

NSDA Reference
To be added by NSDA

Name and address of submitting body:

Textiles Committee (Ministry of Textiles, Govt. Of India)

P Balu Road, Prabhadevi Chowk,

Mumbai -400025

Name and contact details of individual dealing with the submission

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Position in the organisation: Director (Lab)

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List of documents submitted in support of the Qualifications File:

1. Career map of Calendering Machine Operator
2. Calendering Machine Operator Course Module
3. Format for RFP for Assessment Agency Accreditation from RSA
4. Assessment Protocol developed by RSA
5. Skill gap report for textile sector
6. Assessment sheet
7. Photographs and attendance sheet of the validation programme.

SUMMARY

Qualification Title	Calendering Machine Operator
Qualification Code	TC PRC 08
Nature and purpose of the qualification	A certificate course under ISDS (A project of Govt. Of India) Purpose: To convert a non worker (layman) into a worker (able to operate a Calendering machine)
Body/bodies which will award the qualification	Textiles Committee(RSA) under Ministry of Textiles
Body which will accredit providers to offer courses leading to the qualification	Ministry of Textiles/Office of Textile Commissioner/Resource Support Agency (Textiles Committee)
Body/bodies which will carry out assessment of learners	<ul style="list-style-type: none"> • Andhra Pradesh Productivity Council • Apparel Export Promotion Council • Axis Education Society • Base Research Consultancy services Private Limited • C.K.Skill Research & Development Ltd. • Centre for Recruitment and Selection Pvt Ltd • Crux Mangement Services Pvt Ltd • Eduworld Consultants Pvt Ltd. • Employable Skills Advancement Assessmetn and Certification LLP (ESAAC LLP) • Fashion Futures • Federation of Indian Chamber of Commerce and Industry (FICCI) • Federation of Indian Women Entrepreneurs (FIWE) • Human Potential Development Center • Induslynk Training services Pvt. Ltd. • Itcot Consultancy & Services Ltd. • K S Rangasamy Institute of Technology

- Kapokh Fibers & Industries Ltd.
- Manipal City & Guilds Pvt. Ltd
- Methods Apparel Consultancy India Pvt Ltd.
- Multi Skills Assessors Guild (MSAG)
- National Institute of Fashion Technology (NIFT)
- Nice Education & Welfare Trust
- Northern India Textile Research Association (NITRA)
- PSG College of Technology
- PVR Skill Central Pvt Ltd.
- Quibus Technologies Pvt Ltd
- Skills Training Assessment Management Partners Ltd. (STAMP)
- Sona Cotsyn Pvt Ltd
- Techno Tex Informatics Pvt Ltd.
- The Assessors Guild (TAG)
- The Associated Chambers of Commerce And Industry of India (ASSOCHAM)
- Trendsetters Skill Assessors Pvt Ltd.
- TUV SUD South Asia Pvt Ltd
- University of Calcutta

Occupation(s) to which the qualification gives access

Calendering Machine Operator

Licensing requirements

N/A

Level of the qualification in the NSQF

2

Anticipated volume of training/learning required to complete the qualification

Not less than 300 hrs

Entry requirements and/or

The candidate should be able to read and write in any language.

recommendations			
Progression from the qualification	Non Worker to Calendering Machine Operator		
Planned arrangements for the Recognition of Prior learning (RPL)	As the course is basically designed for a non worker to worker (entry level course) there is no requirement of RPL. Making RPL mandatory for the non-worker can act as a hindrance for a non-worker for registering to the course. However the ability to read and write in local language as well as previous knowledge can be assessed by the Implementing Agency itself.		
International comparability where known	N/A-		
Date of planned review of the qualification.	20/09/2018		
Formal structure of the qualification			
Title of component and identification code.	Mandatory/ Optional	Estimated size (learning hours)	Level
	Optional	(learning hours)	
Theoretical Knowledge to impart relevant basic technical information of the machines and it's operations	Mandatory	60	2
Practical knowledge of the course to understand the work practises and operating the machines.	Mandatory	210	2
Soft Skills to improve safety, behaviour, hygiene, attitude, etc.	Mandatory	30	2

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

1. Calendering Machine Operator course module – Annexure II

SECTION 1

ASSESSMENT

Body/Bodies which will carry out assessment:

- Andhra Pradesh Productivity Council
- Apparel Export Promotion Council
- Axis Education Society
- Base Research Consultancy services Private Limited
- C.K.Skill Research & Development Ltd.
- Centre for Recruitment and Selection Pvt Ltd
- Crux Mangement Services Pvt Ltd
- Eduworld Consultants Pvt Ltd.
- Employable Skills Advancement Assesmtn and Certification LLP (ESAAC LLP)
- Fashion Futures
- Federation of Indian Chamber of Commerce and Industry (FICCI)
- Federation of Indian Women Entrepreneurs (FIWE)
- Human Potential Development Center
- Induslynk Training services Pvt. Ltd.
- Itcot Consultancy & Services Ltd.
- K S Rangasamy Institute of Technology
- Kapokh Fibers & Indutries Ltd.
- Manipal City & Guilds Pvt. Ltd
- Methods Apparel Consultancy India Pvt Ltd.
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- Northern India Textile Research Association (NITRA)
- PSG College of Technology
- PVR Skill Central Pvt Ltd.
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- Skills Training Assessment Management Partners Ltd. (STAMP)
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- TUV SUD South Asia Pvt Ltd
- University of Calcutta

These assessing agencies have been chosen through a transparent process after thorough scrutiny of the credentials presented in response to the two stage RFPs. All of them have prior experience of minimum 2 years of carrying out similar assessments in the field of textiles. On the directions of ministry, RSA has empanelled agencies from the different sector skill councils viz. Textile Sector Skill Council (TSC) and Apparel and Home Made-ups Sector Skill Councils (AMHSSC). An assessment protocol, in this regard has also been prepared and forwarded to all the assessment agencies so as to standardise the assessment process. The assessors of the above said agencies are approved for assessment only after thorough scrutiny of their (assessor) documents submitted by the agencies. In this regard, the agencies forward the fully filled Know Your Assessor (KYA) form along with requisite documents. The empanelled Assessment Agencies were allotted regions. The above exercise was done on the directions of Ministry of Textiles. Further, to maintain the quality in assessment, RSA occasionally conducts surprise checks to monitor the activities of assessment agencies.

How will RPL assessment be managed and who will carry it out?

The Implementing Agencies will assess the RPL at the time of enrolling the candidates.

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:

- a) The emphasis is on 'learning-by-doing' and practical demonstration of skills and knowledge based on the performance criteria.
- b) The assessment Sheets are developed by Subject Matter Experts (SME) available with the Resource Support Agency.
- c) The assessments sheets are also checked for the various outcome based parameters such as technical knowledge, soft skills, Practical Knowledge, & equipment requirement, etc.
- d) The assessments are designed so as to assess maximum parts during the practical hands on work. Duties and responsibility of a Calendering Machine Operator are also assessed.

- e) The assessment agencies are instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit that they are not associated with any other assessment agencies or any training partner to avoid any conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments.
- f) The assessment agencies are instructed to Ideally have assessor with right mix of industry experience, academia and these are detailed in Assessment Protocol
- g) The documents of the assessors selected by Assessment Agencies are then forwarded to RSA for further scrutiny.
- h) The selected assessors are provided with unique assessor id by RSA as per the assessment protocol.

The assessment results are backed by evidences collected by assessors.

1. The assessor ensures that the attendances of the trainees are equal to or more than 60%.
2. The assessor needs to verify the authenticity of the candidate by confirming the biometric identity. In case of suspicion, the assessor should authenticate and cross verify trainee's credentials in the enrolment form.
3. The assessor collects the assessment summary sheet with signature of both the assessor and the Implementing Agency's coordinator after successful completion of the assessment.
4. The assessor also needs to carry a photo ID card.
5. The assessor verifies whether the training infrastructure is in compliance to the criteria as set by RSA.
6. The details on assessment are elaborated in the Assessment Protocol developed by RSA.

All accredited Assessment Agency follow the "Assessment Protocol developed by RSA". Each course module comprises of soft skills, theoretical part and practical and accordingly the assessment sheets are prepared. The marks for the theoretical and practical assessment, in total, are calculated and the candidates acquiring marks equal to or more than 60% are declared pass.

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

Give details of the document(s) here:

1. Format of RFP for AA Accreditation from RSA- Annexure III
2. Assessment Protocol Developed by RSA – Annexure IV

ASSESSMENT EVIDENCE

Learning outcomes would be assessed separately for practical as well as theoretical knowledge by the assessment agency.

Title of Course Module: Calendering Machine Operator.

Learning Outcomes			Total Weightage (in %age)
1. Practical Assessment	Identification of different parts of machine..	4.8	48
	Proper passage of fabric through guide rollers & through metal detector	4.8	
	Demo on changes in machine setting for achieving diff. finishing effects	4.8	
	Feeding of fabric in inlet and calendering unit.	4.8	
	Setting between steel roll, cotton roll and plastic roll.	4.8	
	Setting of various parameters in main panel and its meaning.	4.8	
	Operating main panel.	4.8	
	Checking required for calendaring effect on outlet fabric.	4.8	
	Identification of the utility main valves. (air, water, steam, etc.,).	4.8	
	Dos & Don'ts in case of fire or any emergency situation.	4.8	
	Weightage %		48

2. Theoretical Assessment	Various types of calendar machine.	4.8	52
	Importance of calendering machine.	4.8	
	Importance of metal detector and seam detector.	4.8	
	Functions of different parts of machine.	4.8	
	Passage of fabric in the machine.	4.8	
	Importance of cleaning of machine.	4.8	
	Safety precautions while operating the machine.	4.8	
	Importance of inspection at outlet of the machine.	4.8	
	Components of a first aid box?	4.8	
	Attitude of the worker towards work and work place?	4.8	
	Different machines in Process house?	4.8	
		Weightage %	
	Grand Total	100	

Title of Component: Calendering Machine Operator

Outcomes to be assessed	Assessment criteria for the outcome
<p>Practical Outcome:</p> <ul style="list-style-type: none"> • Setting the control panel, • Operate the Machine, • Setting between steel roll, cotton roll and plastic roll • Maintain the steam pressure of the machine, • Proper passage of fabric through guide rollers & through metal detector to be careful about the speed & temperature of the machine 	<ul style="list-style-type: none"> • The assessor will ask the trainee to set the machine for different qualities of fabric. • The trainee will be asked to operate the machine on a sample fabric. • The trainee will be asked to do the setting of the steel, cotton and plastic roll according to the different qualities of fabric. • He/she will be asked to set the steam pressure for a sample fabric. • He/she will be asked by the assessor to pass the cheda fabric through various guide rollers and He/she will be asked to maintain the temperature and speed of the machine.
<p>Theoretical Outcome:</p> <ul style="list-style-type: none"> • Knowledge of basic textiles terms, • Importance of metal detector and seam detector, • Different parts of machine and their functions, • Importance of inspection at outlet of the machine. • Calendaring defects & their remedies. • Safety precautions 	<ul style="list-style-type: none"> • The trainee will be asked questions by the assessor regarding the basic textile terms (given in the assessment sheet). • The trainee will be asked about the importance of metal and seam detector. • He/she will be asked questions regarding the different part of the machines and their functions without them the machine. • The assessor will ask questions like what is the importance of inspection at the outlet of the machine. • The questions regarding defects of calendaring and their remedies will be asked by the assessor as per the assessment sheet. • The assessor will ask questions like what safety precautions will you take before starting the machine etc.

Means of assessment 1	
Theoretical and practical knowledge would be assessed separately with the help of questionnaire (already attached above)	
Means of assessment 2	
N/A	
Pass/Fail	
Qualified or Not qualified. Only after qualifying the certificate will be awarded.	

SECTION 2
EVIDENCE OF LEVEL

OPTION A

Title/Name of qualification/component: Calendering Machine Operator		Level: 2	
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
Process	A Calendering machine Operator - gets work(program) allotted by his supervisor and is responsible for carrying out operating all activities of the Calendering machine like to maintain the steam pressure of the machine, to be careful about the speed & temperature of the machine. Should maintain the continuity without stopping the machine. Operator should be able to stitch the fabric on simple sewing machine.	The process like setting the control panel, operating the machine, handling the various qualities of fabric for giving various effects are the work which are having repetitive nature. This work is done by the operator on regular basis to operate this machine with a little understanding like he/she should operate the machine according to the required procedures.	2
Professional knowledge	A Calendering machine Operator needs to know the process and material flow in a textile processing mill, functioning of different types of processing machines, oiling and greasing, . Understanding of various defects in the fabric. Understanding of importance of quality & productivity and proper handing over shift and taking over shift is very important for efficient production. Also should follow the SOP and safety standards, etc. maintained by the company.	The operator has to handle different panels of the machine according to the different qualities of the fabric. In this way he/she will work with high efficiency, focus on the quality of the product and he/she will make sure that there should be least wastage.	2
Professional skill	This operator operated the fabric Calendering machine on routine basis on instructions from supervisor, attends workshops, provides suggestions in interest of the company, and extends voluntary support wherever required. Also identifies the cause of a problem and applies problem-solving approach to get the best suitable solution, refers	Limited service skills used in limited context like operating the machine etc. He/she have to maintain the speed and temperature according to the fabric. He/she will assist in professional work like to told about any special defects in the machine while working on it. He/she will know about the defects of the product so that he/she could differentiate the	2

Title/Name of qualification/component: Calendering Machine Operator			Level: 2
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	defects to the supervisor.	good and bad quality.	
Core skill	<p>This operator writes clear and short sentences, comprehends written instructions, communicates with the supervisor appropriately and talks to others to convey information effectively.</p> <p>Applies problem-solving approaches in different situations during the production and performs basic calculations required during the production process for quality and uninterrupted output. Operating the machine/control panel as per instructions. Safe handling of tools and equipments. Will be able to set the machine according to the material dyed. Ensures proper functioning of the machine. Safely handles dyes & chemicals using personal protective equipments. Knows personal financing and understands social, political and religious diversity, hygiene and environment.</p>	<p>Receive and transmit written and oral messages like the operator received written instruction from the shift officer and transmit them to the helper. The operator knows basic calculations like addition, subtraction etc. and he uses the same for bath solution preparation according to the required procedure.</p>	2
Responsibility	<p>This operator takes charge of the shift after discussing in the issues faced with respect to the quality, production and safety, reports to his shift superior about issues faced in his shift and leaves the department. He is not responsible for any mishap and works under instructions with close supervision. He contributes in making the work place healthy, safe and secure and follow the industry & organizational compliances.</p>	<p>As the operator leave the premises after discussing the issues faced during the shift, no responsibility lies on the operator. The shift supervisor takes up the matter and resolves the problem, if any. The operator works under instruction and close supervision of the supervisor.</p>	2

SECTION 3

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

Different course validation programs were conducted the details of which is mentioned below:

1. Validation program of Spinning and Weaving course modules developed by RSA was conducted at Coimbatore (Ref. RSA fortnightly report as on 29.05.2015 to MoT).
2. Validation program of Processing, Knitting and Apparels course modules developed by RSA was conducted at Tirupur (Ref. RSA fortnightly report as on 29.05.2015 to MoT).
3. Workshop on course content validation was held in New Delhi on 29.06.2015.
4. One day orientation program on course content and assessment on 13th August, 2015 was conducted in New Delhi
5. Two validation programs were conducted at Ludhiana and Panipath on 2nd June 2015 3rd June 2015 respectively
6. Industrial consultation workshop with the stake holders, traders and industry for course content developed by RSA was organized on Saturday. 31.05.2015 at Coimbatore for validation.

Participants from industry, implementing agencies & assessment agencies participated in the validation programs. Based on the feedback from participant's tables modifications in the course module were incorporated and some more modules were developed.

List of industries involved in the Validation process:

- SITRA, Coimbatore
- Tasma, Bindigul
- ALPINE Knits India Pvt. Ltd.
- NIFT, Tirupur
- Nitin Textiles Pvt. Ltd., Dindigul
- Saravana Spg. Mills Pvt. Ltd. Dindigul
- Gomathi Spinning Mills, Tirupur
- Quantum Knits
- G K Consultancy
- BRT Spinners Pvt. Ltd.
- Sky Cotex India Pvt. Ltd.
- KCT, Copimbatore
- Raghav Industries limited
- Textile Technology Kumaraguru College
- NIFTTEA College, Tirupur
- CBC Tirupur
- SCM Textiles
- Sri Karthikeya Spg. Mills
- ELLITE Textiles
- Aatharva Garments
- ATDC-ERODE
- ATDC-Tirupur
- Santhosh Spg mills

- Sri Venkateshwara Spg. Mills
- Venilakshmi Mills
- Hi Tech Spg. Mills
- Sunder Textiles
- SISPA
- Bhaskar Foundation
- CMAI-Mumbai
- ALT Kanpur
- RSWM, Banswara
- RSWM, Bhilwara
- Modelama Exports
- Textile Association Delhi
- Matric Clothing Pvt. Ltd (ASDA)
- NEED
- Institute of Jute Technology, DJFT, CU
- Dhruv international pvt. Ltd.
- Shri lakshmi Cotsyn
- NTC- New Delhi
- AMH-SSC
- Laj Exports Ltd, noida
- Technopak Advisors Pvt. Ltd.
- Wazir Advisors
- Golden Trends Pvt. Ltd.
- IL&FS Clusters
- SPINFED Odisha
- Orient Craft Limited
- India Fashion
- U K International
- Shivalik Prints
- Feather Touch
- Sampada tex
- Kapoor Industries panipat
- Paliwal Industries
- Rivira Home Furnishings
- Dashmesh Jacquard and Powerloom
- Mittal Industries
- Anand International
- Harisons Overseas
- Khurana Furnishing Pvt. Ltd.
- R H F Pvt. Ltd.
- ESSKAY Enterprise
- Hometex Design
- Abhishek Textiles
- R P Overseas

FAZE3

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

As per the report of NSDC on Human Resource and Skill Requirement in Textile and Clothing Sector (2013-17, 2017-22) (Annexure-5): Currently, 15.23 million people are employed in the textile sub-sector across yarn and fabric, home textiles, technical textiles and readymade garments. Human resource requirement in the sector is expected to reach 21.54 million by 2022 translating into 6.31 million additional employment opportunities during the period 2013-22. Also the National Textile Policy aims to create 35 million jobs and achieve exports worth INR 18 lakh crores by 2024-25 with the help of investments. Draft proposal for the same was submitted by expert panel constituted by the government on 28th July, 2014.

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

QPs for Job Roles of various related SSC's were studied to ensure that there is no duplicity for the claimed levels i.e. level 2

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 reviewed or updated?

Version 1 of the courses has been prepared and uploaded on Textiles Committee website and next version will be prepared by September 2018. Feedback for the courses will be collected 6 months prior to the revision and format for the said purpose will be prepared and uploaded to TC website for receiving the comments from the stake holder for any change, if required, in the said course. Further, the feedback form will be sent to all the Implementing Agencies under MoT for their necessary comments before taking the exercise of revision of version-1.

After receiving feedback and compiling the same the necessary amendments, if required, will be made and all the course will be revised by the team of experts in the domain field.

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

Give details of the document(s) here:

1. Skill gap report for textile sector_2008-2022– Annexure V

SECTION 4

EVIDENCE OF 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?

Please refer to attached career path as per annexure 1 which clearly defines the career path.

Career map of Calendering machine operator:

