Model Curriculum

QP Name: Speed Frame Operator - Tenter and Doffer

QP Code: TSC/Q0106

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

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Training Parameters

Sector	Textile
Sub-Sector	Spinning - Textiles
Occupation	Pre Spinning Operations
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8151.9900
Minimum Educational Qualification and Experience	Basic Literacy and Numeracy with 0-6 Months of experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	19/03/2021
Next Review Date	19/03/2026
NSQC Approval Date	
QP Version	2.0
Model Curriculum Creation Date	19/03/2021
Model Curriculum Valid Up to Date	19/03/2026
Model Curriculum Version	1.0
Minimum Duration of the Course	360 hours
Maximum Duration of the Course	360 hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

- Take charge of shift and hand over shift to the shift supervisor in the speed frame department.
- Creel and replenish sliver cans at speed frame.
- Perform piecing of broken sliver and roving at speed frame machine.
- Perform doffing and machine cleaning activities at speed frame machine.
- Maintain work area, tools and machines as per guidelines.
- Follow greening and energy conservation activities as per guidelines.
- Describe the importance of health, safety and security at workplace.
- Communicate and work effectively in a team.
- Comply with organizational and industry standards.

Compulsory Modules

The table lists the modules, their duration, and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	**03:00**	**01:00**			**04:00**
Module 1: Introduction to spinning mills and the objectives of speed frame machine operation	03:00	01:00			04:00
TSC/N0133: Carryout shift change, can change, piecing, doffing and tenting responsibilities in speed frame department Version 1.0 NSQF Level - 4	**80:00**	**196:00**			**276:00**
Module 2: Taking charge and handing over of shift in speed frame department	06:00	14:00			20:00
Module 3: Operate the speed frame machine	08:00	23:00			31:00
Module 4: Perform sliver can change in a speed frame machine	08:00	23:00			31:00
Module 5: Perform piecing of sliver breaks at creel section	07:00	27:00			34:00

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Module 6: Perform piecing of roving breaks	10:00	30:00			40:00
Module 7: Prepare for doffing operation in the speed frame machine	08:00	16:00			24:00
Module 8: Carry out doffing operation in a speed frame machine	16:00	32:00			48:00
Module 9: Carry out cleaning and other tenting activities in speed frame department	17:00	31:00			48:00
TSC/N9015: Follow machine, safety and organizational guidelines in Textile sector Version 1.0 NSQF Level - 4	**19:00**	**46:00**			**65:00**
Module 10: Maintaining the work area, tools and machines	02:00	06:00			08:00
Module 11: Greening and energy conservation in textile sector	02:00	06:00			08:00
Module 12: Health, safety, and emergency response at workplace	09:00	23:00			32:00
Module 13: Organizational standards and policies	06:00	11:00			17:00
TSC/N9016:Follow teamwork, adaptability and communication guidelines in textile sector Version 1.0 NSQF Level - 4	**05:00**	**10:00**			**15:00**
Module 14: Teamwork, trust, and communication	03:00	07:00			10:00
Module 15: Adaptability	02:00	03:00			05:00
Total Duration	**107:00**	**253:00**			**360:00**

Module Details

Module 1: Introduction to spinning mills and objectives of speed frame machine operation

Bridge Module

Terminal Outcomes:

- Discuss the role of spinning mills in the textile value chain.
- Discuss the process and product flow in the spinning mills.
- Discuss the functions of a speed frame machine.

Duration: ***03:00***	**Duration**: ***01:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the role of spinning mills in the textile value chain. • Discuss the raw material, final product and process flow in a typical spinning mill. • Describe the functions of the speed frame machine. • Classify the types of speed frame machines concerning technology.	• Illustrate the process flow in a typical spinning mill. • Label the parts of a speed frame machine.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Samples of fibres, yarns, intermediate and finished packages, process flow chart from blow room to finishing department, sample tools and accessories for speed Frame, etc, parts of speed frame labelled, sign boards, sample log books and formats, seating arrangement for 25 people.	

Module 2: Taking charge and handing over of shift in speed frame department

Mapped to TSC/N0133, v1.0

- Describe the basics of staple yarn spinning.
- Explain the position and role of the speed frame operator in the hierarchy line of a spinning mill.
- Discuss the rules and regulations of spinning mills.
- Prepare and review shift log report and checklist.
- Demonstrate inspection of machines, materials, and accessories in the Speed frame department.
- Calculate and prepare Speed frame production record.

Duration: ***06:00***	**Duration**: ***14:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the basics of staple yarn spinning i.e., process flow, types of machines involved, material flow, types of fibres used, type of yarn produced, terms and definitions of the count, production, efficiency, machine speed, colour code, etc. • Discuss the importance of coming 10-15 minutes before the shift to take stock of count and productions changes. • Define organizational hierarchy and describe the vertical link between superior and lower levels in an organization. • Describe the roles and responsibilities of the speed frame operator. • List out the rules and regulations followed in a spinning mill like shift timing and duration, limits of leave and holidays, etc. • Describe the process of shift handover and shift takeover. • Explain the shift checklist, shift log report, and its significance. • Discuss the quality requirements of raw materials, spares used in the speed frame department. • List the basic electric connections and motor drives used in the speed frame machine. • Discuss the components of shift handover log report. • List the operational tools required to carry out the tenting activities in the speed frame department. • Classify the count system followed in a spinning mill.	• Prepare an organization chart depicting the various departments and roles involved in a spinning mill. • Prepare a sample log report of an outgoing shift and a checklist of incoming shift. • Demonstrate the process of taking supply and production stock. • Demonstrate inspection of raw materials and tools available at the production area. • Demonstrate collection of the shift details from the previous shift operator. • Demonstrate the end of shift activities like cleaning, weighing waste, disposal of waste, etc. • Demonstrate calculation of shift production, amount of hard waste generated, and record in the register. • Demonstrate reporting of deviations and anomalies to the shift supervisor.

• Distinguish between the different types of waste generated at the speed frame and their effect on sliver quality. • Discuss the SOP of taking care of shift and handing over the shift in the speed frame department. • Discuss the colour code followed in the spinning preparatory department. • Discuss the consequence of improper shift takeover and handover.	
Classroom Aids:	
Charts, Posters, Projector, Blackboard, Chalk.	
Tools, Equipment and Other Requirements	
Waist bag, waste samples, calculator, samples of operational tools, record books, seating arrangement for 25 people.	

Module 3: Operate the speed frame machine

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Demonstrate the operations of the speed frame machine as per the SOP.
- Demonstrate the operation of the machine display panel, recognize machine faults, check and feed process parameters, etc.
- Demonstrate dismantling and assembling of detachable parts in speed frame machine.

Duration: ***08:00***	**Duration**: ***23:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the SOP of operating the speed frame machine. • State the functions of each signal lamp in the Speed frame machine. • Describe the main parts of the speed frame machine, control switches, and display board and their functions. • Discuss the significance of signal lights on sliver and roving breakages. • Discuss the importance of safety doors in the speed frame machine. • Define the terms production, efficiency, hank meter reading, waste, breaks per machine hour, machine speed, etc. • Discuss the impacts of stop motion ineffectiveness, auto leveller failure, inadequate top arm loading on sliver quality.	• Demonstrate starting and stopping of speed frame machine. • Demonstrate identification of various malfunctions of machine using machine display panel. • Demonstrate the operation of the machine display panel for inspecting the parameters like hank, speed, hank production, efficiency, etc. • Demonstrate dismantling and assembling of machine parts of top drafting rollers, clearers, sliver trumpet, etc. • Demonstrate opening and closing of machine safety doors and waste collection chamber.
Classroom Aids:	
Charts, Posters, Projector, Blackboard, Chalk.	
Tools, Equipment and Other Requirements	
One speed frame machine one supply can, one roving bobbin/empty bobbin, seating arrangement for 25 people.	

Module 4: Perform sliver can change in a speed frame machine

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Demonstrate identification of sliver exhausts as per the SOP.
- Demonstrate transportation of sliver cans using specified tools.
- Demonstrate sliver can replacement and sliver piecing as per the SOP.

Duration: ***08:00***	**Duration**: ***23:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the machine parts of the creel zone and their function. • Describe the process of count and colour code identification of sliver cans and their importance. • Discuss the SOP of sliver can replenishment and can transportation. • Discuss the need for checking the surface damages of the sliver.	• Demonstrate transportation of sliver cans using specified tools. • Demonstrate inspection of the can for sliver exhausts. • Demonstrate the process of changing sliver can, passing new end in creel passage. • Demonstrate the removal and storage of exhausted sliver cans as per the SOP.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
One Speed frame machine, one full supply can, one empty can, seating arrangement for 25 people.	

Module 5: Perform piecing of sliver breaks at creel section

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Demonstrate identification of broken sliver at creel zone.
- Demonstrate sliver piecing as per the SOP.
- Demonstrate threading of sliver in the speed frame machine as per the SOP.

Duration: ***07:00***	**Duration**: ***27:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the parts of a speed frame machine, involved in sliver passage and their functions. • Discuss the different types of sliver piecing methods and their applicability. • State the reasons for sliver breakages at creel. • Explain the significance of attending to breakages immediately. • Discuss the SOP of piecing broken sliver at creel zone. • Discuss the impact of incorrect piecing.	• Demonstrate the use of signal lamps to identify the machine stoppage due to sliver breakage. • Demonstrate how to locate the position of broken sliver at creel zone. • Demonstrate piecing of broken sliver as per the SOP. • Demonstrate collection of sliver waste as per the SOP. • Distinguish between the different signal lamps and the associated faults at Speed frame machine.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
One Speed frame machine, waist bag, one supply can with sliver, sliver waste, seating arrangement for 25 people.	

Module 6: Perform piecing of roving breaks

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Demonstrate piecing of roving breaks at various zones of the speed frame machine.
- Dismantle and assemble the drafting zone of the speed frame machine.
- Discuss the SOP of piecing the roving breakage.

Duration: *10:00*	**Duration**: *30:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Label the parts of speed frame involved in roving passage and their functions. • State the reasons for roving breakages at Speed frame. • Discuss the methods to reduce roving breakages in the speed frame machine. • Explain the advantages of using blow horn or nylon wire for piecing broken roving. • Discuss the significance of percentage Relative Humidity (RH) in speed frame production. • Classify the cleaning tools available for cleaning the speed frame machine. • Discuss the SOP of piecing roving breaks in the speed frame machine.	• Demonstrate the method of identification of spindle due to roving breakage. • Demonstrate roving piecing using blow horn or nylon wire as per the SOP. • Demonstrate cleaning of top and bottom roller lapping using specified cleaning tools. • Demonstrate the method of inspection of formation for roving after piecing.
Classroom Aids:	
Charts, Posters, Projector, Blackboard, Chalk.	
Tools, Equipment and Other Requirements	
Speed frame machine, lapping cleaning tool, drafting zone cleaning gun, waist bag, samples of slivers, sliver waste, seating arrangement for 25 people.	

Module 7: Prepare for doffing operation in the speed frame machine

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Discuss the preparatory activities for speed frame doffing operation.
- Demonstrate collection and storage of empty bobbins as per the SOP.
- Demonstrate the operation of OHTC as per SOP.

Duration: ***08:00***	**Duration**: ***16:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the machine parts and ancillaries related to speed frame doffing and their functions. • List the material handling equipment used for doffing in the speed frame machine. • Recall the relationship between doffer running time and bobbin weight with respect to roving of the hank. • State the need for colour coding for the bobbins. • Discuss the impacts of using wrong colour coded and damaged empty bobbins for doffing. • Discuss the SOP for collecting and arranging empty bobbins for doffing.	• Demonstrate inspection of speed frame doffing stages as per the SOP. • Demonstrate the process of storing empties at the designated location. • Demonstrate handling of bobbin trolley as per the SOP. • Demonstrate collection and arrangement of empty bobbins. • Demonstrate the method of operating the speed frame machine as per the SOP.
Classroom Aids:	
Charts, Posters, Projector, Blackboard, Chalk.	
Tools, Equipment and Other Requirements	
One Speed frame machine, bobbin trolley, one empty bobbin, OHTC, seating arrangement for 25 people.	

Module 8: Carry out doffing operation in a speed frame machine

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Operate speed frame machine as per the SOP.
- Perform manual doffing and donning operation.
- Demonstrate piecing of re-starting breaks as per the SOP.

Duration: *16:00*	**Duration**: *32:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the SOP of handling control buttons while doffing at speed frame machine. • Discuss the significance of non-verbal communications used in doffing activity. • Describe hank, bobbin weight, bobbin defects, doff slip, etc. • Discuss the impacts of taking pre-mature and late doffs at speed frame machine. • Discuss the reasons for re-starting breaks. • Discuss the SOP for doffing and machine re-starting operations at speed frame.	• Demonstrate stopping and re-starting speed frame machine as per the SOP. • Demonstrate removing full bobbins and inserting empty bobbins. • Demonstrate gaiting, winding roving end on the bobbin. • Demonstrate piecing of machine re-starting breaks as per the SOP. • Demonstrate preparation of count board to fix on the bobbin trolley. • Demonstrate stacking of empty and full roving bobbins as per the SOP. • Demonstrate preparation of doffing details records in the given format.
Classroom Aids:	
Charts, Posters, Projector, Blackboard, Chalk.	
Tools, Equipment and Other Requirements	
Speed frame machine, bobbin trolley, empty bobbins, roving bobbins, count board, pen, production record, seating arrangement for 25 people.	

Module 9: Carry out cleaning and other tenting activities in speed frame department

Mapped to TSC/N0133, v1.0

Terminal Outcomes:

- Discuss the other tenting responsibilities of operator in speed frame department.
- Demonstrate cleaning of different parts of speed frame machine by following standard cleaning method.

Duration: ***17:00***	**Duration**: ***31:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the other tenting responsibilities of speed frame operator. • Explain the count change process and important items to be noted during count change. • Define the term idle spindle. • Explain the functions of OHTC in Speed frame department. • Describe the terms of production per spindle, machine efficiency percentage. • Describe the significance of following 5s housekeeping system in a spinning mill. • Discuss the need for supporting the maintenance and doffing team as per the SOP. • Discuss the tools required for cleaning the drafting zone. • Discuss the importance of segregating waste as per the SOP. • Discuss the formats for reporting to superiors, log book formats.	• Demonstrate inspection of working condition of the speed frame machine as per the SOP. • Demonstrate the activities to be done during the count change as per the SOP. • Demonstrate cleaning of different parts of Speed frame machine by using specified tools. • Demonstrate cleaning of OHTC as per the standard method.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Speed frame machine, clearer cloth/roll, drafting cleaning mechanical gun, cleaning stick, cleaning brush, OHTC, Seating arrangement for 25 people.	

Module 10: Maintaining the work area, tools and machines

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Maintain the work area, tools and machines in spinning preparatory department.
- Explain the objective of tools, PPE used in the spinning preparatory department.

Duration: ***02:00***	**Duration**: ***06:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Differentiate various types of tools used for cleaning and maintenance. • Explain the objectives of each maintenance and cleaning tool used in Speed frame machine operation. • Discuss the significance of safe handling procedure of tools and equipment. • Brief the importance and written instructions on the allocated machines. • Discuss the significance of minimizing the wastage of material, effort and time. • Prepare a draft schedule for cleaning and waste collection for the assigned job role. • List the types of Material handling equipment and methods used in spinning department. • Discuss the types and importance of PPE used in the spinning preparatory department.	• Demonstrate the procedure to handle materials, tools, Personal Protective Equipment and machines. • Identify the appropriate tools and equipment for the respective job. • Demonstrate the scheduled cleaning of machines and equipment. • Examine the functioning of machine guards.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
One Speed frame machine, ancillaries, material handling equipment and tool kits of operational, cleaning maintenance activities, PPE, seating arrangement for 25 people.	

Module 11: Greening and energy conservation in textile sector

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Identify the recyclable, non-recyclable, and hazardous wastes.
- Optimize usage of material and resources at workplace.

Duration: ***02:00***	**Duration**: ***06:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the terms of pollution control, soil conservation, waste management, recycle, forest conservation, global warming, organic products, etc. • List the different sources of energy. • Discuss the impact of using non-biodegradable materials on the environment. • Evaluate the different ways to conserve energy in a textile factory. • Discuss the significance of conserving environment and energy resources. • Discuss the significance of specified usage of resources at work area.	• Demonstrate the segregation of recyclable, non-recyclable, hazardous wastes in the spinning department. • Demonstrate the handling and storage of waste materials. • Create a list of potential ways to reduce wastage and conserve energy in a textile factory.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
samples of organic cotton, video visuals on solar power, Package materials - Covers, bags, wrappers, box, seating arrangement for 25 people.	

Module 12: Health, safety, and emergency response at workplace

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Perform first aid at workplace.
- Follow fire safety protocol in case of fire emergencies in the spinning preparatory department.
- Recognise hazardous materials in the spinning preparatory department.

Duration: *09:00*	**Duration: *23:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of safe handling procedure of tools and equipment. • Discuss the importance and standard procedure for materials. • Discuss the impacts hazards of unsafe workplace conditions and procedures in the textile industry (operational, environmental, personal, ergonomic, chemical, electric, fire) and methods to avoid hazards. • Distinguish between the various types of fire extinguishers. • Distinguish different types of alarms and their significance. • Differentiate the different items in a First aid box. • Discuss the correct work posture and importance of ergonomics for the assigned job role.	• Classify abnormal sounds emanating from faulty/worn out machine parts. • Classify Personal Protective Equipment (PPEs) like body protector, ear plugs, nose mask, head cap, etc. as per guidelines. • Demonstrate handling of fire extinguishers. • Locate emergency exits of workplace and organization. • Participate in fire drills / evacuation at workplace. • Demonstrate application of first aid procedures for injury/accidents in mock situations. • Demonstrate lifting of heavy weight materials as per standard procedure.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
PPE, first aid kit, fire extinguishers, speed frame machine, seating arrangement for 25 people.	

Module 13: Organizational standards and policies

Mapped to TSC/N9015, v1.0

Terminal Outcomes:

- Recognize the significance of organization policies, quality standards, rules and regulations in textile industries.
- Maintain hygienic working atmosphere as per protocol of the textile sector.

Duration: *06:00*	**Duration: *11:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of following organizational standard procedures, quality standards, rules, codes, policies and safety Standards for textile sector. • Discuss the need for organizational quality systems, 5S, ISO, SA, etc. following in the textile sector. • Brief the importance of following work wear standards, behavioural protocols and etiquette in textile sector. • Discuss the contents of organisation's formats and procedures for reporting production, defects, faults, material/tool requisition and quality parameters and task completed for assigned job.	• Practice the systems like Quality circles, 5S, ISO, etc. in the routine work. • Demonstrate the steps to maintain a hygienic workplace.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
list of rules and regulations followed in the organisation, list of industry standards such as performance indicators of mills, process, worker, seating arrangement for 25 people.	

Module 14: Teamwork, trust, and communication

Mapped to TSC/N9016, v1.0

Terminal Outcomes:

- Confirm to standard guidelines while working with the team.
- Communicate effective with others at workplace.

Duration: *03:00*	**Duration: *07:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the importance of teamwork and following industry protocols at workplace. • Explain the limits and responsibilities for the assigned duties at textile sector. • Summarize emergency contact numbers, details of officials, reporting Protocols and formats. • List hierarchy of communication and communication etiquettes in the textile sector.	• Apply methods of team work to complete/for a given task. • Prepare a sample shift performance report for an allotted task. • Demonstrate the use appropriate verbal and non-verbal communication skills while interacting with others at workplace.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Video visuals of basic communications and team working, models of communicating and team working area at your job, seating arrangement for 25 people.	

Module 15: Adaptability

Mapped to TSC/N9016, v1.0

Terminal Outcomes:

- Operate at various environment and different hierarchy level for the assigned task.
- Create a work plan for the allotted task.

Duration: *02:00*	**Duration: *03:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of adaptability at work place with various levels of people. • Discuss the importance of developing adaptability skills. • Discuss the impacts of inadaptability at the work place.	• Demonstrate the ability to work in dynamic work environment by developing coping mechanisms, survival tactics and traits of flexibility. • Create a sample backup work plan for the shortage of man power, raw materials, etc.
Classroom Aids:	
Charts, Posters, Projector, Blackboard.	
Tools, Equipment and Other Requirements	
Video visuals of adaptability with suitable examples, seating arrangement for 25 people.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Basic Literacy and Numeracy	NA	1	Spinning Production	4	Spinning Production	

Trainer Certification	
Domain Certification	**Platform Certification**
TSC/Q0106, v2.0 - Speed Frame Operator - Tenter and Doffer, Minimum pass percentage 80 percent.	MEP/Q2601, v1.0 - Trainer, Minimum pass percentage 80 percent.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI	Textiles	3	Spinning Production			

Assessor Certification	
Domain Certification	**Platform Certification**
TSC/Q0106, v2.0 - Speed Frame Operator - Tenter and Doffer, Minimum pass percentage 80 percent	MEP/Q2701, v1.0 - Assessor, Minimum pass percentage 80 percent

Assessment Strategy

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

a) The emphasis is on 'learn-by-doing' and practical demonstration of skills and knowledge based on the performance criteria.

b) The assessments papers are developed by Subject Matter Experts (SME) available with the Assessment Agency as per the performances and assessment criteria mentioned in the Qualification Packs.

c) The assessments papers are also checked for the various outcome-based parameters such as quality, time taken, tools and equipment requirement, etc.

d) The assessments are designed so as to assess maximum parts during the practical hands-on work. Duties and responsibility of Speed Frame Operator - Tenter and Doffer also assessed. The technical limitations at the training centres are taken care in theory and viva.

e) The assessment agencies are instructed to hire qualified and experienced assessors as per TSC's criteria who have integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and 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 assessors with the right mix of industry experience, academia and these are detailed in Assessment Agency Protocol of TSC

g) The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to Assessment Framework, competency-based assessments, assessors guide etc. and they are assessed for Domain and assessment skills. Only those assessors who clears both the assessments with minimum 80% marks in each are permitted to carry out assessments.

h) The assessors are provided with Assessor's guide developed by the Subject Matter Expert of the Assessment Agency or by Textile SSC as per Assessment Framework. The Assessors guides are developed to ensure the maximum possible consistency/transparency in the assessment by different assessors and elaborate on the following:

1. Qualification Pack Structure.
2. Guidance for the assessors to conduct theory, practical and viva assessments.
3. Guidance for trainees to be given by assessor before the start of the assessments.
4. Guidance on assessment process, practical brief with step of operational practical observation checklist Attendance Sheet and mark sheet.
5. Viva guidance for uniformity and consistency across the batch.
6. Guidance on assessment evidence collection.

The assessment results are backed by evidence collected by assessors.

1. The assessors need to collect a copy of the attendance sheets for the training done under the scheme. The attendance sheets are signed and stamped by the in charge/ Head of the training centre.

2. The assessors need to verify the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same needs to be mentioned in the attendance sheet. In case of suspicion, the assessor should authenticate and cross verify trainee's credential in the enrolment form.

3. The assessors need to take a camera to click photograph of the trainees working on the job and giving theory exam as evidence.

4. The assessors also need to carry a Photo ID card.

5. The assessors also need to take the photographs as evidence from appropriate angles/sides of the final work piece/job submitted by the trainee.

6. The details on assessment framework are elaborated in Textile SSC protocol for accreditation of Assessment Agencies and Assessment Framework.

All accredited Assessment Agencies follow the "Textile SSC's protocol for accreditation of Assessment Agencies and Assessment Framework". Each NOS in the Qualification Pack (QP) will be assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Performances Criteria in the NOS will be assigned marks for theory or practical based on relative importance, criticality of function and training infrastructure.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do **upon the completion of the training**.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do **upon the completion of a module.** A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
SOP	Standard Operating Procedure
PPE	Personal Protective Equipment
QC	Quality Control
ISO	International Organization for Standardization
SA	Standards on Auditing