

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR TEXTILE SECTOR

### What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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### Introduction

## Qualifications Pack – Fitter-Shuttleless Weaving Machine: Projectile

**SECTOR: TEXTILE**

**SUB-SECTOR: WEAVING**

**OCCUPATION: MAINTENANCE**

**REFERENCE ID: TSC/Q 2404**

**ALIGNED TO: NCO-2004 / 7233.46**

**Brief Job Description:** A Fitter - Shuttleless Weaving Machine: Projectile is a job-role in a weaving department. The responsibility of Fitter - Shuttleless Weaving Machine: Projectile is to maintain the loom efficiently so as to get maximum output with minimum defects, with less cost of production giving due importance to safety and environment aspects.

**Personal Attributes:** A Fitter – Fitter - Shuttleless Weaving Machine: Projectile should have good eyesight, eye-hand coordination, motor skills and vision (including near vision, distance vision, colour vision, peripheral vision, depth perception and ability to change focus).

<b>Job Details</b>	<b>Qualifications Pack Code</b>	<b>TSC/ Q 2404</b>		
	<b>Job Role</b>	<b>Fitter - Shuttleless Weaving Machine: Projectile</b>		
	<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
	<b>Sector</b>	<b>Textile</b>	<b>Drafted on</b>	<b>15/12/14</b>
	<b>Sub-sector</b>	<b>Weaving</b>	<b>Last reviewed on</b>	<b>21/01/15</b>
	<b>Occupation</b>	<b>Maintenance</b>	<b>Next review date</b>	
<b>Job Role</b>	<b>Fitter - Shuttleless Weaving Machine: Projectile</b>			
<b>Role Description</b>	To maintain automatic shuttle-less loom( Projectile) efficiently so as to get maximum output with minimum defects, with less cost of production ,giving due importance to safety & environmental aspects.			
<b>NSQF level</b>	5			
<b>Minimum Educational Qualifications</b>	Preferably 10 <sup>th</sup> standard			
<b>Maximum Educational Qualifications</b>	N/A			
<b>Training</b> (Suggested but not mandatory)	Preferably training in weaving department.			
<b>Experience</b>	Not essential			
<b>National Occupational Standards (NOS)</b>	<b>Compulsory:</b> <ol style="list-style-type: none"> <li><a href="#">TSC / N2406 Taking charge of shift and handing over shift to fitter.</a></li> <li><a href="#">TSC / N2407 Maintain "shuttle-less loom(Projectile) "</a></li> <li><a href="#">TSC / N9001 Maintain work area, tools and machines.</a></li> <li><a href="#">TSC / N9002 Working in a team</a></li> <li><a href="#">TSC / N9003 Maintain health, safety and security at workplace</a></li> <li><a href="#">TSC / N9004 Comply with industry and organizational requirement.</a></li> </ol>			
<b>Performance Criteria</b>	As described in the relevant OS units			

**Table 1: Glossary of Key Terms**

Keywords /Terms	Description
Definitions	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-functions	Sub-functions are sub-activities essential to fulfill the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack(QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an OS unit, which can be denoted with either an 'O' or an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.

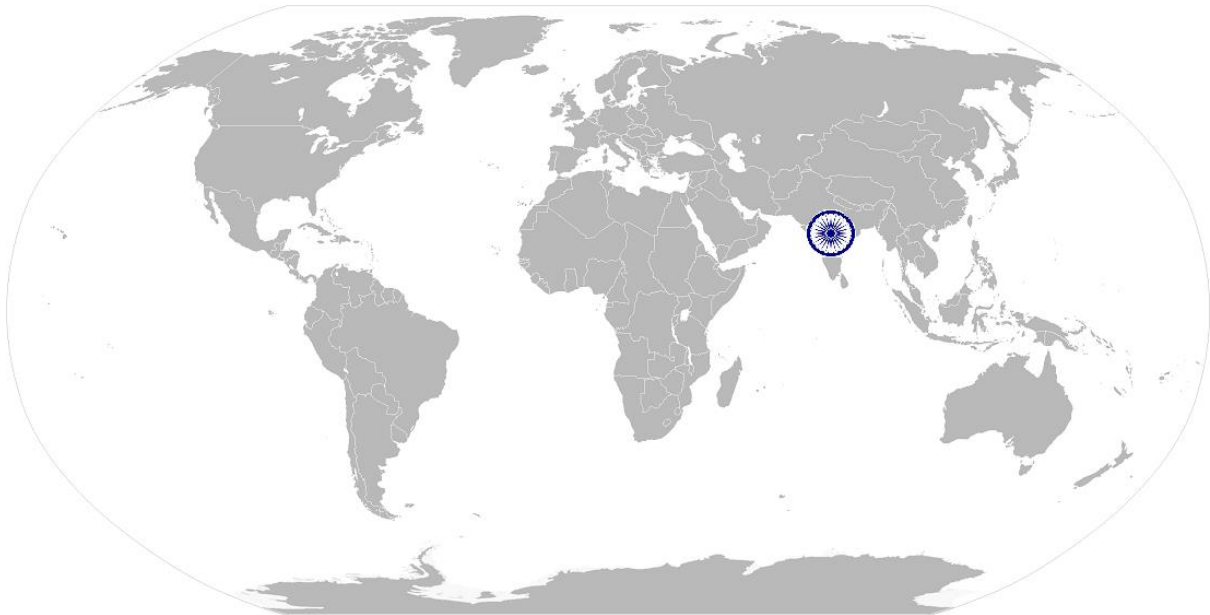
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Keywords /Terms</b>	<b>Description</b>
SSC	Sector Skill Council
OS	Occupational Standard(s)
NOS	National Occupational Standard(s)
QP	Qualifications Pack
NSQF	National Skill Qualifications Framework
NCO	National Classifications of Occupation
TBD	To Be Determined
TSC	Textile Sector Skill Council
NSDC	National Skill Development Corporation

**Acronyms**

TSC/ N 2406

Taking charge of shift and handing over of shift to fitter

# National Occupational Standard



## Overview

This unit is about taking charge of shift from previous shift fitter and relieving the responsibilities to the next shift fitter

TSC/ N 2406

Taking charge of shift and handing over of shift to fitter

National Occupational Standard	<b>Unit Code</b>	TSC/ N 2406
	<b>Unit Title (Task)</b>	Taking charge of shift and handing over shift to fitter
	<b>Description</b>	This unit is about taking charge of shift from previous shift fitter and relieving the responsibilities to the next shift fitter.
	<b>Scope</b>	<b>This unit/task covers the following:</b> <ul style="list-style-type: none"> <li>• Taking charge of shift</li> <li>• Handing over the shift</li> </ul>
	<b>Elements</b>	<b>Performance Criteria</b>
	<b>Taking charge of shift</b>	To be competent, you must be able to: <ul style="list-style-type: none"> <li>PC1. Come at least 15- 20minutes earlier to the work spot.</li> <li>PC2. ensure that the necessary tools, gauges etc, are in place</li> <li>PC3. Should meet the previous shift fitter, discuss with Him regarding the issues faced by Him with respect to the quality or production or spare or safety or any other specific instruction etc.</li> <li>PC4. Check for the availability of the Weft &amp; the condition of the same.</li> <li>PC5. Check the working condition of the Weft Feeders.</li> <li>PC6. Check the fabric defects on cloth.</li> <li>PC7. Check for the correct functions of Centre Cutter, Side Cutter etc., wherever they are in use.</li> <li>PC8. Check for defects like “Under Tuck In”, “Tails” etc.</li> <li>PC9. check the condition of the running beams , for cross ends, ends pulling out particularly at the selvedge</li> <li>PC10. note down the break downs.</li> <li>PC11. check for the size of the Cloth Rolls &amp; to see whether any indication is there in the cloth rolls.</li> <li>PC12. check the cleanliness of the machines &amp; other work areas.</li> <li>PC13. check whether any spare/raw material/ tool / fabric/ any other material are thrown under the machines or in the other work areas.</li> <li>PC14. question the previous shift Fitter for any deviation in the above and should bring the same to the knowledge of His/ Her shift Superior as well that of the previous shift as well.</li> </ul>
	<b>Handing over the Shift</b>	<ul style="list-style-type: none"> <li>PC15. hand over the shift to the incoming Fitter in a proper manner &amp; get clearance from the incoming counterpart before leaving the work spot.</li> <li>PC16. report to his shift superiors as well as that of the incoming shift, in case His/ Her counterpart doesn't come for the incoming shift. In that case, the shift has to be properly handed over to the incoming shift Superior &amp; get clearance from him before leaving the work spot.</li> <li>PC17. report to his shift Superior about the quality / production / safety issues/ any other issue faced in His/ Her shift and should leave the department only after getting concurrence for the same from His/ Her superiors.</li> </ul>
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b>	The individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. the organization's policies &amp; standard operating procedures (SOP).</li> </ul>

TSC/ N 2406	Taking charge of shift and handing over of shift to fitter
(Knowledge of the company/ organization and its processes)	<p>KA2. should have awareness, knowledge of customers.</p> <p>KA3. potential hazards associated with the machines and the safety precautions.</p> <p>KA4. protocol to obtain more information on work related tasks.</p> <p>KA5. contact person in case of queries on procedure or products and for revolving issues related to defective machines, tools, materials &amp; equipments.</p> <p>KA6. details of the various job rolls &amp; responsibilities.</p> <p>KA7. documentation and reporting formats.</p> <p>KA8. work targets &amp; review machine with superiors.</p> <p>KA9. protocol and format for reporting work related risks/ problems.</p> <p>KA10. method of obtaining /giving feed back with respect to performance.</p> <p>KA11. importance of team work .harmonious working relationships.</p> <p>KA12. process for offering /obtaining work related assistance.</p> <p>KA13. responsibilities under health, safety and environmental legislation.</p> <p>KA14. guidelines for storage &amp; disposal of waste materials.</p>
<b>B. Technical / Domain Knowledge about the Products</b>	The user/individual on the job needs to know and understand:
	<p>KB1. minimum quality requirements of the product with respect to permissible/non-permissible defects.</p> <p>KB2. fabric quality particulars such as ends &amp; picks per inch, width, weave etc.</p>
About the Raw materials	<p>KB3. yarns from natural fibers - cotton, silk, wool.</p> <p>KB4. yarns from manmade fibers - polyester, nylon, viscose.</p> <p>KB5. blended yarns - Polyester Cotton, Polyester Viscose.</p>
About different types of Looms	<p>KB6. Hand loom.</p> <p>KB7. Power loom – Conventional loom.</p> <p>KB8. Auto loom – Shuttle loom.</p> <p>KB9. Shuttle less loom – Rapier, Projectile, Projectile, Waterjet.</p> <p>KB10. Tappet loom/ Cam Loom/ Crank Loom, Dobby Loom, Jacquard Loom.</p>
About Type Of Weaves	KB11. Plain Weave, Twill, Drill, Plain Satin, Stripe Satin, Dobby designs, Jacquard designs.
Causes for fabric defects: due to weaver, due to loom, due to other reasons.	<p>KB12. Wrong Drawing , Wrong Denting, End Out , Double End, Broken Pick , Double Pick, Missing Pick, Hand Stain , Hole, Wrong Weft, Bad Selvedge.</p> <p>KB13. End Out, Let-Off, Take- Up problem, Temple Mark, Temple Cut, Emery Hole/ Emery Cut/ Emery Mark, Broken Pick, Missing Pick, Double Pick, Short Pick, Snarls, Impression Mark, Oil Stain, Lashing In, Weft Catching, Selvedge Cut, Loops, Weft Stitches, Warp Stitches, Bumping Mark, Weft Crack, Cloth Torn , Bad Shedding, Warp Floats, Weft Floats, Reed Mark, Bad Selvedge, Starting Mark, Thin &amp; Thick Place , Hair line crack.</p> <p>KB14. Spinning Faults - Thin Place, Thick Place, Neps, Kitties, Contamination, Color Flies, Yarn variation, Shade Variation.</p> <p>KB15. Sizing Faults - Shade variation, Size Patches, Sizing Oil, Bead formation.</p> <p>KB16. Weaving Faults - Wrong Weft, Wrong Pattern, Less Width, Low EPI, Low PPI, wrong warp.</p>
Inspection	KB17. Four Point American System

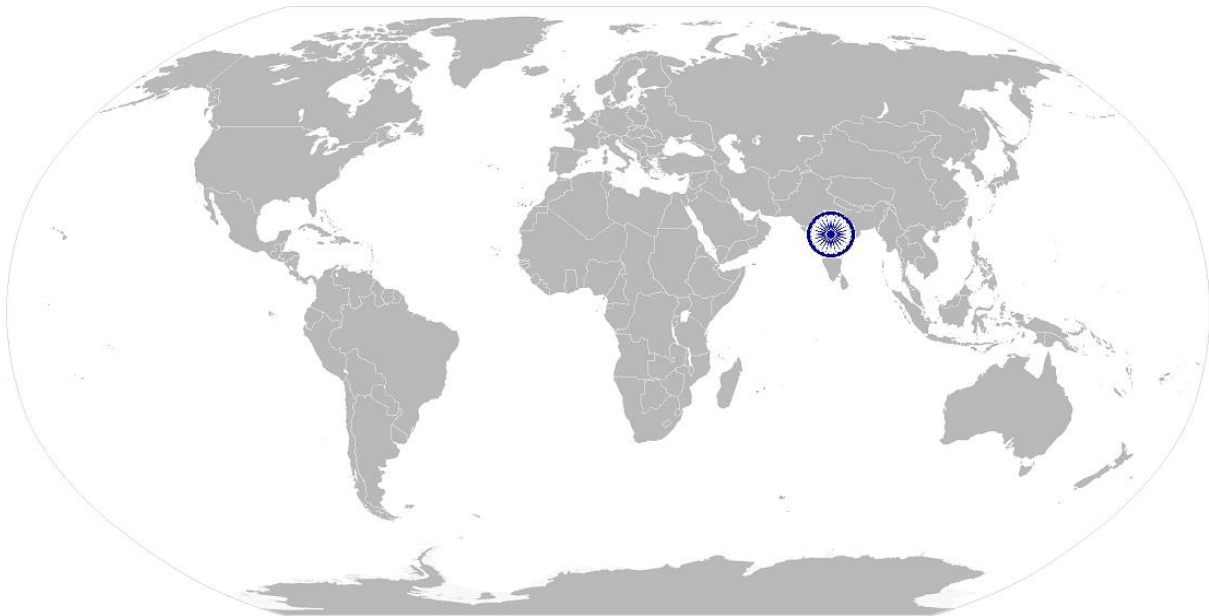
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Standard		a. Below 3" - 1 point	
		b. Between 3" to 6 " - 2 points	
		c. Between 6" to 9" - 3 points	
		d. Above 9" - 4 points	
British System of grading Cuttable Faults, Warp Way Continuous Faults, Specification Deviations		KB18.A Grade - No Cuttable Faults, No Warp Way Continuous Faults, No 3 Major Faults, 15 minor points	
		KB19. B Grade - Rejection. Deviation from A Grade	
		KB20.Cuttable Faults ; Hole, Let - Off, Take - Up, Selvedge Cut, Weft Crack, Cloth Torn, Wrong Pattern, Bad Shedding, Size Patches , Sizing Oil, Bead Formation, Wrong weft.	
		KB21.Major Faults : Wrong Drawing, Wrong Denting, End Out, Double End, Temple Mark Temple Cut, Emery Hole, Emery Cut, Emery Mark, Impression Mark, Guide Tooth Mark, Under Tuck In, Tails, Warp Stitches , Warp Floats, Reed Mark, Bad Selvedge, Yarn Variation, Shade Variation.	
		KB22.Cloth Width - No Minus is accepted & No excess above 0.5" is accepted.	
		KB23.Ends Per Inch - Plus or Minus 2 is accepted.	
		KB24.Picks Per Inch - Plus or Minus 1.	
American System		KB25.A Grade - No Cuttable Faults, No Warp Way Continuous Faults, No of grading Export Specification Deviation. Maximum 15 points for 100 Square meter Standard – Piece	
		KB26.B Grade - Rejection. Deviation from A Grade lengths.	
		KB27.Between 40 meters to 79.75 meters - 20% (to variation from Buyer to Buyer)	
		KB28.Above 80 meters - 80%	
Safety Mechanism		KB29.know the safety mechanisms of the machines & should ensure that the same are in order.	
		KB30.know about the stop motions & should ensure that the same are in order.	
		KB31. know about the indication lamps & should ensure that the same are in order.	
Machine Operations		KB32.know about the functional operations of the machines, where he is working.	
<b>Skills (S)</b>			
<b>A. Core Skills/ Generic Skills Participation</b>		On job the individual should be able to :	
		SA1. Plan and manage work routine based on instructions from supervisor.	
		SA2. participate in the various programs/ meetings that will be conducted by the Superiors.	
		SA3. put forth the suggestions in the interest of the Company.	
		SA4. participate in the "Quality Circles" that will be formed by the Superiors.	
		SA5. extend voluntary supports and adapt to the various procedures that will be adopted by the Company with respect to compliances for the different certifications like " ISO 9001", " ISO 14001", " SA 8001" GOTS Certification " Fair Trade " etc.	
<b>B. Technical Skills</b>		On job the individual should be able to achieve the following skills :	
		SC1. ensure that Warp breaks/loom hour doesn't exceed 2.	
		SC2. ensure that weft breaks/loom hour doesn't exceed 1.	
		SC3. ensure that fabric rejection doesn't exceed 1%.	



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	<p>SC4. ensure that the efficiency is maintained in excess of 85%.</p> <p>SC5. ensure that the warp waste doesn't exceed 0.5%.</p> <p>SC6. ensure that the weft waste doesn't exceed 0.5 %</p>
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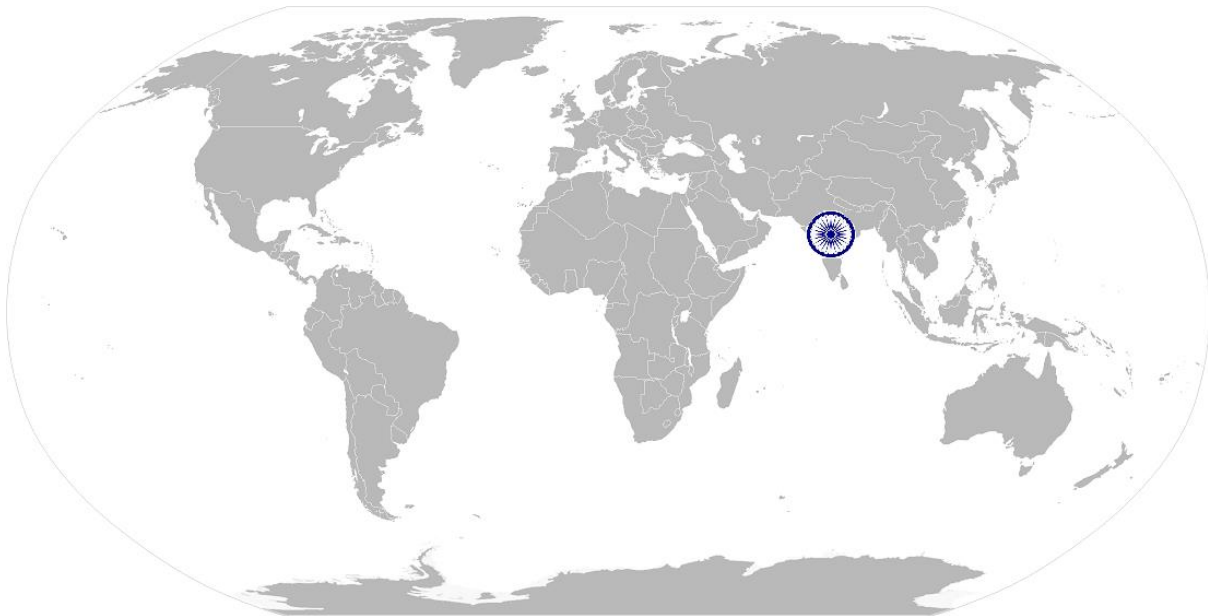


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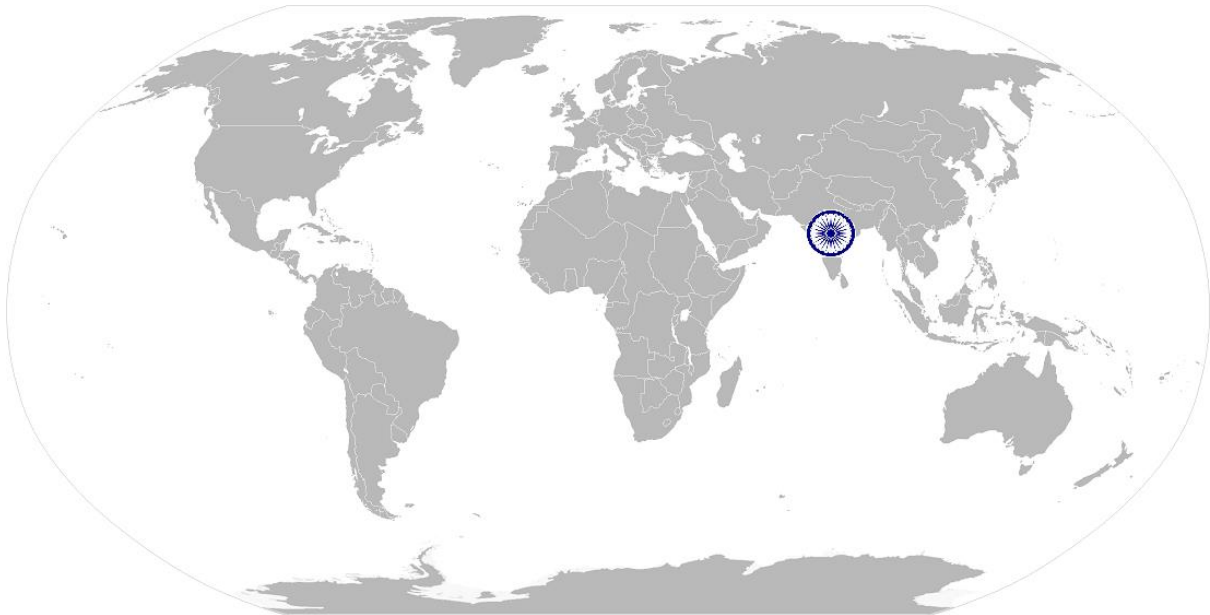
Taking charge of shift and handing over of shift to fitter

**NOS Version Control**

<b>NOS Code</b>	<b>TSC/ N 2406</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Textile</b>	<b>Drafted on</b>	<b>15/12/14</b>
<b>Industry Sub-sector</b>	<b>Weaving</b>	<b>Last reviewed on</b>	<b>21/01/15</b>
<b>Occupation</b>	<b>Maintenance</b>	<b>Next review date</b>	<b>01/03/16</b>



# National Occupational Standard



## Overview

This unit provides performance criteria, knowledge & understanding and skills & abilities required to maintain shuttle-less loom (Projectile), by attending to repairs with respect to quality & production so as to get maximum output & minimum defects, and with less cost of production without entertaining any damage to the people, the machine etc., without wasting much of raw materials, spares, tools etc., & without spoiling the environmental aspects.


**TSC/ N2407**

**Maintaining a Shuttleless loom (Projectile)**

<b>Unit Code</b>	<b>TSC/ N 2407</b>
<b>Unit Title (Task)</b>	<b>Maintaining a shuttle-less loom (Projectile)</b>
<b>Description</b>	This unit provides performance criteria, knowledge & understanding and skills & abilities required to maintain shuttle-less loom (Projectile), by attending to repairs with respect to production & quality so as to get maximum output & minimum defects, with less cost of production without entertaining any damage to the people, the machine etc., without wasting much of raw materials, spares, tools etc., & without spoiling the environmental aspects.
<b>Scope</b>	<p><b>This unit/task covers the following:</b></p> <ul style="list-style-type: none"> <li>▪ Attending to quality issues</li> <li>▪ Attending Production Issues/ Break downs</li> <li>▪ Ensuring Maintenance activities</li> <li>▪ Other Work Practices</li> </ul>
<b>Elements</b>	<b>Performance Criteria</b>
<b>Attending to quality Issues</b>	<p>To be competent, you must be able to:</p> <p>PC1. ensure that the production is commenced only after the sample is approved.</p> <p>PC2. ensure that bulk production is started only after the first roll is approved.</p> <p>PC3. ensure that Warp Stop motion functions properly, so that no end out problem, warp float etc. doesn't occur on the fabrics.</p> <p>PC4. ensure that Weft stop motion functions properly so that fabrics don't get rejected due to weft crack.</p> <p>PC5. maintain Take – Up &amp; Let-Off mechanisms properly so that fabrics don't get rejected due to let-off faults, take-up faults etc.</p> <p>PC6. ensure proper functioning of stop motions, Back Rest, Shedding etc., so that fabrics are free from defects like starting mark, bad shedding etc.</p> <p>PC7. maintain temple setting, reed setting so that fabrics don't get rejected for reasons like "temple cut", temple mark", Reed mark".</p> <p>PC8. attend the other fabric defects like "Tails", "Under Tuck In" "Drop Pick", "Cloth Torn" "Weft Stitches" "floats" etc.</p>
<b>Attending Production Issues/ Break downs</b>	<p>PC9. attend excessive weft breaks.</p> <p>PC10. attend to Weft Transfer failures.</p> <p>PC11. attend excessive warp breaks.</p> <p>PC12. attend to loom stoppages due to "Projectile getting Jammed"</p> <p>PC13. see that the condition of Heald wires, Heald Frames, reed etc. are in good condition.</p> <p>PC14. see that the loom runs with the actual required belts and should see that there is no slippage in the same, so as to ensure that the loom works in the recommended speed.</p> <p>PC15. see that replenishment of spares or attending to break downs is done in the prescribed time.</p> <p>PC16. ensure required humidity in the loom shed.</p> <p>PC17. check the knotted looms &amp; ensure that knotting is carried out without cross ends.</p> <p>PC18. The check the sort change loom &amp; ensure that drawing &amp; reaching was carried</p>

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**Maintaining a Shuttleless loom (Projectile)**

	<p>out without any cross ends.</p> <p>PC19. ensure “Loom Breakage Study” and check the quality of both warp &amp; weft yarn. For any deviation the same has to be brought to the knowledge of the higher authority</p> <p>PC20. check the Sizing quality and for any deviation, the same has to be brought to the notice Of the higher authority.</p> <p>PC21. ensure proper dropper cleaning.</p>
<p><b>Ensuring Maintenance activities</b></p>	<p>PC22. ensure that the looms are cleaned properly as per the below schedule</p> <ul style="list-style-type: none"> <li>• Daily cleaning</li> <li>• Cleaning during Knotting</li> <li>• Cleaning during Sort Changes</li> </ul> <p>PC23. check the oil level on weekly basis.</p> <p>PC24. change the oil on yearly basis</p> <p>PC25. correct “ Oil Leakages”</p> <p>PC26. take “ Revision” during knotting</p> <p>PC27. carry out preventive maintenance as per the schedule.</p> <p>PC28. ensure the life of all the spares through effective maintenance.</p> <p>PC29. maintain “Spare Changing Details” note, for the following details.</p> <div style="text-align: center;">  </div> <ol style="list-style-type: none"> <li>a) Loom No.</li> <li>b) Name Of The Spare</li> <li>c) Side ( If any)</li> <li>d) Part No.</li> <li>e) Name Of the Supplier</li> <li>f) Make</li> <li>g) Date of Application</li> <li>h) Date Of Removal</li> <li>i) Reason For Removal</li> <li>j) Life Of Item</li> </ol> <p>PC30. salvage the “Broken Spare “&amp; to avail new spare, only after producing the “Old Spare to the Stores.</p> <p>PC31. maintain “ Sort Muster” as per the below details</p> <ol style="list-style-type: none"> <li>a) Loom No.</li> <li>b) Construction Details</li> <li>c) Warp Material details</li> <li>d) Warp Count</li> <li>e) Warp Mill Name</li> <li>f) Warp Yarn Test Report( Test Parameters)</li> <li>g) Reed Used</li> <li>h) Total Ends Used</li> <li>i) Name Of The Sizing</li> <li>j) Warming Breakage Rate</li> <li>k) Average Warp Count</li> <li>l) Size Pick Up</li> <li>m) Warp break/ loom hour</li> </ol>

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**Maintaining a Shuttleless loom (Projectile)**

	<p>n) Weft Material Details                  o) Weft Count                  p) Weft Mill Name                  q) Weft Yarn Test Report( Test Parameters)                  r) Reed Space                  s) Weft breakage per loom hour]                  t) Average Loom Efficiency                  u) Loom Speed                  v) Average Production in Kilo Picks/loom day                  w) Production in metres/loom day                  x) Date of knotting                  y) Knotted metres                  z) Date of exhaustion                  ➤ Produced metres                  ➤ Warp Crimp                  ➤ Warp Consumption/metre ( Excluding Size Add On)                  ➤ Warp Wt in kgs/ metre ( Including Size add on)                  ➤ Weft Consumption/metre                  ➤ Total cloth wt in kgs/ metre                  ➤ GSM                  ➤ Fabric doffed                  ➤ Fabric inspected                  ➤ Fabric Passed                  ➤ Fabric Rejected                  ➤ Rejection %                  ➤ Reason For Rejection                  ➤ Warp Waste %                  ➤ Weft Waste %                  PC32. maintain effective working of "Generator".</p> 
<p><b>Other Work Practices</b></p>	<p>PC33. Should see that " Air" is not misused Can use air for cleaning, only in the areas, where it is allowed                  PC34. ensure proper maintenance of " Air Compressor"                  PC35. Should ensure that " Loom Cards " for all the required details are placed on all the looms                  a) Loom No.                  b) Construction details                  c) Reed Count                  d) Reed Space                  e) Weft Count                  f) Pick Wheel                  g) Winding Spindle No.                  h) Drawing Method                  PC36. Should see that the weft yarn is completely used, without giving room for additional wastage of raw materials. For any quality issue or defective cone etc., the same has to be brought to the notice of the superiors.</p>

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**Maintaining a Shuttleless loom (Projectile)**

	<p>PC37. maintain “ Knotting Entry Note” with the following details</p> <ol style="list-style-type: none"> <li>a) Loom No.</li> <li>b) Construction Details</li> <li>c) Date Of Knotting</li> <li>d) Time of Exhaustion</li> <li>e) Cleaning Completed Time</li> <li>f) Beam Loading Completed Time</li> <li>g) Knotting Completed Time</li> <li>h) Loom Run Time</li> <li>i) Total Stopped Time For Knotting</li> <li>j) Name Of the Sizing</li> <li>k) Set No.</li> <li>l) Beam Nos.</li> <li>m) Beam Metres</li> <li>n) Old Warp Waste kgs</li> <li>o) New Warp Waste kgs</li> <li>p) Cleaning Quality</li> <li>q) Knotting Quality</li> </ol> <p>PC38. ensure Relative Humidity in the Department is maintained.</p> <p>PC39. ensure correct quality of thrums is there &amp; see that the same are properly tied.</p> <p>PC40. check the knotted loom for knotting quality etc. Double ends have to be removed Should report to Superiors for any deviation in the same &amp; for any other quality issue.</p> <p>PC41. check all the safety covers are placed.</p> <p>PC42. check the projectile oil lubrications by taking out the projectile from receiving unit at m/c degree 20 to 30, touch and feel whether the projectile surface is having oil or not?</p> <p>PC43. check the oilyness of all projectile circulation area.</p> <p>PC44. pump the bijur pump handle on daily 2 times.</p> <p>PC45. ensure that cloth rolls are doffed whenever/ wherever necessary.</p> <p>PC46. give preference to safety. should not enter the area, where he/ she are not allowed. should not do a job in which training has not being given.</p> <p>PC47. ensure that no raw material/ cloth/ spare/ tool / any other material is thrown under/ near the machines or in the other work areas.</p>
<b>Knowledge and Understanding (K)</b>	
<p><b>A. Organizational Context</b>                  (Knowledge of the company/ organization and its processes)</p>	<p>The individual on the job needs to know and understand:</p> <ol style="list-style-type: none"> <li>KA1. the organization's policies &amp; standard operating procedures (SOP).</li> <li>KA2. should have awareness, knowledge of customers.</li> <li>KA3. potential hazards associated with the machines and the safety precautions.</li> <li>KA4. protocol to obtain more information on work related tasks.</li> <li>KA5. contact person in case of queries on procedure or products and for revolving issues related to defective machines, tools, materials &amp; equipments.</li> <li>KA6. details of the various job rolls &amp; responsibilities.</li> <li>KA7. documentation and reporting formats.</li> </ol>

**TSC/ N2407**

**Maintaining a Shuttleless loom (Projectile)**

	<p>KA8. work targets &amp; review machine with superiors.          KA9. protocol and format for reporting work related risks/ problems.          KA10. method of obtaining /giving feed back with respect to performance.          KA11. importance of team work .harmonious working relationships.          KA12. process for offering /obtaining work related assistance.          KA13. responsibilities under health, safety and environmental legislation.          KA14. guidelines for storage &amp; disposal of waste materials.</p>
<b>B. Technical / Domain Knowledge about the Products</b>	<p>The user/individual on the job needs to know and understand:          KB1. Minimum quality requirements of the product with respect to permissible/non-permissible defects.          KB2. Fabric quality particulars such as ends &amp; picks per inch, width, weave etc.</p>
About the Raw materials	<p>KB3. Yarns from natural fibers - Cotton, Silk, and Wool.          KB4. Yarns from Manmade Fibers - Polyester, Nylon, Viscose.          KB5. Blended yarns - Polyester Cotton, Polyester Viscose.</p>
About different types of Looms	<p>KB6. Hand loom.          KB7. Power loom – Conventional loom.          KB8. Auto loom – Shuttle loom.          KB9. Shuttle less loom – Rapier, Projectile, Projectile, and Waterjet.          KB10. Tappet loom/ Cam Loom/ Crank Loom, Dobby Loom, Jacquard Loom.</p>
About Type Of Weaves	<p>KB11. Plain Weave, Twill, Drill, Plain Satin, Stripe Satin, Dobby designs, Jacquard designs.</p>
Causes for fabric defects: due to weaver, due to loom, due to other reasons.	<p>KB12. Wrong Drawing , Wrong Denting, End Out , Double End, Broken Pick , Double Pick, Missing Pick, Hand Stain , Hole, Wrong Weft, Bad Selvedge.          KB13. End Out, Let-Off, Take- Up problem, Temple Mark, Temple Cut, Emery Hole/ Emery Cut/ Emery Mark, Broken Pick, Missing Pick, Double Pick, Short Pick, Snarls, Impression Mark, Oil Stain, Lashing In, Weft Catching, Selvedge Cut, Loops, Weft Stitches, Warp Stitches, Bumping Mark, Weft Crack, Cloth Torn , Bad Shedding, Warp Floats, Weft Floats, Reed Mark, Bad Selvedge, Starting Mark, Thin &amp; Thick Place , Hair line crack.          KB14. Spinning Faults - Thin Place, Thick Place, Neps, Kitties, Contamination, Color Flies, Yarn variation, Shade Variation.          KB15. Sizing Faults - Shade variation, Size Patches, Sizing Oil, Bead formation.          KB16. Weaving Faults - Wrong Weft, Wrong Pattern, Less Width, Low EPI, Low PPI, wrong warp.</p>
Inspection Standard	<p>KB17. Four Point American System          KB18. Below 3" - 1 point          KB19. Between 3" to 6 " - 2 points          KB20. Between 6" to 9" - 3 points          KB21. Above 9" - 4 points</p>
British System of grading Cuttable Faults, Warp Way Continuous	<p>KB22. A Grade - No Cuttable Faults, No Warp Way Continuous Faults, No 3 Major Faults, 15 minor points          KB23. Grade - Rejection. Deviation from A Grade          KB24. Cuttable Faults ; Hole, Let - Off, Take - Up, Selvedge Cut, Weft Crack, Cloth</p>



**TSC/ N2407**

**Maintaining a Shuttleless loom (Projectile)**

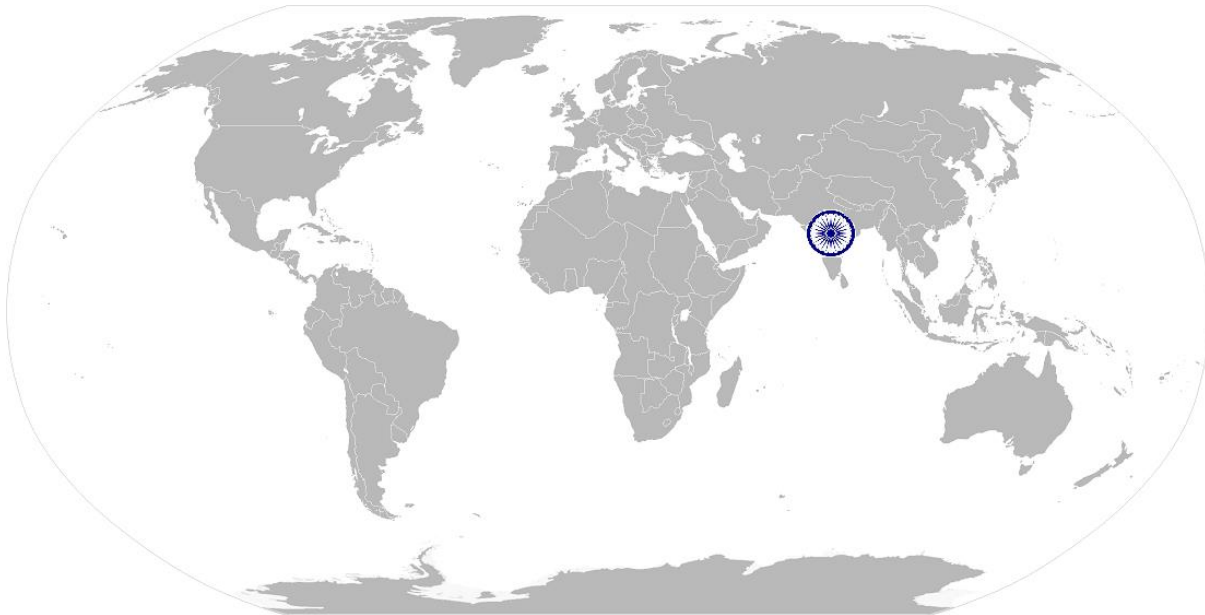
<p>Faults, Specification Deviations</p>	<p>Torn, Wrong Pattern, Bad Shedding, Size Patches , Sizing Oil, Bead Formation, Wrong weft.          KB25. Major Faults : Wrong Drawing, Wrong Denting, End Out, Double End, Temple Mark Temple Cut, Emery Hole, Emery Cut, Emery Mark, Impression Mark, Guide Tooth Mark, Under Tuck In, Tails, Warp Stitches , Warp Floats, Reed Mark, Bad Selvedge, Yarn Variation, Shade Variation.          KB26. Cloth Width - No Minus is accepted &amp; No excess above 0.5" is accepted.          KB27. Ends Per Inch - Plus or Minus 2 is accepted.          KB28. Picks Per Inch - Plus or Minus 1.</p>
<p>American System</p>	<p>KB29. A Grade - No Cuttable Faults, No Warp Way Continuous Faults, No of grading Export Specification Deviation. Maximum 15 points for 100 Square meter Standard – Piece          KB30. B Grade - Rejection. Deviation from A Grade lengths.          KB31. Between 40 meters to 79.75 meters - 20% (to variation from Buyer to Buyer)          KB32. Above 80 meters - 80%</p>
<p>Safety Mechanism</p>	<p>KB33. know the safety mechanisms of the machines &amp; should ensure that the same are in order.          KB34. know about the stop motions &amp; should ensure that the same are in order.          KB35. know about the indication lamps &amp; should ensure that the same are in order.</p>
<p>Machine Operations</p>	<p>KB36. know about the functional operations of the machines, where he is working.</p>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills Participation</b></p>	<p>On job the individual should be able to :</p> <p>SA1. Plan and manage work routine based on instructions from supervisor.          SA2. willingly participate in the various programs/ meetings that will be conducted by the Superiors.          SA3. put forth the suggestions in the interest of the Company.          SA4. participate in the "Quality Circles" that will be formed by the Superiors.          SA5. extend voluntary supports and adapt to the various procedures that will be adopted by the Company with respect to compliances for the different certifications like " ISO 9001", " ISO 14001", SA 8001" GOTS Certification " Fair Trade " etc.</p>
<p><b>B. Technical Skills</b></p>	<p>On job the individual should be able to achieve the following skills :</p> <p>SC1. ensure that Warp breaks/loom hour doesn't exceed 2.          SC2. ensure that weft breaks/loom hour doesn't exceed 1.          SC3. ensure that fabric rejection doesn't exceed 1%.          SC4. ensure that the efficiency is maintained in excess of 85%.          SC5. ensure that the warp waste doesn't exceed 0.5%.          SC6. ensure that the weft waste doesn't exceed 0.5 %</p>

**TSC/ N2407**

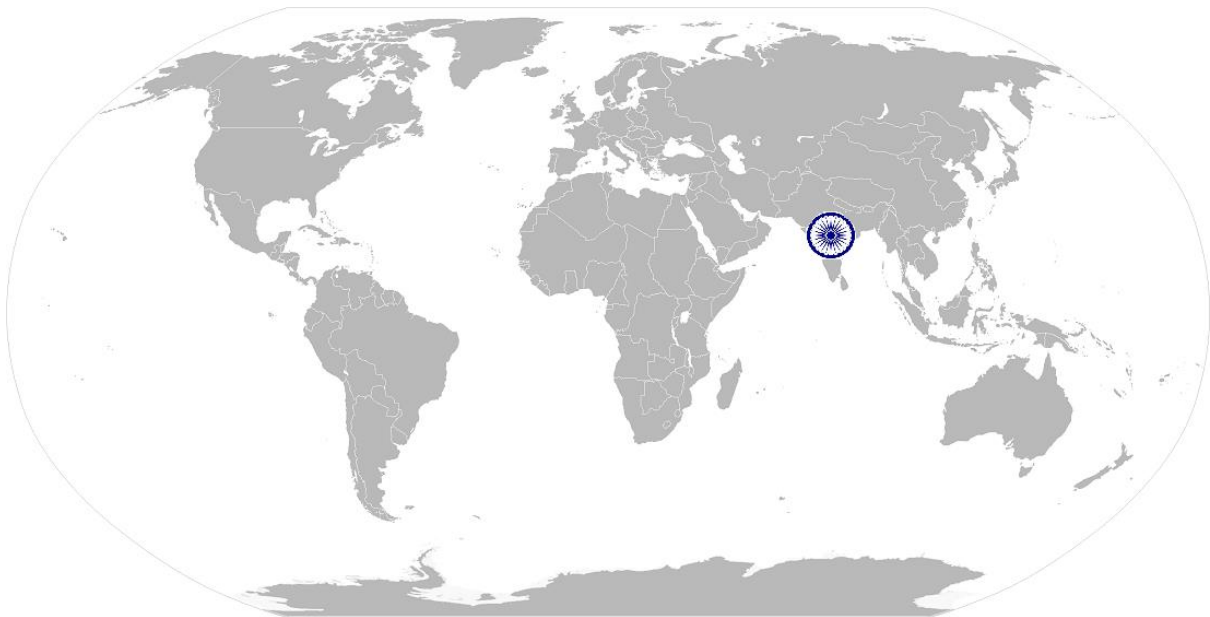
**Maintaining a Shuttleless loom (Projectile)**

**NOS Version Control**

<b>NOS Code</b>	<b>TSC/ N 2407</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Textile</b>	<b>Drafted on</b>	<b>15/12/14</b>
<b>Industry Sub-sector</b>	<b>Weaving</b>	<b>Last reviewed on</b>	<b>21/01/15</b>
<b>Occupation</b>	<b>Maintenance</b>	<b>Next review date</b>	<b>01/03/16</b>



# National Occupational Standard



## Overview

This unit provides performance criteria, knowledge & understanding and skills & abilities required to organise/ maintain work areas and activities to ensure tools and machines are maintained as per norms.

TSC/N 9001

Maintains work area, tools and machines

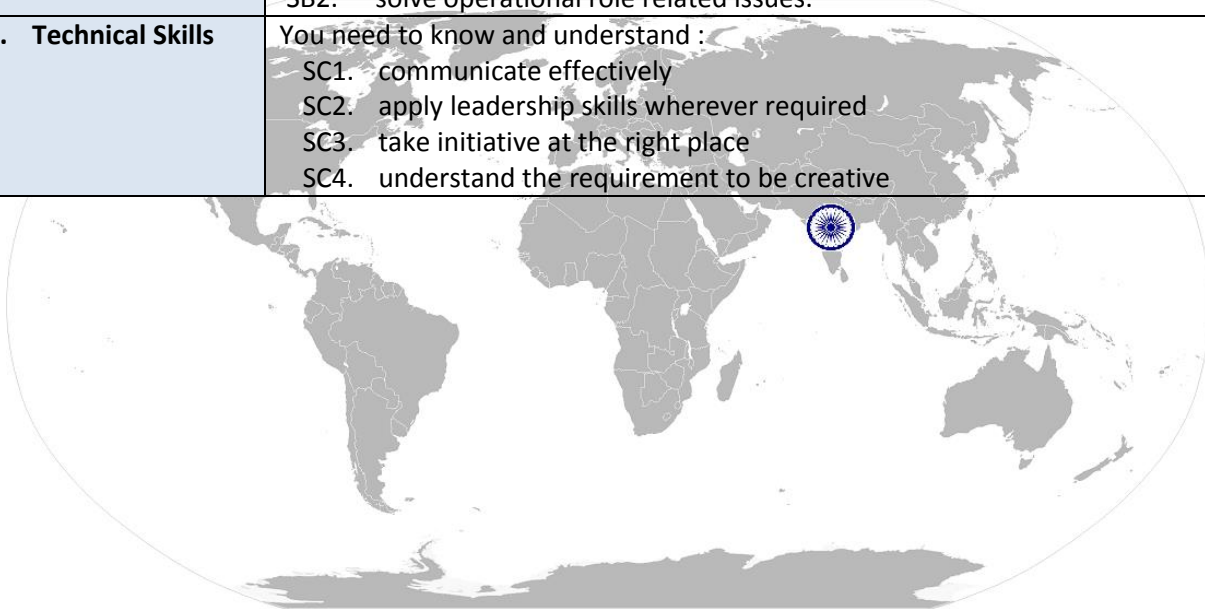
National Occupational Standard

<b>Unit Code</b>	TSC/ N9001
<b>Unit Title (Task)</b>	<b>Maintains work area, tools and machines</b>
<b>Description</b>	This unit provides performance criteria, knowledge & understanding and skills & abilities required to organise/ maintain work areas and activities to ensure tools and machines are maintained as per norms.
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>▪ Maintain the work area, tools and machines</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Elements</b>	<b>Performance Criteria</b>
Maintain the work area, tools and machines	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. handle materials, machinery, equipment and tools with care and use them in the correct way.</p> <p>PC2. use correct lifting and handling procedures.</p> <p>PC3. use materials to minimize waste.</p> <p>PC4. maintain a clean and hazard free working area.</p> <p>PC5. maintain tools and equipment.</p> <p>PC6. carry out running maintenance within agreed schedules.</p> <p>PC7. carry out maintenance and/or cleaning within one's responsibility.</p> <p>PC8. report unsafe equipment and other dangerous occurrences.</p> <p>PC9. ensure that the correct machine guards are in place.</p> <p>PC10. work in a comfortable position with the correct posture.</p> <p>PC11. use cleaning equipment and methods appropriate for the work to be carried out.</p> <p>PC12. dispose of waste safely in the designated location.</p> <p>PC13. store cleaning equipment safely after use.</p> <p>PC14. carry out cleaning according to schedules and limits of responsibility.</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company/ organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. organisational standard operating procedures (SOP).</p> <p>KA2. limits of your own responsibility.</p> <p>KA3. ways of resolving with problems within the work area.</p> <p>KA4. the production process and the specific work activities that relate to the whole process.</p> <p>KA5. the importance of effective communication with supervisors.</p> <p>KA6. the lines of communication, authority and reporting procedures.</p> <p>KA7. the organisation's rules, codes and guidelines (including timekeeping)</p> <p>KA8. the company's quality standards.</p> <p>KA9. the importance of complying with written instructions.</p> <p>KA10. equipment operating procedures / supervisor's instructions.</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. work instructions and specifications and interpret them accurately.</p> <p>KB2. relation between work role and the overall manufacturing process.</p> <p>KB3. hazards likely to be encountered when conducting routine maintenance.</p> <p>KB4. the importance of taking action when problems are identified.</p>

**TSC/N 9001**

**Maintains work area, tools and machines**

	KB5. different ways of minimising waste. KB6. the importance of running maintenance and regular cleaning. KB7. effects of contamination on products i.e. machine oil, dirt, and foreign materials. KB8. common faults with equipment and the method to rectify. KB9. maintenance procedures. KB10. different types of cleaning equipment and substances and their use. KB11. safe working practices for cleaning and the method of carrying them out.
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	On the job the individual needs to be able to: SA1. Plan and manage work routine based on company procedure.
<b>B. Professional Skills</b>	On the job the individual needs to be able to: SB1. take appropriate decisions regarding to responsibilities. SB2. solve operational role related issues.
<b>C. Technical Skills</b>	You need to know and understand : SC1. communicate effectively SC2. apply leadership skills wherever required SC3. take initiative at the right place SC4. understand the requirement to be creative

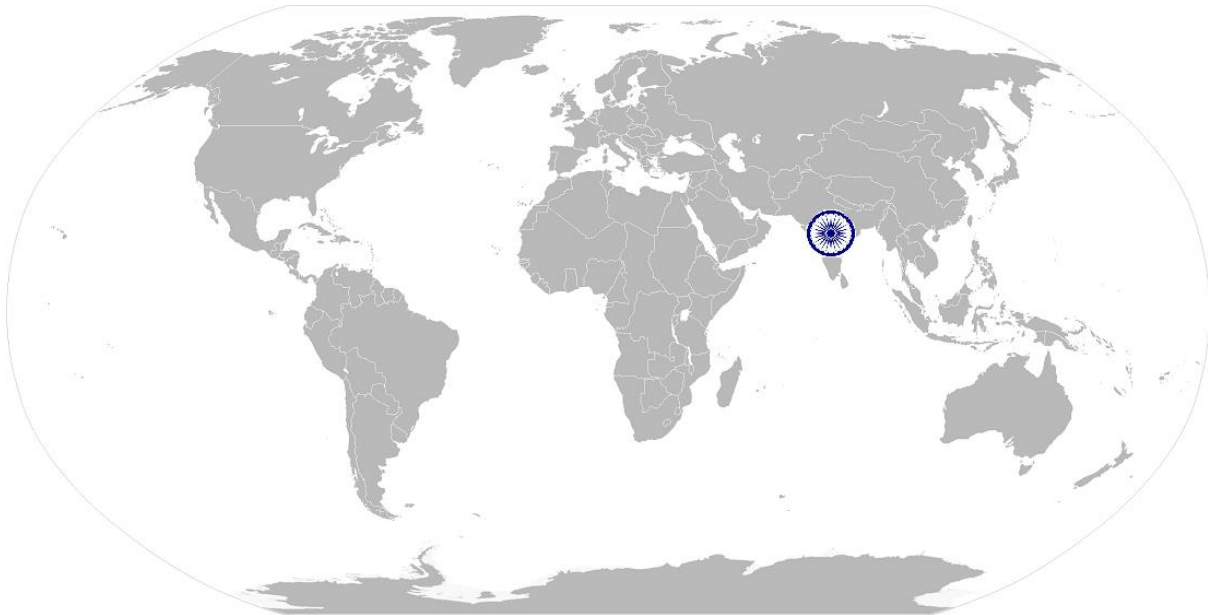


TSC/N 9001

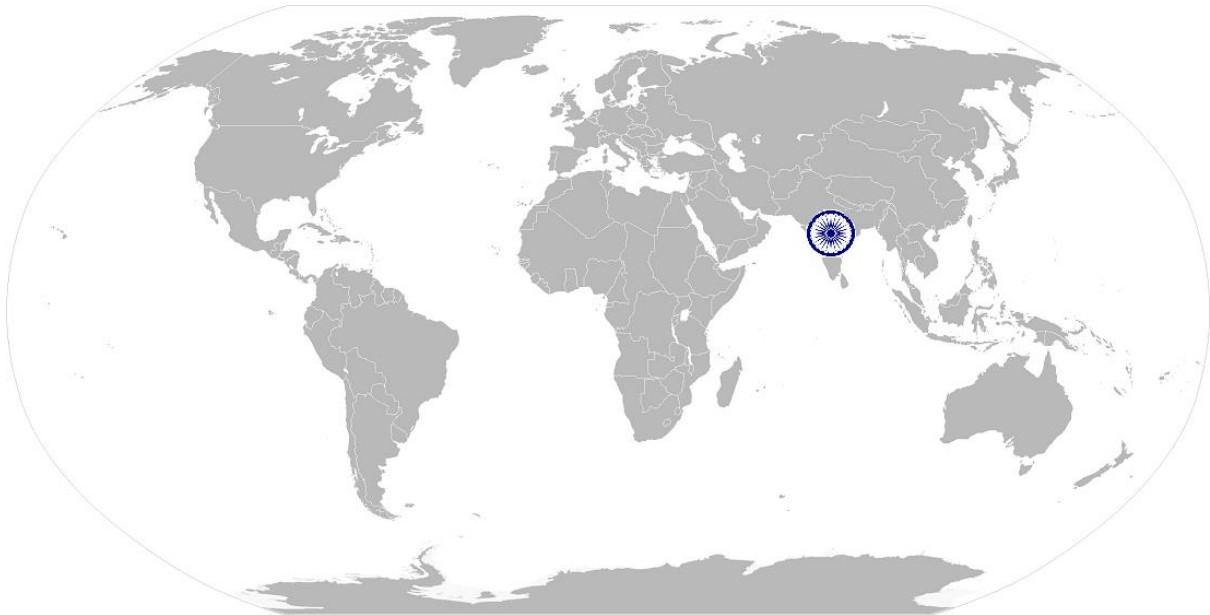
Maintains work area, tools and machines

**NOS Version Control**

<b>NOS Code</b>	<b>TSC/ N9001</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Textile</b>	<b>Drafted on</b>	<b>15/12/14</b>
<b>Industry Sub-sector</b>	<b>Weaving</b>	<b>Last reviewed on</b>	<b>21/01/15</b>
<b>Occupation</b>	<b>Maintenance</b>	<b>Next review date</b>	<b>01/03/16</b>



# National Occupational Standard



## Overview

This unit is about working as part of a team in the textile industry.

**Working in a team**

National Occupational Standard

<b>Unit Code</b>	<b>TSC/ N9002</b>
<b>Unit Title (Task)</b>	<b>Working in a team</b>
<b>Description</b>	This unit is about working as a team member in the role of ring frame tenter in the textile industry
<b>Scope</b>	<b>This unit/task covers the following:</b> <ul style="list-style-type: none"> <li>▪ Commitment and trust</li> <li>▪ Communication</li> <li>▪ Adaptability</li> <li>▪ Creative freedom</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Elements</b>	<b>Performance Criteria</b>
Commitment and trust	To be competent, you must be able to: PC1. be accountable to the own role in whole process PC2. perform all roles with full responsibility PC3. be effective and efficient at workplace
Communication	PC4. properly communicate about company policies PC5. report all problems faced during the process PC6. talk politely with other team members and colleagues PC7. submit daily report of own performance
Adaptability	PC8. adjust in different work situations PC9. give due importance to others' point of view PC10. avoid conflicting situations PC11. collaborate with colleagues performing the pre-required and post-required duty of ring frame tenter
Creative freedom	PC12. develop new ideas for work procedures PC13. improve upon the existing techniques to increase process efficiency
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b>	You need to know and understand: KA1. standard operating procedures (SOP) and regulations in a weaving unit KA2. procedure followed to get the final output in the unit KA3. safe working practices to be adopted in weaving unit KA4. reporting to the supervisor or higher authority about any grievances faced
<b>B. Technical Knowledge</b>	KA5. understanding the importance of the previous and next step of the process KA6. process flow in a weaving unit and the concerned workers KA7. material flow in a weaving unit and the required person KA8. functions of different parts of a machine in the weaving unit. KA9. tools and equipments used KA10. guidelines for operating the machine in the weaving unit. KA11. safety procedures to be followed in a machine in the weaving unit.
<b>Skills (S)</b>	
<b>A. Core Skills/</b>	<b>Writing Skills</b>
	You need to know and understand how to:



**TSC/N9002**

**Working in a team**

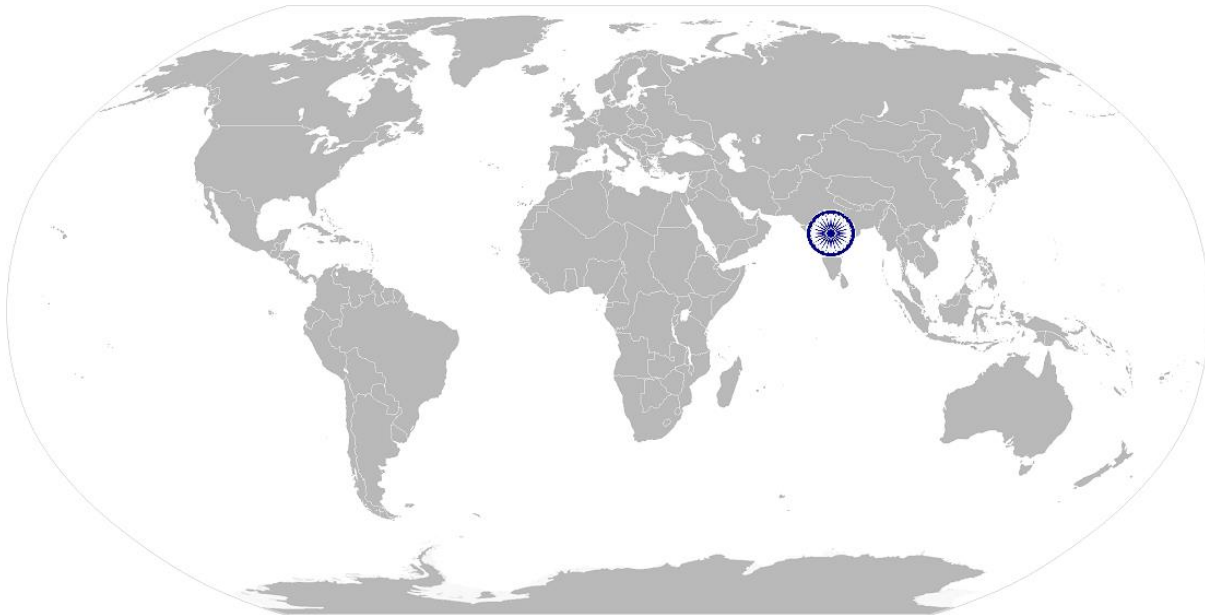
<b>Generic Skills</b>	SA1. write clear and short sentences SA2. write daily work report SA3. write grievance complaint application
	<b>Reading Skills</b>
	You need to know and understand how to: SA4. comprehend written instructions SA5. Read any application sent by other colleagues
	<b>Oral Communication (Listening and Speaking skills)</b>
	You need to know and understand how to: SA6. Communicate with supervisor appropriately SA7. talk to co-workers to convey information effectively
<b>B. Professional Skills</b>	<b>Problem Solving</b>
	You need to know and understand how to: SB1. identify the real reason of problem faced SB2. find the most effective solution to the problems faced
	<b>Attention to Detail</b>
	You need to know and understand how to: SB3. apply good attention to detail SB4. ensure every kind of communication is error free
<b>C. Technical Skills</b>	You need to know and understand how to:
	SC1. communicate effectively SC2. apply leadership skills wherever required SC3. take initiative at the right place SC4. understand the requirement to be creative



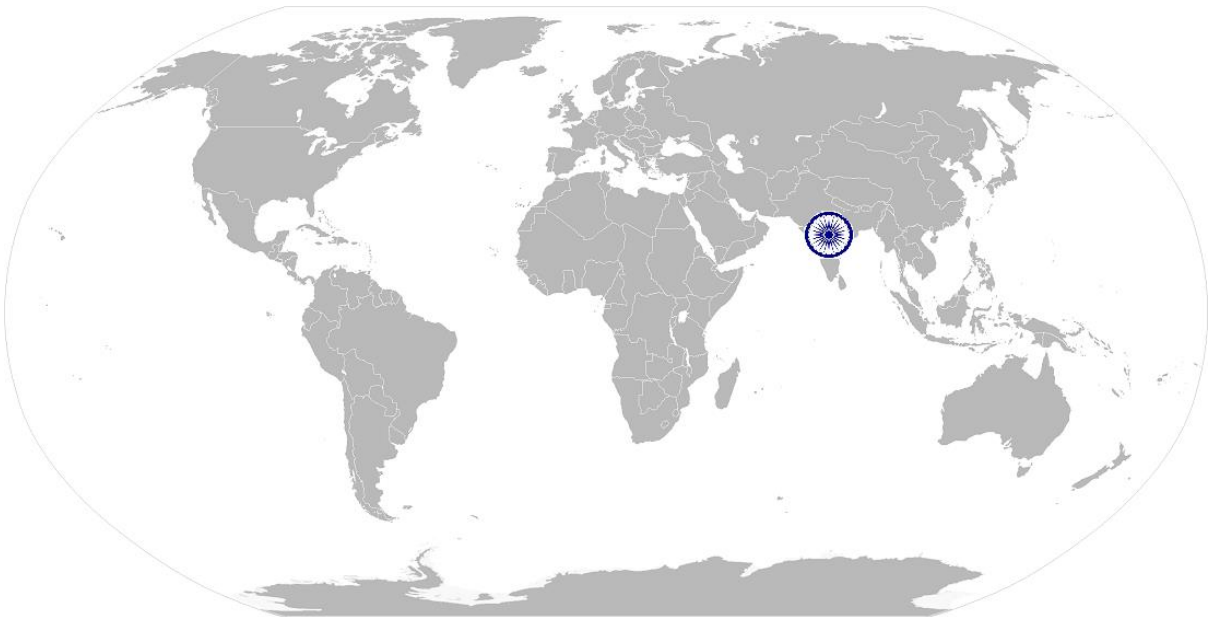
**Working in a team**

**NOS Version Control**

<b>NOS Code</b>	<b>TSC/ N9002</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Textile</b>	<b>Drafted on</b>	<b>15/12/14</b>
<b>Industry Sub-sector</b>	<b>Weaving</b>	<b>Last reviewed on</b>	<b>21/01/15</b>
<b>Occupation</b>	<b>Maintenance</b>	<b>Next review date</b>	<b>01/03/16</b>



# National Occupational Standard



## Overview

This unit provides performance criteria, knowledge & understanding and skills & abilities required to comply with health, safety and security requirements at the workplace and covers procedures to prevent, control and minimise risk to self and others.

**TSC/ N 9003**

**Maintain health, safety and security at work place**

<b>Unit Code</b>	<b>TSC/N 9003</b>
<b>Unit Title (Task)</b>	<b>Maintain health, safety and security at work place</b>
<b>Description</b>	This unit provides performance criteria, knowledge & understanding and skills & abilities required to comply with health, safety and security requirements at the workplace and covers procedures to prevent, control and minimise risk to self and others.
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>comply with health, safety and security requirements at work</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Elements</b>	<b>Performance Criteria</b>
<b>Comply with health, safety and security requirements at work</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. comply with health and safety related instructions applicable to the work place.</p> <p>PC2. use and maintain personal protective equipment such as “ ear plug” “ nose mask “ “ head cap” etc., as per protocol.</p> <p>PC3. carry out own activities in line with approved guidelines and procedures.</p> <p>PC4. maintain a healthy lifestyle and guard against dependency on intoxicants.</p> <p>PC5. follow environment management system related procedures.</p> <p>PC6. identify and correct (if possible) malfunctions in machinery and equipment.</p> <p>PC7. report any service malfunctions that cannot be rectified.</p> <p>PC8. store materials and equipment in line with organisational requirements.</p> <p>PC9. safely handle and remove waste.</p> <p>PC10. minimize health and safety risks to self and others due to own actions.</p> <p>PC11. seek clarifications, from supervisors or other authorized personnel in case of perceived risks.</p> <p>PC12. monitor the workplace and work processes for potential risks and threat.</p> <p>PC13. carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned.</p> <p>PC14. report hazards and potential risks/ threats to supervisors or other authorized personnel.</p> <p>PC15. participate in mock drills/ evacuation procedures organized at the workplace.</p> <p>PC16. undertake first aid, fire-fighting and emergency response training, if asked to do so.</p> <p>PC17. take action based on instructions in the event of fire, emergencies or accidents.</p> <p>PC18. follow organisation procedures for shutdown and evacuation when required.</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company/ organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. health and safety related practices applicable at the workplace</p> <p>KA2. potential hazards, risks and threats based on nature of operations.</p> <p>KA3. organizational procedures for safe handling of equipment and machine operations.</p> <p>KA4. potential risks due to own actions and methods to minimize these.</p> <p>KA5. environmental management system related procedures at the workplace.</p>

**TSC/ N 9003**

**Maintain health, safety and security at work place**

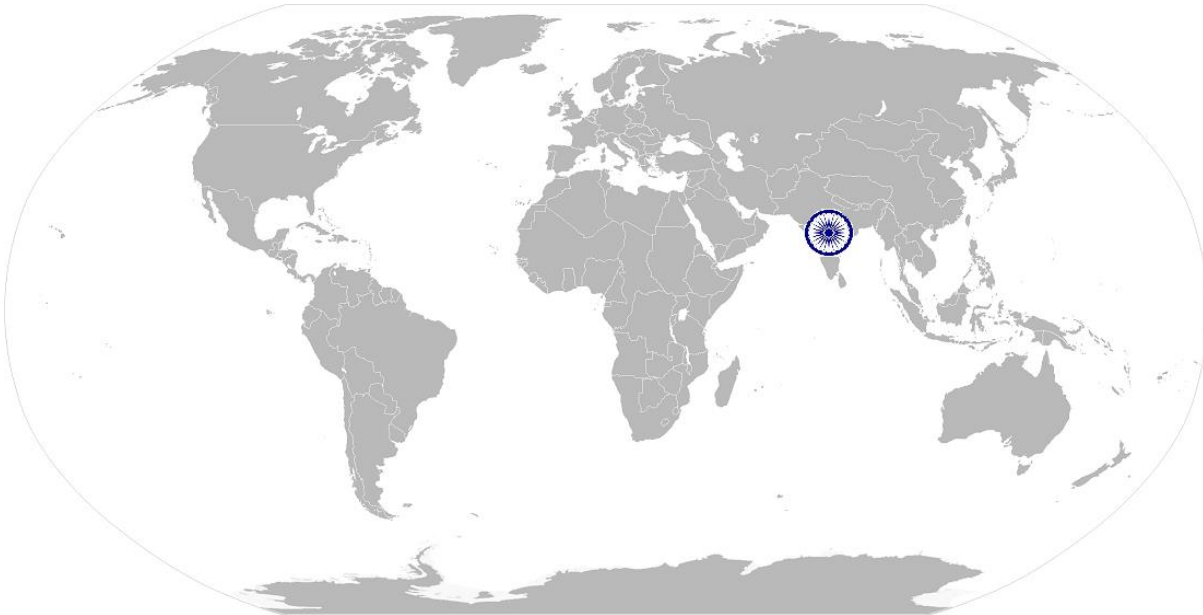
	<p>KA6. layout of the plant and details of emergency exits, escape routes, emergency equipment and assembly points.</p> <p>KA7. potential accidents and emergencies and response to these scenarios.</p> <p>KA8. reporting protocol and documentation required.</p> <p>KA9. details of personnel trained in first aid, fire-fighting and emergency response.</p> <p>KA10. actions to take in the event of a mock drills/ evacuation procedures or actual accident, emergency or fire.</p>
<p><b>B. Technical / Domain Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. occupational health and safety risks and methods.</p> <p>KB2. personal protective equipment and method of use.</p> <p>KB3. identification, handling and storage of hazardous substances.</p> <p>KB4. proper disposal system for waste and by-products.</p> <p>KB5. signage related to health and safety and their meaning.</p> <p>KB6. importance of sound health, hygiene and good habits.</p> <p>KB7. ill-effects of alcohol, tobacco and drugs.</p>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Respond to emergencies, accidents or fire at the workplace.</p> <p>SA2. Evacuate the premises and help others in need while doing so.</p> <p>SA3. The value of physical fitness, personal hygiene and good habits.</p>
<p><b>B. Professional Skills</b></p>	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB1. Raise alarm.</p> <p>SB2. Safe and correct procedure of handling equipment and machinery.</p> <p>SB3. Identify, report malfunctions in machinery and equipment and correct them if possible.</p> <p>SB4. Identify and report service malfunctions and chemical leaks.</p> <p>SB5. Keep work area free from potential hazards.</p> <p>SB6. Report to supervisors and other authorized personnel for assistance.</p>
<p><b>C. Technical Skills</b></p>	<p>You need to know and understand :</p> <p>SC1. maintain neatness at work</p> <p>SC2. procedure for reporting unwanted behavior</p>

**TSC/ N 9003**

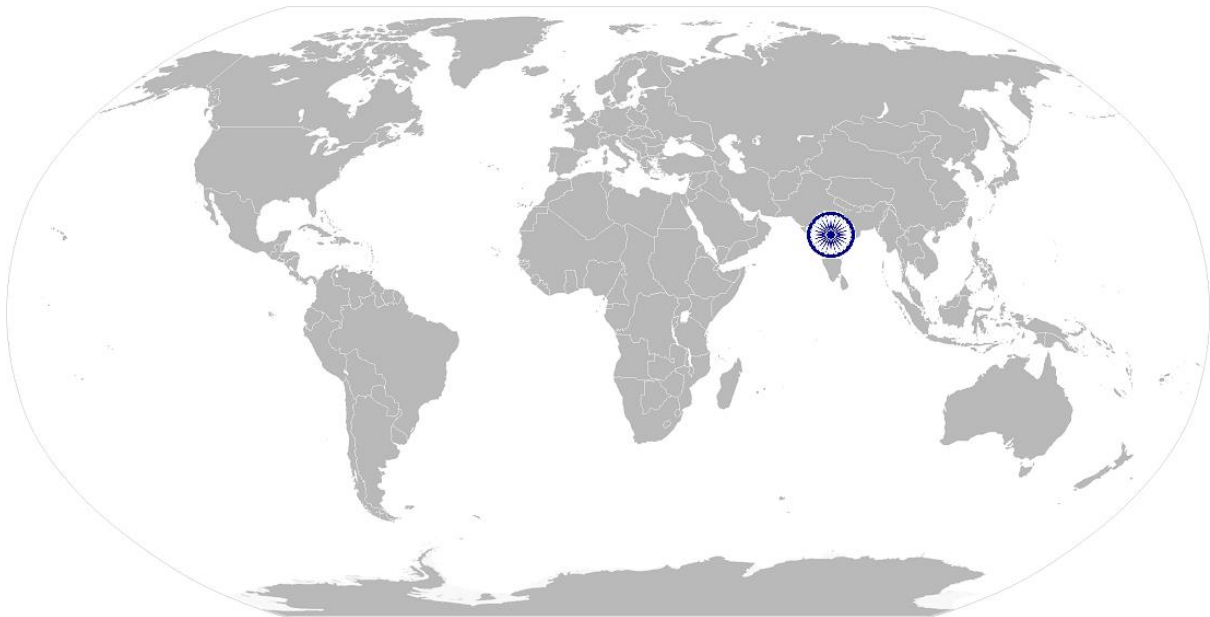
**Maintain health, safety and security at work place**

**NOS Version Control**

NOS Code	TSC/N 9002		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Weaving	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



# National Occupational Standard



## Overview

This unit covers performance criteria, knowledge & understanding and skills abilities required to comply with legal and organisation requirements.

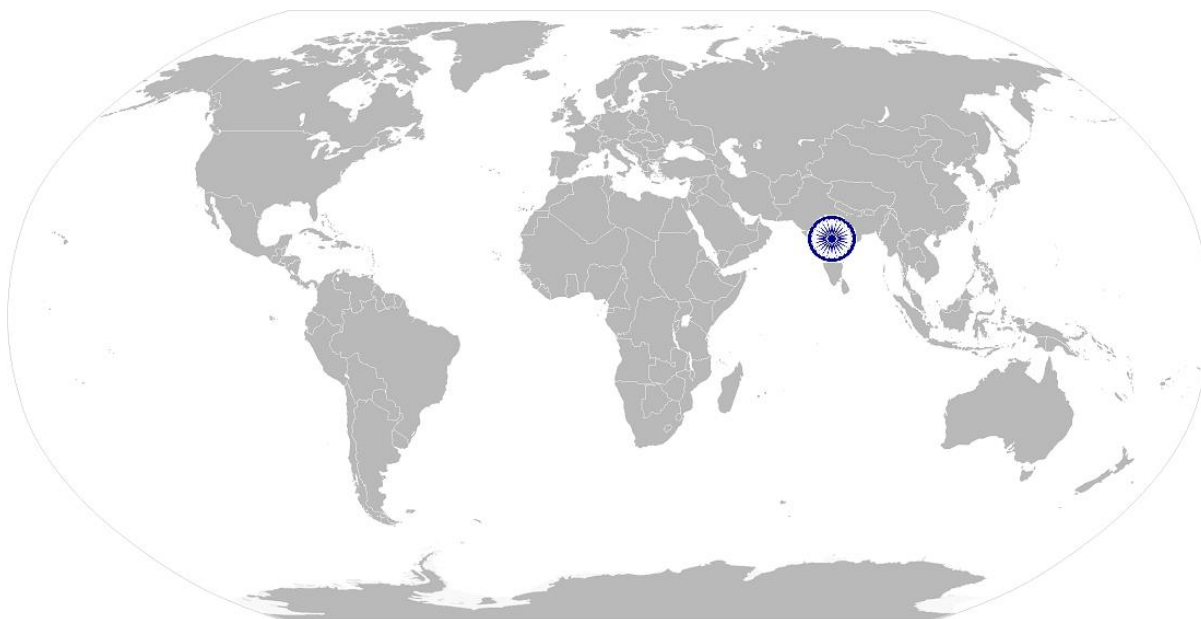
**TSC/ N 9004 Comply with industry and organisational requirements**

National Occupational Standard	<b>Unit Code</b>	TSC/ N9004
	<b>Unit Title (Task)</b>	<b>Comply with industry and organisational requirements</b>
	<b>Description</b>	This unit is about complying with legal and organisational requirements.
	<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>▪ comply with legal and organisational requirements</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Elements</b>	<b>Performance Criteria</b>
	Comply with legal and organizational requirements	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> <li>PC1. carry out work functions in accordance with legislation and regulations, organizational guidelines and procedures.</li> <li>PC2. seek and obtain clarifications on policies and procedures, from your supervisor or other authorized personnel.</li> <li>PC3. apply and follow these policies and procedures within your work practices</li> <li>PC4. provide support to your supervisor and team members in enforcing these considerations.</li> <li>PC5. identify and report any possible deviation to these requirements.</li> </ul>
	<b>Knowledge and Understanding (K)</b>	
	<b>A. Organizational Context</b> (Knowledge of the company/ organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. the importance of having an ethical and value-based approach.</li> <li>KA2. benefits to your company and yourself due to practice of these procedures.</li> <li>KA3. the importance of punctuality and attendance.</li> <li>KA4. specific to the industry/sector, know and understand:                             <ul style="list-style-type: none"> <li>a. Legal and ethical requirements.</li> <li>b. Procedures to follow if someone does not meet the requirements</li> </ul> </li> <li>KA5. customer specific requirements mandated as a part of your work process.</li> </ul>
	<b>B. Technical /Domain Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. Customer specific regulations and their importance.</li> <li>KB2. Reporting procedure in case of deviations.</li> <li>KB3. Limits of personal responsibility.</li> </ul>
<b>Skills (S)</b>		
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>	
	You need to know and understand how to: <ul style="list-style-type: none"> <li>SA1. Write clear and short sentences</li> </ul>	
	<b>Reading Skills</b>	
	You need to know and understand how to: <ul style="list-style-type: none"> <li>SA2. comprehend written instructions</li> </ul>	
	<b>Oral Communication (Listening and Speaking skills)</b>	
	You need to know and understand how to: <ul style="list-style-type: none"> <li>SA3. Communicate with supervisor appropriately</li> <li>SA4. talk to others to convey information effectively</li> </ul>	



**TSC/ N 9004 Comply with industry and organisational requirements**

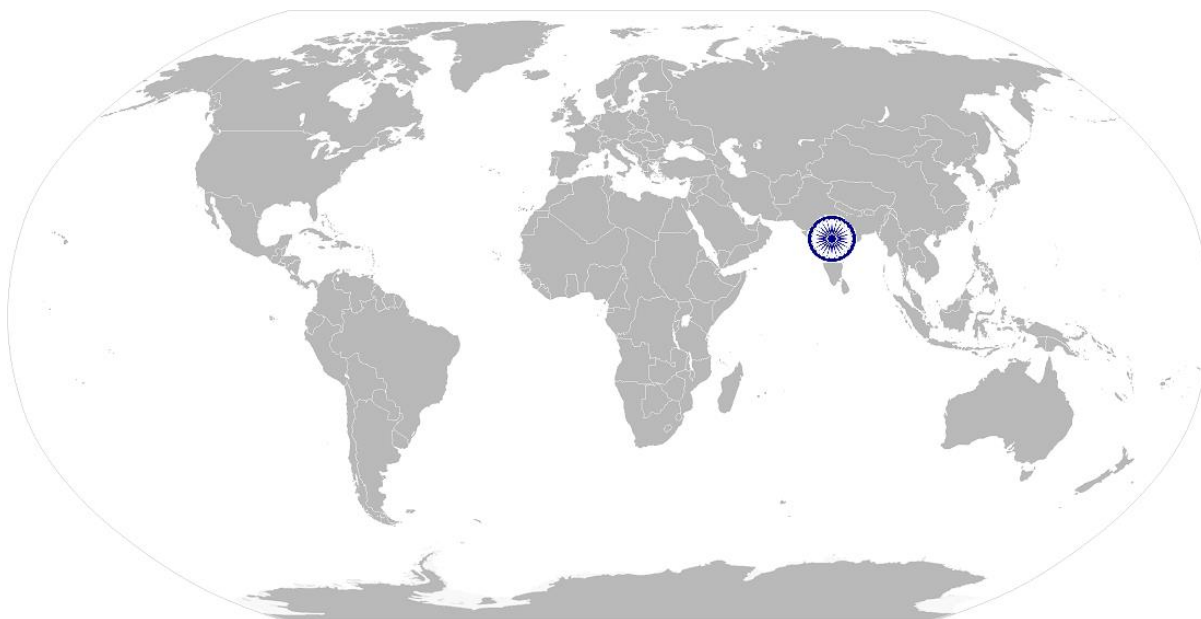
<p><b>B. Professional Skills</b></p>	<p>On the job the individual needs to be able to:</p> <ul style="list-style-type: none"> <li>SB1. Take appropriate decisions related to responsibilities.</li> <li>SB2. Practice a customer service oriented approach.</li> <li>SB3. Plan and manage work routine based on company procedure.</li> <li>SB4. Positively influence your team members into following procedures.</li> <li>SB5. Participate and influence your organization’s response towards these procedures.</li> </ul>
<p><b>C. Technical Skills</b></p>	<p>You need to know and understand :</p> <ul style="list-style-type: none"> <li>SC1. Procedure for operating the various cleaning tools and equipments</li> <li>SC2. Procedure for cleaning the creeling area</li> <li>SC3. Procedure for cleaning the drafting zone</li> </ul>



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**NOS Version Control**

<b>NOS Code</b>	<b>TSC/N 9004</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Textile</b>	<b>Drafted on</b>	<b>15/12/14</b>
<b>Industry Sub-sector</b>	<b>Weaving</b>	<b>Last reviewed on</b>	<b>21/01/15</b>
<b>Occupation</b>	<b>Maintenance</b>	<b>Next review date</b>	<b>01/03/16</b>



### Assessment Criteria

**Job Role: 'Fitter - Shuttleless Weaving Machine: Projectile'**  
**Qualification Pack: 'Fitter - Shuttleless Weaving Machine: Projectile'**  
**Sector Skill Council: Textile Sector Skill Council**

**Guidelines for assessment: -**

1. Criteria for assessment for each qualification pack will be created by the Sector Skill Council. Each performance criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for theory & skill practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of question created by the SSC.
3. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre (as per assessment criteria below).
4. To pass the qualification pack, every trainee should score a minimum of 80%.

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Practical	Theory	Viva
<b>1. TSC/ N2406 Taking charge of shift and handing over shift to operator</b>	PC1. Come at least 15-20minutes earlier to the work spot.	<b>50</b>	1	1	0	0
	PC2. ensure that the necessary tools, gauges etc, are in place		3	2	1	0
	PC3. meet the previous shift fitter, discuss with Him regarding the issues faced by Him with respect to the quality or production or spare or safety or any other specific instruction etc.		1	1	0	0
	PC4. Check for the availability of the Weft & the condition of the same.		2	2	0	0
	PC5. Check the working condition of the Weft Feeders.		5	3	1	1
	PC6. Check the fabric defects on cloth.		3	2	1	0
	PC7. Check for the correct functions of Centre Cutter, Side Cutter etc., wherever they are in use.		4	3	1	0

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	PC8. check for defects like “ Under Tuck In” , “ Tails” etc.	3	3	0	0
	PC9. check the condition of the running beams , for cross ends, ends pulling out particularly at the selvages	4	2	1	1
	PC10. Note down the break downs.	1	1	0	0
	PC11. Check for the size of the Cloth Rolls & to see whether any indication is there in the cloth rolls.	3	1	2	0
	PC12. Check the cleanliness of the machines & other work areas.	5	2	2	1
	PC13. Check whether any spare/raw material/ tool / fabric/ any other material are thrown under the machines or in the other work areas.	3	1	2	0
	PC14. question the previous shift Fitter for any deviation in the above and should bring the same to the knowledge of His/ Her shift Superior as well that of the previous shift as well	3	1	2	0
	PC15. Hand over the shift to the incoming Fitter in a proper manner & get clearance from the incoming counterpart before leaving the work spot.	2	2	0	0
	PC16. Report to His shift superiors as well as that of the incoming shift, in case His/ Her counterpart doesn't come for the incoming shift. In that case, the shift has to be properly handed over to the incoming shift Superior & get clearance from him before leaving the work spot.	4	3	1	0

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	PC17. Report to His shift Superior about the quality / production / safety issues/ any other issue faced in His/ Her shift and should leave the department only after getting concurrence for the same from His/ Her superiors.		3	2	1	0
			50	32	15	3
	<b>Total</b>	<b>Weight age %</b>		64%	30%	6%
<b>2. TSC/ N2407 Maintain "shuttle-less loom(Projectile) "</b>						
	PC1. Ensure that the production is commenced only after the sample is approved.	<b>150</b>	3	2	1	0
	PC2. Ensure that bulk production is started only after the first roll is approved.		3	2	1	0
	PC3. Ensure that Warp Stop motion functions properly, so that no end out problem, warp float etc. doesn't occur on the fabrics.		4	2	1	1
	PC4. Ensure that Weft stop motion functions properly so that fabrics don't get rejected due to weft crack.		3	2	1	0
	PC5. maintain Take – Up & Let-Off mechanisms properly so that fabrics don't get rejected due to let-off faults, take-up faults etc.		3	2	0	1
	PC6. ensure proper functioning of stop motions, Back Rest, Shedding etc., so that fabrics are free from defects like starting mark, bad shedding etc.		3	2	1	0
	PC7. maintain temple setting, reed setting so that		2	2	0	0

**Assessment Criteria**

	fabrics don't get rejected for reasons like "temple cut", temple mark", Reed mark".					
	PC8. attend the other fabric defects like "Tails", " Under Tuck In" " Drop Pick" , " Cloth Torn" " Weft Stitches" " floats" etc.	3	2	1	0	
	PC9. Attend excessive weft breaks.	3	2	1	0	
	PC10. Attend to Weft Transfer failures.	4	2	1	1	
	PC11. Attend excessive warp breaks.	3	2	1	0	
	PC12. attend to loom stoppages due to " Projectile getting Jammed"	3	2	1	0	
	PC13. See that the condition of Heald wires, Heald Frames, reed etc. are in good condition.	3	2	1	0	
	PC14. See that the loom runs with the actual required belts and should see that there is no slippage in the same, so as to ensure that the loom works in the recommended speed.	3	2	1	0	
	PC15. See that replenishment of spares or attending to break downs is done in the prescribed time.	3	2	1	0	
	PC16. Ensure required humidity in the loom shed.	3	2	0	1	
	PC17. Check the knotted looms & ensure that knotting is carried out without cross ends.	2	2	0	0	
	PC18. The check the sort change loom & ensure that drawing & reaching was carried out without any cross ends.	3	2	1	0	

**Assessment Criteria**

PC19. Ensure “Loom Breakage Study” and check the quality of both warp & weft yarn. For any deviation the same has to be brought to the knowledge of the higher authority	4	2	1	1
PC20. Check the Sizing quality and for any deviation, the same has to be brought to the notice Of the higher authority.	3	2	1	0
PC21. Ensure proper dropper cleaning.	3	2	1	0
PC22. ensure that the looms are cleaned properly as per the below schedule <ul style="list-style-type: none"> <li>• Daily cleaning</li> <li>• Cleaning during Knotting</li> <li>• Cleaning during Sort Changes</li> </ul>	3	2	1	0
PC23. Check the oil level on weekly basis.	3	2	1	0
PC24. change the oil on yearly basis	3	2	1	0
PC25. correct “ Oil Leakages”	3	2	1	0
PC26. take “ Revision” during knotting	3	2	1	0
PC27. Carry out preventive maintenance as per the schedule.	3	2	1	0
PC28. Ensure the life of all the spares through effective maintenance.	4	2	2	0

**Assessment Criteria**

	<p>PC29. Maintain “Spare Changing Details” note, for the following details.</p> <p>a) Loom No. b) Name Of The Spare c) Side ( If any) d) Part No. e) Name Of the Supplier f) Make g) Date of Application h) Date Of Removal i) Reason For Removal j) Life Of Item</p>		5	2	2	1
	<p>PC30. Salvage the “Broken Spare “&amp; to avail new spare, only after producing the “Old Spare to the Stores.</p>		3	2	1	0



**Assessment Criteria**

	<p>PC31. maintain “ Sort Muster” as per the below details</p> <ul style="list-style-type: none"> <li>a) Loom No.</li> <li>b) Construction Details</li> <li>c) Warp Material details</li> <li>d) Warp Count</li> <li>e) Warp Mill Name</li> <li>f) Warp Yarn Test Report( Test Parameters)</li> <li>g) Reed Used</li> <li>h) Total Ends Used</li> <li>i) Name Of The Sizing</li> <li>j) Warping Breakage Rate</li> <li>k) Average Warp Count</li> <li>l) Size Pick Up</li> <li>m) Warp break/ loom hour</li> <li>n) Weft Material Detail so) Weft Count</li> <li>p) Weft Mill Name</li> <li>q) Weft Yarn Test Report( Test Parameters)</li> <li>r) Reed Space</li> <li>s) Weft breakage per loom hour]</li> <li>t) Average Loom Efficiency</li> <li>u) Loom Speed</li> <li>v) Average Production in Kilo Picks/loom day</li> <li>w) Production in meters/loom day</li> <li>x) Date of knotting</li> <li>y) Knotted meters</li> <li>z) Date of exhaustion</li> <li>Ø Produced meters</li> <li>Ø Warp Crimp</li> <li>Ø Warp Consumption/meter ( Excluding Size Add On)</li> <li>Ø Warp Wt in kgs/ meter ( Including Size add on)</li> <li>Ø Weft Consumption/meter</li> <li>Ø Total cloth wt in kgs/ meter</li> <li>Ø GSM</li> <li>Ø Fabric doffed</li> </ul>		6	2	3	1
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**Assessment Criteria**

	<p>∅ Fabric inspected</p> <p>∅ Fabric Passed</p> <p>∅ Fabric Rejected</p> <p>∅ Rejection %</p> <p>∅ Reason For Rejection</p> <p>∅ Warp Waste %</p> <p>∅ Weft Waste %</p>					
	PC32. Maintain effective working of "Generator".	4	2	2	0	
	PC33. Should see that " Air" is not misused Can use air for cleaning, only in the areas, where it is allowed	3	2	1	0	
	PC34. ensure proper maintenance of " Air Compressor"	3	2	1	0	

**Assessment Criteria**

	<p>PC35. Should ensure that " Loom Cards " for all the required details are placed on all the looms</p> <ul style="list-style-type: none"> <li>a) Loom No.</li> <li>b) Construction details</li> <li>c) Reed Count</li> <li>d) Reed Space</li> <li>e) Weft Count</li> <li>f) Pick Wheel</li> <li>g) Winding Spindle No.</li> <li>h) Drawing Method</li> </ul>		6	3	2	1
	<p>PC36. Should see that the weft yarn is completely used, without giving room for additional wastage of raw materials. For any quality issue or defective cone etc., the same has to be brought to the notice of the superiors.</p>		3	2	1	0
	<p>PC37. maintain " Knotting Entry Note" with the following details</p> <ul style="list-style-type: none"> <li>a) Loom No.</li> <li>b) Construction Details</li> <li>c) Date Of Knotting</li> <li>d) Time of Exhaustion</li> <li>e) Cleaning Completed Time</li> <li>f) Beam Loading Completed Time</li> <li>g) Knotting Completed Time</li> <li>h) Loom Run Time</li> <li>i) Total Stopped Time For Knotting</li> <li>j) Name Of the Sizing</li> <li>k) Set No.</li> <li>l) Beam Nos.</li> <li>m) Beam Meters</li> <li>n) Old Warp Waste kgs</li> <li>o) New Warp Waste kgs</li> <li>p) Cleaning Quality</li> <li>q) Knotting Quality</li> </ul>		3	2	1	0
	<p>PC38. Ensure Relative Humidity in the Department</p>		2	2	0	0

### Assessment Criteria

	is maintained.					
	PC39. Should ensure correct quality of thrums is there & see that the same are properly tied.		3	2	1	0
	PC40. Should check the knotted loom for knotting quality etc. Double ends have to be removed. Should report to Superiors for any deviation in the same & for any other quality issue.		3	2	1	0
	PC41. Check all the safety covers are placed.		2	2	0	0
	PC42. Check the Projectile oil lubrications by taking out the projectile from receiving unit at M/c degree 20 to 30, touch and feel whether the projectile surface is having oil or not?		3	2	1	0
	PC43. Check the Oilyness of all projectile circulation area.		3	2	1	0
	PC44. Pump the Bijur pump handle on Daily 2 Times.		3	2	1	0
	PC45. Should ensure that cloth rolls are doffed whenever/ wherever necessary.		3	2	1	0
	PC46. Should give preference to safety. Should not enter the area, where He/ She are not allowed. Should not do a job in which training has not being given.		3	2	1	0
	PC47. Should ensure that no raw material/ cloth/ spare/ tool / any other material is thrown under/ near the machines or in the other work areas.		3	2	1	0
			150	95	47	8
	<b>Total</b>	<b>Weight age</b>		63%	31%	5%

**Assessment Criteria**

		%				
<b>3.TSC/N9001(Maintaining work area, tools and machines)</b>	PC1. handle materials, machinery, equipment and tools with care and use them in the correct way	<b>50</b>	4	1	2	1
	PC2. use correct lifting and handling procedures		4	1	2	1
	PC3. use materials to minimize waste		3	1	1	1
	PC4. maintain a clean and hazard free working area		3	1	1	1
	PC5. maintain tools and equipment		4	2	1	1
	PC6. carry out running maintenance within agreed schedules		4	1	2	1
	PC7. carry out maintenance and/or cleaning within one's responsibility		4	1	2	1
	PC8. report unsafe equipment and other dangerous occurrences		4	1	2	1
	PC9. ensure that the correct machine guards are in place		3	1	1	1
	PC10. work in a comfortable position with the correct posture		3	1	1	1
	PC11. use cleaning equipment and methods appropriate for the work to be carried out		3	1	1	1
	PC12. dispose of waste safely in the designated location		4	1	2	1
	PC13. store cleaning equipment safely after use		3	1	1	1
	PC14. carry out cleaning according to schedules and limits of responsibility		4	1	2	1
			50	15	21	14
<b>Total</b>	<b>Weight age %</b>		30%	42%	28%	

### Assessment Criteria

<b>4.TSC/N9002 (Working in a team)</b>	PC1. be accountable to the own role in whole process	<b>50</b>	5	3	1	1
	PC2. perform all roles with full responsibility		4	2	1	1
	PC3. be effective and efficient at workplace		4	1	2	1
	PC4. properly communicate about company policies		4	1	1	2
	PC5. report all problems faced during the process		4	1	1	2
	PC6. talk politely with other team members and colleagues		4	1	1	2
	PC7. submit daily report of own performance		5	2	2	1
	PC8. adjust in different work situations		4	2	1	1
	PC9. give due importance to others' point of view		4	1	1	2
	PC10. avoid conflicting situations		4	1	2	1
	PC11. develop new ideas for work procedures		4	1	2	1
	PC12. improve upon the existing techniques to increase process efficiency		4	1	2	1
			50	17	17	16
	<b>Total</b>	<b>Weight age %</b>	50	34.00%	34.00%	32.00%
<b>5.TSC/N9003 (Comply with health, safety and security at work place)</b>	PC1. comply with health and safety related instructions applicable to the workplace	<b>100</b>	5	2	2	1
	PC2. use and maintain personal protective equipment such as " ear plug" " nose mask " " head cap" etc., as per protocol		5	2	2	1
	PC3. carry out own activities in line with approved guidelines and procedures		4	2	1	1

**Assessment Criteria**

PC4. maintain a healthy lifestyle and guard against dependency on intoxicants	4	2	1	1
PC5. follow environment management system related procedures	4	2	1	1
PC6. identify and correct (if possible) malfunctions in machinery and equipment	5	2	2	1
PC7. report any service malfunctions that cannot be rectified	4	2	1	1
PC8. store materials and equipment in line with organizational requirements	4	1	2	1
PC9. safely handle and remove waste	4	1	2	1
PC10. minimize health and safety risks to self and others due to own actions	5	2	2	1
PC11. seek clarifications, from supervisors or other authorized personnel in case of perceived risks	4	2	0	2
PC12. monitor the workplace and work processes for potential risks and threat	5	2	2	1
PC13. carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned	5	2	2	1
PC14. report hazards and potential risks/ threats to supervisors or other authorized personnel	4	1	2	1
PC15. participate in mock drills/ evacuation procedures organized at the workplace	4	2	2	0
PC16. undertake first aid, fire-fighting and emergency response training, if asked to do so	5	2	2	1

**Assessment Criteria**

	PC17. take action based on instructions in the event of fire, emergencies or accidents		5	2	2	1
	PC18. follow organization procedures for shutdown and evacuation when required		4	2	1	1
	PC19. identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry		4	2	1	1
	PC20. recognize other possible security issues existing in the workplace		4	2	1	1
	PC21. recognize different measures to curb the hazards		4	2	1	1
	PC22. communicate the safety plan to everyone		4	2	1	1
	PC23. attach disciplinary rules with the implementation		4	2	1	1
			100	43	34	23
	<b>Total</b>	<b>Weightage %</b>	100	43%	34%	23%
<b>7.TSC/N9004 (Comply with industry and organizational requirements)</b>						
	PC1. perform own duties effectively	<b>50</b>	4	1	2	1
	PC2. take responsibility for own actions		4	1	2	1
	PC3. be accountable towards the job role and assigned duties		4	2	1	1
	PC4. take initiative and innovate the existing methods		3	1	1	1
	PC5. focus on self-learning and improvement		4	1	2	1
	PC6. co-ordinate with all the		4	1	2	1



**Assessment Criteria**

	team members and colleagues					
	PC7. communicate politely		4	1	1	2
	PC8. avoid conflicts and miscommunication		4	1	2	1
	PC9. know the organizational standards		4	2	1	1
	PC10. implement them in your performance		4	1	2	1
	PC11. motivate others to follow them		3	1	1	1
	PC12. know the industry standards		4	3	1	0
	PC13. align them with organization standards		4	2	1	1
			50	18	19	13
	<b>Total</b>	<b>Weight age %</b>	50	36%	38%	26%
	<b>Total</b>		<b>450</b>	<b>220</b>	<b>155</b>	<b>75</b>
<b>Grand Total</b>			<b>450</b>			