

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 – Bead Room Operator (Attached as Annexure 1)**
2. **Occupational Map (Attached as Annexure 2)**
3. **Concurrence letter from RSDC NOS Subcommittee (Attached as Annexure 4)**
4. **Composition of NOS Subcommittee (Attached as Annexure 5)**
5. **List of companies share the concurrence on Qualification Pack (Attached as Annexure 7)**
6. **Assessment Process flow (Attached as Annexure 8)**
7. **Web Link : Reports of Skill Gap study conducted by RSDC**
<http://rsdcindia.in/knowledge-base.html>

QUALIFICATION FILE SUMMARY

Qualification Title	Bead Room Operator - RSC/ Q 1104		
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	Stock/Component Preparation under Tyre manufacturing process		
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/ITI, Desirable – 18 Years		
Progression from the qualification.	Bead Room Operator level role which leads to supervisor level in Stock/component preparation process in rubber product manufacturing		
Planned arrangements for RPL.	RPL assessment carries out as per normal RSDC assessment process.		
International comparability where known:	Not applicable		
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 1110 (Prepare material, tools and machine for bead building)	M	30	4
RSC/ N 1111 (Perform bead extrusion and building)	M	70	4
RSC/ N 1112 (Perform post bead building activities)	M	50	4
RSC/ N5001 (To carry out housekeeping)	M	25	Common across level (3 to 5)
RSC/ N5002 (To carry out reporting and documentation)	M	25	Common across level (3 to 5)
RSC/ N5003 (To carry out quality checks)	M	25	Common across level (3 to 5)
RSC/ N5004 (To carry out problem identification and escalation)	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 – Bead Room 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 1110 Prepare material, tools and machine for bead building	Equipment readiness	PC1. Ensure the functioning of bead insulator (cold feed extruder)	6	6	0
		PC2. Ensure that the tools are clean and well sharpened.	6	6	0
		PC3. Set parameters for the machine as per the organizational SOP.	10	0	10
		PC4. Place the hand tools on a safe location.	14	6	8
		PC5. Check the sharpness of the bead wire cutter for the cutting purpose.	8	0	8
		PC6. Ensure that the bead assembly units/chucks are in operational condition	6	6	0
	Raw material appropriateness	PC7. Ensure that bead wire spools are approved by the laboratory.	6	6	0
		PC8. Check the availability of lab released bead insulation compound available for bead wire insulation .	6	6	0
		PC9. Ensure that the bead wire insulation compound is available in the strip form for suitability to feed the cold feed extruders	6	6	0
	Health & Safety	PC10. Ensure the use of certified/tested wire cutting hand tools and machine and check their functioning.	10	6	4
		PC11. Adhere to all safety norms (such as wearing protective gloves, masks and shoes).	12	6	6
		PC12. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.	10	6	4
			100	60	40
RSC / 1111 Perform bead	Raw material appropriateness	PC1. Ensure the required number of bead wire spools	4	4	0
		PC2. Ensure lab released bead compound in the strip for feeding the	6	4	2

extrusion and building		cold feed extruders			
	Operation	PC3. Draw bead wire from the spools through guide rollers , tensioer rolls to the extruder .	6	2	4
		PC4. Ensure that the number of wires are as per the requirement for the bead bundle code being built	6	2	4
		PC5. Draw the wire through baffle ,die assembly	6	2	4
		PC6. Ensure that the cold feed extruder is redy to supply rubber for insulaton	6	2	4
		PC7. Commence coating , ensuring good coverage with NO bare wire	6	2	4
		PC8. Apply cement adhesive (on line thru a cement dip tank) in case technical specifies	6	2	4
		PC9. Pass the insualted wire through cooling drums and festooners to the wind up chuck	6	2	4
		PC10. Wind up chuck of specific diameter is used for building bead bundle with specific number if turns and overlap .	6	2	4
		PC11. Jam the loose end with on line jammer to avoid end opening	6	2	4
		PC12. The insulated wire strip is cut by mechanical cutter once each bundle coil is built and ready for extarctionfrom chuck	6	2	4
		PC13. The bead wire bundle is removed from chuck and hung on pin stands.	6	2	4
		PC14. The bead bundles are then identified and stored in the designated area	6	2	4
		Health & Safety	PC15. Handle the sheet and ply using hand gloves and other safety equipment.	6	2
	PC16. Adhere to all safety norms (such as wearing protective gloves and shoes, etc)		6	2	4
PC17. Comply with health, safety, environment guidelines and regulations in accordance with international/national standards or the organizational standards.	6		4	2	
			100	40	60
RSC / N 1112 Perform Post-Bead Building	Operation	PC1. Clean tools and keep the tools at designated place after the completion of cutting operation.	4	4	0
		PC2. Check the dimension of bead wire budles –diameter , overlap length	9	5	4

Activities		,turns and strands			
		PC3. Ensure proper identification for better traceability	7	4	3
		PC4. Place proper tag indicating the date and time of bead building to help FIFO while usage in the next stage operation	8	5	3
		PC5. Ensure no left over of the compounds and bare wires are kept well covered and are ready to use whenever needed.	8	4	4
		PC6. Bead wire bundles are so kept to ensure smooth flow for bead wrapping, apexing and flipper application	8	4	4
		PC7. Report to the supervisor if there are too much variation in the bead bundle or process related problems at bead extruders	2	2	0
		PC8. Inform supervisor if there are problems related to machine set up and actual obtained dimensions	2	2	0
		PC9. Send bead bundles to band building or tyre building as required by specification	2	2	0
	Material disposal	PC10. Dispose of waste material safely, as per organizational SOP.	8	4	4
Batch Marking	PC11. Ensure identification and traceability by batch marking/coding for the right product as per the instructions laid down by the plant technical (in terms of code, date, time stamp).	8	4	4	
	PC12. Ensure log book is maintained documenting the details of bead wire source , lot number ,compound code, mixed date, batch number used to facilitate traceability	8	4	4	
Sampling	PC13. Keep random samples of bead wire spools for diameter checks	2	2	0	
	PC14. Check the bead compound strip samples before commencing the extrusion to make sure it is OK to use (this is in addition to lab having approved the batches earlier)	6	2	4	
Health & Safety	PC15. Handle the material using hand gloves and other safety equipment.	6	4	2	
	PC16. Adhere to all safety norms (such as wearing protective gloves , shoes, safety goggles etc).	8	4	4	
	PC17. Comply with health, safety, environment guidelines and regulations	4	4	0	

		in accordance with international/national standards or the organizational standards.			
			100	60	40
RSC/N500 1 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 lying around	9	3	6
		PC17. Maintain and store housekeeping	3	3	0

		equipment and supplies			
		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/N500 2 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/N500 3 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/N500 4 To Carry Out Problem Identificat ion And Escalation	Problem Identificatio n	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

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):

The bead room operator is accustomed in periodic work, have knowledge to demonstrate skills, using tools & quality concepts and he is able to disseminate with clear responsibility of work, with minimum supervision.

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

Summary of other evidence (if used):

Bead Room Operator - RSC/ Q 1104					
Process Required	Professional Knowledge	Professional Skill	Core Skill	Responsibility	Level
<p>Bead room operator ensures housekeeping & safety in work area and prepare the extruder for insulating bead wires of given strands and build them into bead rings of given turns and specified diameter</p> <p>Bead room operator has to prepare the bead building rings with the on line cutting tools and machine. Also to load bead wire spools loaded at let off station to carry out bead building operations</p> <p>He/She ensures functioning of bead insulator (cold feed extruder), Sets beadwire spools at let off positions and prepare cold feed extruder for bead</p>	<p>Bead room operator is expected to have knowledge and importance of extrusion, needs to be well aware of the operations.</p> <p>He/She is expected to have knowledge of working on cold feed extruder, procedure of insulation of wire using cold feed extruder and proper - setting of machine to achieve desired turns and overlap of bead wire strands</p> <p>He/She needs to have knowledge of cutter blade inspection for improper or rough cutting and avoid wrinkling of fabric due to damaged cutting blade and functioning of Functioning of extruder , dies , baffles and the cutter knives</p> <p>He/She needs to have knowledge of coding, batching, marking and types of defects leading to rejections and their, reasons and possible solutions.</p>	<p>Bead room operator needs to handle bead wire pallets, spools, machines, tools and insulated wires</p> <p>He/She needs to handle bead wire insulator/extruder machine, die and baffle.</p> <p>He/She needs to have the capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems</p> <p>Thus he is practically engaged in the production activity.</p>	<p>Bead room operator is expected to have basic communication skills to fill appropriate forms, process charts and activity logs, etc and also understand application of basic arithmetic principles.</p> <p>Bead room operator is expected to conduct themselves in ways, which show a basic understanding of the social and professional environment of working on shopfloor.</p>	<p>The Bead Room Operator is responsible for insulating bead wires and form circular bundles of required diameter with specified number of strands and turns.</p> <p>So the bead room Operator is completely responsible for the work on the cold feed extruder and his own learning.</p> <p>He is continuously engaged in the self-learning process and he has the responsibility for own work.</p> <p>Bead room 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</p>	4

<p>compound extrusion and insulation of wire</p> <p>The activities listed above are the familiar and routine activities in nature and he handles all this independently (with minimal or no supervision).</p>				<p>for Level 5). In 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.