Common across level (3 to 5)
RSC/ N5003 (<u>To carry out quality checks</u>)	M	25	Common across level (3 to 5)
RSC/ N5004 (<u>To carry out problem identification and escalation</u>)	M	25	Common across level (3 to 5)

Please attach any document giving further detail about the structure of the qualification – eg a Curriculum or Qualification Pack.

Give details of the document here:

Qualification Pack – Bladder Curing Operator

SECTION 1

ASSESSMENT

Name of assessment body:

If there will be more than one assessment body for this qualification, give details.

- RSDC's affiliated assessment agency. At present RSDC has two affiliated assessment agency.
 1. Aspiring Minds
 2. Trendsetters

Kindly refer RSDC assessment protocol for selection of assessment agency as Annexure 9

Will the assessment body be responsible for RPL assessment?

- Yes

Give details of how RPL assessment for the qualification will be carried out and quality assured.

RPL assessment will be carries out as per normal RSDC assessment process.

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

With uniformity and setting of National Occupational Standards (NOS), for different Jobs Roles the assessment of candidates will be at NOS level. Assessment criterion has been defined for each NOS and it includes both theoretical and practical skills on which the candidate will be assessed. The question suite which will be used to check the skills of the trainee would include

- **Theoretical test suite** – Will include multiple choice questions, audio-video question etc. which will test the trainee on his knowledge of the subject
- **Practical Knowledge suite** – Practical knowledge can be tested through Assessor driven evaluation, Situational Judgment Tests and Simulations. A mix of the three would be able to evaluate the trainee on his practical knowledge of the QP

RSDC's assessment strategy:

- Assessment criteria for each Qualification Pack developed, in which each Performance criteria (PC) assigned marks based on NOS separately for theoretical and practical skill
- Set of question bank developed to assess the theoretical and practical knowledge. To ensure the quality, each trainees get the unique set of question
- Student has to score minimum marks separately for theoretical and practical skill and overall percentage should also be 50%.
- Empanelment of subject matter expert as assessor to assess trainee specifically on practical skills
- Assessments are preferably conducted on tablets or pen or papers in regional languages according to the requirement.
- Questions are uploaded in the tablets only on the day of assessment
- It has been ensure that TP/trainer should not be present during assessment

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

Assessment Process flow

ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as listed in the entry on the structure of the qualification on page 1.

Assessable outcomes			Assessment criteria for the outcome		
NOS	Elements	Performance Criteria	Total	Theory	Practical
RSC / N 0228 Prepare Curing System	Equipment readiness	PC1. Ensure that the curing press is clean and ready to use.	1	0	1
		PC2. Ensure that the tools required for bladder curing operation are ready.	1	0	1
		PC3. Check the Bladder curing press for the correct fitment of core and the bladder mold	12	7	5
		PC4. Set the temperature of curing press and oven as per the specification	12	9	3
		PC5. Ensure that the pressure settings are as per specification provided by technical	12	5	7
		PC6. Turn on the services and check if the specified temperature conditions have been met and are controlled properly	13	8	5
	Raw material appropriateness	PC7. Ensure the availability of extruder slugs for the required bladder curing operation as per specification	13	8	5
	Health & Safety	PC8. Safety measures for handling the hot mold, platens and core	7	5	2
		PC9. Safe handling of bladder cutting knives	9	5	4
		PC10. Proper safety and maintenance of press	9	5	4
		PC11. Adhere to all safety norms (such as wearing protective gloves ,mask and safety shoes).	8	5	3
		PC12. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.	3	3	0
			100	60	40
RSC / N 0229 Perform Bladder Curing Operation	Operation	PC1. Follow curing process as per instructions /SOP .	13	5	8
		PC2. Inspect the green bladder slugs; fine tune the cut length of bladder slug to get the specified weight of the bladders after curing	11	4	7
		PC3. Place the Bladder slugs in the heating oven to warm up the bladder slugs and facilitate molding	4	0	4
		PC4. Ensure that temperature settings of the oven to be as per the guidelines of technical	11	6	5
		PC5. Place the warm bladder slug on	4	0	4

		the bottom half of the mold surrounding the core			
		PC6. Facilitate initial flow and then apply specified pressure and close the press	3	0	3
		PC7. Start auto timer; once the curing is over, the press opens	2	0	2
		PC8. Pull the bladder out of the mold	2	0	2
		PC9. Trim the centre line flash	2	0	2
		PC10. Inspect the flash and the centre line ; if needed adjust the mold setting to reduce the gap between top and bottom mold halves to reduce mold register gap	10	4	6
		PC11. Cut one bladder and check the gauges form bead to bead	7	3	4
	Health & Safety	PC12. Safe handling of hot bladders out of curing press	8	4	4
		PC13. Ensure the use of certified equipments during curing operation	2	2	0
		PC14. Handle the material using hand gloves and other safety equipment as directed by organizations safety department	8	4	4
		PC15. Adhere to all safety norms (such as wearing protective gloves,masks and shoes)	8	3	5
		PC16. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.	2	2	0
		PC17. Follow the guidance of safety department to contain spillages which may affect the health and safety of self or the environment in the curing area	3	3	0
			100	40	60
RSC / N 0230 Perform Post-Curing Activities	Operation	PC1. Inspect cured bladder for undercure, blisters, lights, torn/damaged ends	18	9	9
		PC2. Segregate the good /OK bladders and mark on them the code, date and shift of curing , piece number	7	3	4
		PC3. Send scrap or cured bladders with blemish for the review committee for suitable disposition	7	7	0
		PC4. Mark the date and shift on bladders for proper post cure aging to improve life .	9	5	4
		PC5. Report repair and maintenance requirement to the Supervisor	6	6	0
	Material disposal/re-work	PC6. Dispose of waste material safely, as per organizational SOP.	5	0	5
		PC7. Mark the Green scrap bladder slugs duly and send to the designated area for re-work	12	8	4
	Batch Marking	PC8. Ensure identification and traceability by marking/coding for the product as per the instructions laid	12	8	4

		down by the company.			
	Health & Safety	PC9. Handle the prepared product using hand gloves and other safety equipment.	12	6	6
		PC10. Adhere to all safety norms (such as wearing protective gloves , shoes, safety masks etc).	9	5	4
		PC11. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.	3	3	0
			100	60	40
RSC/N5001 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 cleaning required that is outside one's responsibility or skill	3	3	0
	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	9	3	6

		lying around			
		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
RSC/N5002 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
RSC/N5003 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
	RSC/N5004 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 and corrective action in an appropriate manner	8	5	3
		PC15. Monitor corrective action	2	2	0
		PC16. Evaluate implementation of corrective action taken to determine if the problem has been resolved	2	2	0
		PC17. Ensure that corrective action selected is viable and practical	2	2	0
		PC18. Ensure that correct solution is identified to an identified problem	2	2	0
		PC19. Take corrective action for problems identified according to the company procedures	1	1	0
		PC20. Ensure that no delays are caused as a result of failure to take necessary action	1	1	0
	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

Means of assessment 1

The assessment comprise of :

- Written Assessment
- Viva
- Practical assessment

Means of assessment 2

Pass/Fail

The Pass mark of written assessment is 40% and for viva and practical assessment is 40%. Total passing mark is 50%.

SECTION 2

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

Qualification pack has been developed by suggestion and approval of RSDC NOS Subcommittee, which consist of senior leaders and experts from rubber Industry and has been further substantiated by skill gap study conducted by RSDC

What is the estimated uptake of this qualification and what is the basis of this estimate?

We had conducted skill gap study in different states of the country to understand the demand and supply for estimated uptake. Assuming the study finding base for entire rubber industry across the nation, employment opportunity is expected to grow approximately at the rate of 30% in the coming 5 year.

Reports of Skill gap study conducted uploaded on the below link:

<http://rsdcindia.in/knowledge-base.html>

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

Mapping has been done with National Classification of Occupation 2004 to ensure the qualification does not duplicate.

What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

Qualification Packs shall be revised annually.

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

SECTION 3

SUMMARY EVIDENCE OF LEVEL

Level of qualification: 4

Summary of Direct Evidence (from learning outcomes):

Bladder Curing Operator is responsible for work assigned to him. He shall be working independently and does not required continuous supervision. However he reports to supervisor on day to day basis.

Skill requires fulfil roles and responsibilities along with activities matched with NSQF level 4.

Summary of other evidence (if used):

Bladder curing operator- RSC/ Q 0204					
Process Required	Professional Knowledge	Professional Skill	Core Skill	Responsibility	Level
<p>Bladder curing operator is expected to Ensure housekeeping and safety in the work area and to ensure that the machines are clean and ready to use</p> <p>He/She is expected to ensure that the curing press is clean and ready to use also expected to ensure that the tools required for bladder curing operation are ready</p> <p>He/She is expected to follow curing process as per instructions /SOP/ Inspect the green bladder slugs; fine tune the cut length of bladder slug to get the specified weight of the bladders after curing/ Ensure that temperature settings of the oven to be as per the guidelines of technical</p> <p>He/She is expected to comply with health, safety, environment guidelines and</p>	<p>Bladder curing operator is expected understand components of Bladder curing press and its operation / working dynamics of bladder mold and the centre core/</p> <p>He/She is expected to have knowledge of green bladder being of NON compatible polymer and the need to keep it separate from other polymers</p> <p>He/She is expected to understand various abnormalities and suitable response for abnormalities in equipment performance/ Implications of delays in the preparation process/ Importance of keeping the bladder green slugs and cured flash trimmings in separate bins/</p>	<p>Bladder curing operator is expected to handle Bladder curing press/ handle steam, oils and water on production floor/ handle various types of material handling equipment</p> <p>He/she is expected to apply problem-solving approaches in different situations and capacity to apply technology, combining the physical and sensory skills needed to operate equipment</p> <p>He/she is expected to Identify the problems and diagnose common problems in the tools and machine based on visual inspection and Suggest improvements(if any) in process</p>	<p>Bladder curing operator is expected to have basic communication/written skill to fill up appropriate forms and activity logs in required format of the company</p> <p>He/she is expected to Perform basic mathematical operations and maintain records in given format</p> <p>He/she is expected to read and understand manuals, health and safety instructions and read images, graphs, diagrams</p> <p>Also expected to Understand the various coding systems as per company norms</p> <p>He/she is expected to Understand instructional language of the organization and respond appropriately to any queries</p> <p>He/she is expected to Communicate with supervisor</p>	<p>Bladder curing operator is responsible to cure the extruded green bladder slugs to produce tyre curing bladders.</p> <p>So He/She is completely responsible for the work on the Bladder curing operation and his own learning.</p> <p>He/She is continuously engaged in the self-learning process</p> <p>Bladder curing operator is majorly responsible for his own job and self learning process which justifies the pegging of the QP at level 4 and not directly involved in some learning of others (which is a requirement for Level 5). In</p>	4

<p>regulations in accordance with international/national standards or the organizational standards.</p> <p>The activities identified are the familiar and routine activities in nature and he handles all this independently (with minimal or no supervision).</p>	<p>Implications of variations in temperature and pressure settings from specification set by technical/ Proper handling of cured bladders</p>	<p>based on experience</p> <p>Thus he is practically engaged in the Bladder curing operation in Tyre manufacturing Process.</p>	<p>and downstream team.</p> <p>Tyre Pre cure Preparation operator is expected to conduct themselves in ways, which show a basic understanding of the social and professional environment of working on the Finishing Operation</p>	<p>his routine activity he is free from supervision (which is a requirement of level 3).</p>	
Level 4	Level 4	Level 4	Level 4	Level 4	

SECTION 4

EVIDENCE OF RECOGNITION OR PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

Occupation Map has been created and attached.

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here: