





Transforming the skill landscape



# Fitter - Shuttleless Weaving Machine: Projectile

QP Code: TSC/Q2404

Version: 3.0

NSQF Level: 4

Textile Sector Skill Council || 14-H, 14th Floor, Hansalaya Building, 15, Barakhamba Road New Delhi - 110001



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# TSC/Q2404: Fitter - Shuttleless Weaving Machine: Projectile

## **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. He/she should carry out all the maintenance aspects such as erecting, dismantling, assembling, leveling, attending & resolving repairs and breakdowns in preparatory department. He/she should also carry out regular preventive maintenance activities thus ensuring proper functioning of all machines.

#### **Personal Attributes**

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).

# Applicable National Occupational Standards (NOS)

#### **Compulsory NOS:**

1. <u>TSC/N2407: Taking charge of shift and handing over shift to fitter Shuttle less Weaving Machine:</u> <u>Projectile</u>

- 2. TSC/N2408: Maintain the shuttle-less Projectile loom
- 3. TSC/N9001: Maintain work area, tools, and machines
- 4. TSC/N9002: Working in a team
- 5. TSC/N9003: Maintain health, safety and security at workplace
- 6. TSC/N9004: Comply with industry and organizational requirement
- 7. DGT/VSQ/N0101: Employability Skills (30 Hours)

#### **Qualification Pack (QP) Parameters**

Sector	Textile
Sub-Sector	Weaving – Textiles
Occupation	Maintenance-Weaving Machines







Country	India
NSQF Level	4
Credits	15
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8152.99
Minimum Educational Qualification & Experience	11th Class (with no experience (OR) Completed 1st year of 3- year diploma (after 10th) and pursuing regular diploma with no experience (OR) 10th grade pass plus 1-year NTC/ NAC with no experience (OR) 8th grade pass plus 2-year NTC plus 1 Year NAC with no experience (OR) 8th pass plus 1-year NTC plus 1-Year NAC plus CITS with no experience (OR) 10th grade pass and pursuing continuous schooling (OR) 10th Grade Pass with 2 year relevant experience (OR) Previous relevant Qualification of NSQF Level 3.0 with minimum education as 5th Grade pass (OR) Previous relevant Qualification of NSQF Level 3.5 with 1 year relevant experience)
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Training in weaving department (Suggested but not mandatory)
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	27/01/2025
NSQC Approval Date	17/11/2022
Version	3.0
Reference code on NQR	2022/TEXT/TSC/07083
NQR Version	1.0







# TSC/N2407: Taking charge of shift and handing over shift to fitter Shuttle less Weaving Machine: Projectile

## Description

This unit is about taking charge of shift from previous shift fitter-Shuttleless Weaving Machine: Projectile and relieving the responsibilities to the next shift fitter-Shuttleless Weaving Machine: Projectile.

## Scope

The scope covers the following :

- Taking charge of shift from Fitter-Shuttleless Weaving Machine: Projectile
- Handing over the shift Fitter-Shuttleless Weaving Machine: Projectile

## **Elements and Performance Criteria**

#### Taking charge of shift from fitter Shuttleless Weaving Machine: Projectile

To be competent, the user/individual on the job must be able to:

- **1.** come at least 15 -20 minutes earlier to the work spot.
- 2. ensure that the necessary tools, gauges etc., are in place
- **3.** meet the previous shift fitter & discuss with him regarding the issues faced by him/ her with respect to the quality, production, spare, safety or any other specific instruction etc.
- 4. check for the availability of the Weft & the condition of the same.
- 5. check the working condition of the Weft Feeders.
- 6. check for the fabric defects on cloth.
- 7. check for the correct functions of Centre Cutter, Side Cutter etc., wherever they are in use.
- 8. check for defects like Under Tuck In, Tails etc.
- **9.** check the condition of the running beams for cross ends, ends pulling out particularly at the selvedge etc.
- 10. note down the break downs In the machines
- 11. check for the size of the Cloth Rolls & to see whether any indication is there in the cloth rolls.
- 12. check the cleanliness of the machines & other work areas.
- **13.** check whether any spare/raw material/ tool / fabric/ any other materials are thrown under the machines or in the other work areas.
- **14.** question the previous shift Fitter for any deviation if so, should bring the same to the knowledge of His/ Her shift Superior as well as that of the previous shift

Handing over the Shift to fitter Shuttleless Weaving Machine: Projectile

To be competent, the user/individual on the job must be able to:

- **15.** hand over the shift to the incoming Fitter in a proper manner & get clearance from the him before leaving the work spot.
- **16.** report to his shift superiors as well as that of the incoming shift, in case His/Her counterpart doesn't report for duty. In that case, the shift has to be properly handed over to the incoming shift's Superior & get clearance from him before leaving the work spot.







17. 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.

# Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** the organization's policies & standard operating procedures (SOP).
- **KU2.** should have awareness & knowledge of customers.
- **KU3.** potential hazards associated with the machines and the safety precautions.
- KU4. protocol to obtain more information on work related tasks.
- **KU5.** contact person in case of queries on procedure or products and for resolving issues related to defective machines, tools, materials & equipments.
- **KU6.** details of the various job roles & responsibilities.
- KU7. documentation and reporting formats, work targets & review with superiors.
- KU8. protocol and format for reporting work related risks/ problems.
- **KU9.** method of obtaining /giving feedback with respect to performance.
- **KU10.** importance of team work, harmonious working relationships.
- **KU11.** process for offering /obtaining work related assistance.
- **KU12.** Wrong Drawing, Wrong Denting, End Out, Double End, Broken Pick, Double Pick, Missing Pick, Hand Stain, Hole, Wrong Weft, Bad Selvedge.
- KU13. 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 & Thick Place, Hair line crack.
- KU14. Process flow & material flow in a weaving / textile mill
- **KU15.** fabric quality particulars such as ends & picks per inch, width, weave etc.
- **KU16.** yarns from natural fibers cotton, silk, wool.
- **KU17.** yarns from manmade fibers polyester, nylon, viscose.
- KU18. blended yarns Polyester Cotton, Polyester Viscose
- KU19. Standard procedure for operating Projectile weaving machine
- KU20. Functions of various controls of projectile loom
- **KU21.** Functions and methodology for operating different material handling tools
- **KU22.** Knowledge of waste collection systems & their use
- KU23. Safety procedures to be followed at work place
- KU24. Tappet loom/ Cam Loom/ Crank Loom, Dobby Loom, Jacquard Loom
- KU25. Plain Weave, Twill, Drill, Plain Satin, Stripe Satin, Dobby designs, Jacquard designs.
- **KU26.** Wrong Drawing, Wrong Denting, End Out, Double End, Broken Pick, Double Pick, Missing Pick, Hand Stain, Hole, Wrong Weft, Bad Selvedge.







- **KU27.** 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 & Thick Place, Hair line crack.
- **KU28.** Spinning Faults Thin Place, Thick Place, Neps, Kitties, Contamination, Color Flies, Yarn variation, Shade Variation.
- **KU29.** Sizing Faults Shade variation, Size Patches, Sizing Oil, Bead formation.
- **KU30.** Weaving Faults Wrong Weft, Wrong Pattern, Less Width, Low EPI, Low PPI, wrong warp.
- KU31. Four Point American System
- **KU32.** British System of grading Cuttable Faults, Warp Way Continuous Faults, Specification Deviations
- KU33. American System
- **KU34.** know the safety mechanisms of the machines & ensure that the same are in order.
- **KU35.** know about the stop motions & ensure that the same are in order.
- **KU36.** know about the indication lamps & ensure that the same are in order.
- **KU37.** know about the functional operations of the machines, where he is working.

# **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** Plan and manage work routine based on instructions from supervisor.
- **GS2.** participate in the various programs/ meetings that are conducted by the Superiors.
- **GS3.** put forth the suggestions in the interest of the Company.
- **GS4.** participate in the Quality Circles formed by the Superiors.
- **GS5.** extend voluntary support and adapt to the various procedures that are adopted by the Company with respect to compliances for the different certifications like ISO 9001, ISO 14001, SA 8001 GOTS Certification Fair Trade etc.
- **GS6.** ensure that Warp breaks/loom hour doesn't exceed 2.
- **GS7.** ensure that weft breaks/loom hour doesn't exceed 1.
- **GS8.** ensure that fabric rejection doesn't exceed 1%.
- **GS9.** ensure that the efficiency is maintained in excess of 85%.
- **GS10.** ensure that the warp waste doesn't exceed 0.5%.
- **GS11.** ensure that the weft waste doesn't exceed 0.5 %



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#### **Qualification Pack**

#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Taking charge of shift from fitter Shuttleless</i> <i>Weaving Machine: Projectile</i>	13	25	-	3
1. come at least 15 -20 minutes earlier to the work spot.	-	1	_	-
<ol> <li>ensure that the necessary tools, gauges etc., are in place</li> </ol>	1	2	_	-
<b>3.</b> meet the previous shift fitter & discuss with him regarding the issues faced by him/ her with respect to the quality, production, spare, safety or any other specific instruction etc.	-	1	-	-
<ol> <li>check for the availability of the Weft &amp; the condition of the same.</li> </ol>	-	2	-	-
<b>5.</b> check the working condition of the Weft Feeders.	1	3	_	1
6. check for the fabric defects on cloth.	1	2	-	-
7. check for the correct functions of Centre Cutter, Side Cutter etc., wherever they are in use.	1	3	_	-
8. check for defects like Under Tuck In, Tails etc.	-	3	-	-
<b>9.</b> check the condition of the running beams for cross ends, ends pulling out particularly at the selvedge etc.	1	2	-	1
10. note down the break downs In the machines	-	1	_	-
<b>11.</b> check for the size of the Cloth Rolls & to see whether any indication is there in the cloth rolls.	2	1	_	-
<b>12.</b> check the cleanliness of the machines & other work areas.	2	2	_	1
<b>13.</b> check whether any spare/raw material/ tool / fabric/ any other materials are thrown under the machines or in the other work areas.	2	1	-	-







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#### Practical Project Viva Theory Assessment Criteria for Outcomes Marks Marks Marks Marks **14.** guestion the previous shift Fitter for any deviation if so, should bring the same to the 2 1 knowledge of His/ Her shift Superior as well as that of the previous shift Handing over the Shift to fitter Shuttleless Weaving 2 7 -Machine: Projectile 15. hand over the shift to the incoming Fitter in a proper manner & get clearance from the him 2 before leaving the work spot. **16.** report to his shift superiors as well as that of the incoming shift, in case His/Her counterpart doesn't report for duty. In that case, the shift has 1 3 to be properly handed over to the incoming shift's Superior & get clearance from him before leaving the work spot. 17. report to his shift Superior about the quality / production /safety issues/ any other issue faced in His/ Her shift and should leave the department 1 2 only after getting concurrence for the same from His/ Her superiors. **NOS Total** 15 32 3 -







# **National Occupational Standards (NOS) Parameters**

NOS Code	TSC/N2407
NOS Name	Taking charge of shift and handing over shift to fitter Shuttle less Weaving Machine: Projectile
Sector	Textile
Sub-Sector	Weaving – Textiles
Occupation	Maintenance-Weaving Machines
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	27/01/2025
NSQC Clearance Date	17/11/2022







# TSC/N2408: Maintain the shuttle-less Projectile loom

# Description

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.

#### Scope

The scope covers the following :

- Attending to quality issues
- Attending Production Issues/ Break downs
- Ensuring Maintenance activities
- Other Work Practices

## **Elements and Performance Criteria**

#### Attending to quality Issues

To be competent, the user/individual on the job must be able to:

- **1.** ensure that the production is commenced only after the sample is approved.
- **2.** ensure that bulk production is started only after the first roll is approved.
- **3.** ensure that Warp Stop motion functions properly so that there is no end out problem, warp float etc. in the fabrics.
- **4.** ensure that Weft stop motion functions properly so that fabrics dont get rejected due to weft crack.
- 5. maintain Take Up & Let-Off mechanisms properly
- **6.** ensure proper functioning of stop motions, Back Rest, Shedding etc., so that fabrics are free from defects like starting mark, bad shedding etc.
- 7. maintain temple setting, reed setting so that fabrics dont get rejected for reasons like temple cut, temple mark, Reed mark etc.
- **8.** attend the other fabric defects like Tails, Under Tuck In, Drop Pick, Cloth Torn, Weft Stitches, floats etc.

#### Attending Production Issues/ Break downs

To be competent, the user/individual on the job must be able to:

- 9. attend excessive weft breaks.
- **10.** attend to Weft Transfer failures.
- **11.** attend excessive warp breaks.
- 12. attend to loom stoppages due to Projectile getting Jammed
- **13.** Ensure that the Heald wires, Heald Frames, reed etc. are in good working condition.
- **14.** Ensure that the loom runs with the correct belt size and see that there is no slippage in the same & to ensure that the loom works at the recommended speed.







- **15.** see that replenishment of spares or attending to break downs is done in the prescribed time.
- **16.** ensure required humidity is maintained in the loom shed.
- **17.** check the knotted looms & ensure that knotting is carried out without cross ends.
- **18.** The check the sort change loom & ensure that drawing & reaching was carried out without any cross ends.
- **19.** 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
- **20.** check the Sizing quality and for any deviation, the same has to be brought to the notice of the higher authority.
- **21.** ensure proper dropper cleaning.

#### Ensuring Maintenance activities

To be competent, the user/individual on the job must be able to:

- **22.** ensure that the looms are cleaned properly as per the below schedule: Daily cleaning, Cleaning during Knotting, Cleaning during Sort Changes
- 23. check the oil level on weekly basis.
- 24. change the oil on yearly basis
- 25. correct / arrest Oil Leakages
- 26. take proper precautions during knotting
- **27.** carry out preventive maintenance as per the schedule.
- **28.** ensure the life of all the spares through effective maintenance.
- **29.** maintain Spare Changing Details note, for the following details: 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
- **30.** Salvage the Broken Spare& to avail new spare only after producing the Old Spare to the Stores.
- **31.** maintain sort muster as per the below details: a) Loom No., b) Construction Details, c) Warp details, d) Warp Count, e) Warp Mill Name, f) Warp Yarn Test Report (Test Parameters), g) Reed Used, h) Total Ends Used, i) Name Of The Sizing, j) Warping Breakage Rate, k) Average Warp Count, I) Size Pick Upm) Warp break/ loom hour, n) Weft 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 Mtr / Kg, Fabric inspectedMtr/ Kg, Fabric Passed Mtr / Kg, Fabric Rejected Mtr / Kg, Rejection %, Reason For Rejection, Warp Waste %, Weft Waste %
- 32. maintain effective working of Generator

#### **Other Work Practices**

To be competent, the user/individual on the job must be able to:

- **33.** Should see that Air is not misused, use air for cleaning only in the areas where it is recommended
- 34. ensure proper maintenance of Air Compressor
- **35.** 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







- **36.** Ensure that the weft yarn is completely used, without any wastage of raw materials. For any quality issue or defective cone etc., the same has to be brought to the notice of the superiors.
- 37. maintain Knotting Entry Note with the following details: a) Loom No., b) Construction Details, c) Date Of Knotting, d) Time of Exhaustion, e) Cleaning Completed Time, f) Beam Loading Completed Time, g) Knotting Completed Time, h) Loom Run Time, i) Total Stopped Time For Knotting, j) Name Of the Sizing, k) Set No., l) Beam Nos., m) Beam Metresn) Old Warp Waste kgs, o) New Warp Waste kgs, p) Cleaning Quality, q) Knotting Quality
- **38.** ensure that Relative Humidity in the Department is maintained properly
- **39.** ensure that correct quality of thrums is there & see that the same are properly tied.
- **40.** check the knotted loom for knotting quality etc. Double ends have to be removed, Should report to Superiors for any deviation and, any other quality issue.
- 41. check that all the safety covers are in place
- **42.** check the projectile oil lubrications by taking out the projectile from receiving unit touch and feel whether the projectile surface is having oil or not.
- **43.** check the lubrication of all projectile circulation area.
- **44.** pump the bijur pump handle twice daily.
- **45.** ensure that cloth rolls are doffed whenever/ wherever necessary.
- **46.** 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.
- **47.** ensure that no raw material/ cloth/ spare/ tool / other material is thrown under/ near the machines or in the other work areas.

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. the organization's policies & standard operating procedures (SOP).
- **KU2.** should have awareness & knowledge of customers.
- **KU3.** potential hazards associated with the machines and the safety precautions.
- KU4. protocol to obtain more information on work related tasks.
- **KU5.** contact person in case of queries on procedure or products and for resolving issues related to defective machines, tools, materials & equipment.
- **KU6.** details of the various job roles & responsibilities.
- **KU7.** documentation and reporting formats.
- **KU8.** work targets & review with superiors.
- **KU9.** protocol and format for reporting work related risks/ problems.
- **KU10.** method of obtaining /giving feedback with respect to performance.
- **KU11.** importance of team work, harmonious working relationships.
- **KU12.** process for offering /obtaining work related assistance.
- **KU13.** Wrong Drawing, Wrong Denting, End Out, Double End, Broken Pick, Double Pick, Missing Pick, Hand Stain, Hole, Wrong Weft, Bad Selvedge.







- KU14. 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 & Thick Place, Hair line crack.
- **KU15.** Planning maintenance activities and preparing date-wise plans for maintenance and replacement of parts considering their life
- KU16. workloads, work allocation and standard working conditions for maintenance operatives
- KU17. Knowledge about make & models of various projectile looms/ machines & spare parts
- KU18. Knowledge about oils & lubricants used in projectile looms
- KU19. Knowledge of various types of bearings & belts used in projectile looms
- **KU20.** Fabric quality particulars such as ends & picks per inch, width, weave etc.
- KU21. Yarns from natural fibers Cotton, Silk, and Wool.
- KU22. Yarns from Manmade Fibers Polyester, Nylon, Viscose.
- **KU23.** Blended yarns Polyester Cotton, Polyester Viscose.
- KU24. Shuttle less loom Rapier, Projectile, Airjet, and Waterjet.
- KU25. Tappet loom/ Cam Loom/ Crank Loom, Dobby Loom, Jacquard Loom.
- **KU26.** Plain Weave, Twill, Drill, Plain Satin, Stripe Satin, Dobby designs, Jacquard designs.
- **KU27.** Wrong Drawing, Wrong Denting, End Out, Double End, Broken Pick, Double Pick, Missing Pick, Hand Stain, Hole, Wrong Weft, Bad Selvedge.
- KU28. 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 & Thick Place, Hair line crack.
- **KU29.** Spinning Faults Thin Place, Thick Place, Neps, Kitties, Contamination, Color Flies, Yarn variation, Shade Variation.
- **KU30.** Sizing Faults Shade variation, Size Patches, Sizing Oil, Bead formation.
- **KU31.** Weaving Faults Wrong Weft, Wrong Pattern, Less Width, Low EPI, Low PPI, wrong warp.
- **KU32.** Four Point American System: Below 3 1 point, Between 3 to 6 2 points, Between 6 to 9 3 points, Above 9 4 points
- KU33. British System of grading Cuttable Faults, Warp Way Continuous Faults, Specification Deviations: A Grade:- No Cuttable Faults, No Warp Way Continuous Faults, No 3 Major Faults, 15 minor points, B Grade:- Rejection, Deviation from A Grade, 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. 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. Cloth Width No Minus is accepted & No excess above 0.5 is accepted. Ends Per Inch Plus or Minus 2 is accepted. Picks Per Inch Plus or Minus 1.
- **KU34.** American System: 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, B Grade:- Rejection. Deviation from A Grade lengths







- **KU35.** Length based defect and value reduction Between 40 meters to 79.75 meters 20% (to variation from Buyer to Buyer) Above 80 meters 80%
- **KU36.** know the safety mechanisms of the machines & ensure that the same are in order.
- **KU37.** know about the functions of stop motions & ensure that the same are in order.
- **KU38.** know about the functions of various indication lamps & ensure that the same are in order.
- **KU39.** know about the functional operations of the machines, where he is working.

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** Plan and manage work routine based on instructions from supervisor.
- **GS2.** willingly participate in the various programs/ meetings that are conducted by the Superiors.
- **GS3.** put forth the suggestions in the interest of the Company.
- **GS4.** participate in the Quality Circles formed by the Superiors.
- **GS5.** extend voluntary support and adapt to the various procedures that are adopted by the Company with respect to compliances for the different certifications like ISO 9001, ISO 14001, SA 8001 GOTS Certification Fair Trade etc. On job the individual should be able to achieve the following skills :
- GS6. ensure that Warp breaks/loom hour doesn't exceed 2.
- **GS7.** ensure that weft breaks/loom hour doesn't exceed 1.
- **GS8.** ensure that fabric rejection doesn't exceed 1%.
- **GS9.** ensure that the efficiency is maintained in excess of 85%.
- **GS10.** ensure that the warp waste doesn't exceed 0.5%.
- GS11. ensure that the weft waste doesn't exceed 0.5 %



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#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Attending to quality Issues	6	16	-	2
<b>1.</b> ensure that the production is commenced only after the sample is approved.	1	2	-	-
<b>2.</b> ensure that bulk production is started only after the first roll is approved.	1	2	-	-
<b>3.</b> ensure that Warp Stop motion functions properly so that there is no end out problem, warp float etc. in the fabrics.	1	2	-	1
<b>4.</b> ensure that Weft stop motion functions properly so that fabrics dont get rejected due to weft crack.	1	2	-	-
5. maintain Take Up & Let-Off mechanisms properly	-	2	-	1
<b>6.</b> ensure proper functioning of stop motions, Back Rest, Shedding etc., so that fabrics are free from defects like starting mark, bad shedding etc.	1	2	-	_
<b>7.</b> maintain temple setting, reed setting so that fabrics dont get rejected for reasons like temple cut, temple mark, Reed mark etc.	_	2	-	-
8. attend the other fabric defects like Tails, Under Tuck In, Drop Pick, Cloth Torn, Weft Stitches, floats etc.	1	2	-	-
Attending Production Issues/ Break downs	11	26	-	3
9. attend excessive weft breaks.	1	2	-	-
10. attend to Weft Transfer failures.	1	2	-	1
11. attend excessive warp breaks.	1	2	-	-
<b>12.</b> attend to loom stoppages due to Projectile getting Jammed	1	2	-	-
<b>13.</b> Ensure that the Heald wires, Heald Frames, reed etc. are in good working condition.	1	2	-	_







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>14.</b> Ensure that the loom runs with the correct belt size and see that there is no slippage in the same & to ensure that the loom works at the recommended speed.	1	2	-	-
<b>15.</b> see that replenishment of spares or attending to break downs is done in the prescribed time.	1	2	-	-
<b>16.</b> ensure required humidity is maintained in the loom shed.	-	2	-	1
<b>17.</b> check the knotted looms & ensure that knotting is carried out without cross ends.	-	2	-	-
<b>18.</b> The check the sort change loom & ensure that drawing & reaching was carried out without any cross ends.	1	2	-	-
<b>19.</b> 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	1	2	-	1
<b>20.</b> check the Sizing quality and for any deviation, the same has to be brought to the notice of the higher authority.	1	2	-	-
<b>21.</b> ensure proper dropper cleaning.	1	2	-	-
Ensuring Maintenance activities	16	22	-	2
<b>22.</b> ensure that the looms are cleaned properly as per the below schedule: Daily cleaning, Cleaning during Knotting, Cleaning during Sort Changes	1	2	-	-
23. check the oil level on weekly basis.	1	2	-	-
24. change the oil on yearly basis	1	2	-	-
25. correct / arrest Oil Leakages	1	2	-	-
26. take proper precautions during knotting	1	2	-	-
<b>27.</b> carry out preventive maintenance as per the schedule.	1	2	-	-
<b>28.</b> ensure the life of all the spares through effective maintenance.	2	2	-	-







Transforming the skill landscape

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>29.</b> maintain Spare Changing Details note, for the following details: 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	2	2	-	1
<b>30.</b> Salvage the Broken Spare& to avail new spare only after producing the Old Spare to the Stores.	1	2	-	-
<b>31.</b> maintain sort muster as per the below details: a) Loom No., b) Construction Details, c) Warp details, d) Warp Count, e) Warp Mill Name, f) Warp Yarn Test Report (Test Parameters), g) Reed Used, h) Total Ends Used, i) Name Of The Sizing, j) Warping Breakage Rate, k) Average Warp Count, I) Size Pick Upm) Warp break/ loom hour, n) Weft 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 Mtr / Kg, Fabric inspectedMtr/ Kg, Fabric Passed Mtr / Kg, Fabric Rejected Mtr / Kg, Rejection %, Reason For Rejection, Warp Waste %, Weft Waste %	3	2	_	1
<b>32.</b> maintain effective working of Generator	2	2	-	-
Other Work Practices	14	31	-	1
<b>33.</b> Should see that Air is not misused, use air for cleaning only in the areas where it is recommended	1	2	-	-
34. ensure proper maintenance of Air Compressor	1	2	-	-
<b>35.</b> 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	2	3	-	1







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>36.</b> Ensure that the weft yarn is completely used, without any wastage of raw materials. For any quality issue or defective cone etc., the same has to be brought to the notice of the superiors.	1	2	-	-
<b>37.</b> maintain Knotting Entry Note with the following details: a) Loom No., b) Construction Details, c) Date Of Knotting, d) Time of Exhaustion, e) Cleaning Completed Time, f) Beam Loading Completed Time, g) Knotting Completed Time, h) Loom Run Time, i) Total Stopped Time For Knotting, j) Name Of the Sizing, k) Set No., l) Beam Nos., m) Beam Metresn) Old Warp Waste kgs, o) New Warp Waste kgs, p) Cleaning Quality, q) Knotting Quality	1	2	-	-
<b>38.</b> ensure that Relative Humidity in the Department is maintained properly	-	2	-	-
<b>39.</b> ensure that correct quality of thrums is there & see that the same are properly tied.	1	2	-	-
<b>40.</b> check the knotted loom for knotting quality etc. Double ends have to be removed, Should report to Superiors for any deviation and, any other quality issue.	1	2	_	-
<b>41.</b> check that all the safety covers are in place	-	2	-	-
<b>42.</b> check the projectile oil lubrications by taking out the projectile from receiving unit touch and feel whether the projectile surface is having oil or not.	1	2	_	-
<b>43.</b> check the lubrication of all projectile circulation area.	1	2	-	-
<b>44.</b> pump the bijur pump handle twice daily.	1	2	-	-
<b>45.</b> ensure that cloth rolls are doffed whenever/ wherever necessary.	1	2	-	-
<b>46.</b> 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.	1	2	-	-
<b>47.</b> ensure that no raw material/ cloth/ spare/ tool / other material is thrown under/ near the machines or in the other work areas.	1	2	-	-







Assessment Criteria for Outcomes	Theory	Practical	Project	Viva
	Marks	Marks	Marks	Marks
NOS Total	47	95	-	8







# **National Occupational Standards (NOS) Parameters**

NOS Code	TSC/N2408
NOS Name	Maintain the shuttle-less Projectile loom
Sector	Textile
Sub-Sector	Weaving – Textiles
Occupation	Maintenance-Weaving Machines
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	27/01/2025
NSQC Clearance Date	17/11/2022







# TSC/N9001: Maintain work area, tools, and machines

# Description

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

## Scope

The scope covers the following :

• Maintaining the work area, tools and machines

#### **Elements and Performance Criteria**

#### Maintaining the work area, tools and machines

To be competent, the user/individual on the job must be able to:

- 1. handle materials, machinery, equipment and tools with care and use them in the correct way
- 2. use correct lifting and handling procedures
- 3. use materials to minimize waste
- 4. maintain a clean and hazard free working area
- 5. maintain tools and equipment
- 6. carry out running maintenance within agreed schedules
- 7. carry out maintenance and/or cleaning within ones responsibility
- 8. report unsafe equipment and other dangerous occurrences
- 9. ensure that the correct machine guards are in place
- 10. work in a comfortable position with the correct posture
- 11. use cleaning equipment and methods appropriate for the work to be carried out
- 12. dispose of waste safely in the designated location
- 13. store cleaning equipment safely after use
- 14. carry out cleaning according to schedules and limits of responsibility

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. personal hygiene and duty of care
- KU2. safe working practices and organisational standard operating procedures
- KU3. limits of your own responsibility
- **KU4.** ways of resolving problems within the work area
- KU5. the production process and the specific work activities that relate to the whole process
- KU6. the importance of effective communication with supervisors
- KU7. the lines of communication, authority and reporting procedures







- KU8. the organisation's rules, codes and guidelines (including timekeeping)
- **KU9.** the company's quality standards
- KU10. the importance of complying with written instructions
- **KU11.** equipment operating procedures / supervisor's instructions
- KU12. work instructions and specifications and interpret them accurately
- KU13. relation between work role and the overall manufacturing process
- KU14. hazards likely to be encountered when conducting routine maintenance
- KU15. the importance of taking action when problems are identified
- KU16. different ways of minimising waste
- KU17. the importance of running maintenance and regular cleaning
- KU18. effects of contamination on products i.e. machine oil, dirt, foreign materials
- KU19. common faults with equipment and the method to rectify
- KU20. maintenance procedures
- KU21. different types of cleaning equipment and substances and their use
- KU22. safe working practices for cleaning and the method of carrying them out

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** comprehend written instructions
- GS2. read any application sent by other colleagues
- GS3. Communicate effectively in local language
- GS4. communicate with supervisor appropriately
- GS5. talk to others to convey information effectively
- GS6. identify the real reason of problem faced
- **GS7.** apply problem-solving approaches in different situations
- GS8. refer anomalies to the supervisor
- GS9. seek clarification on problems from others
- GS10. apply good attention to detail
- GS11. check your work is complete and free from errors
- GS12. make sure every kind of communication is error free
- GS13. communicate effectively
- GS14. apply leadership skills wherever required
- GS15. take initiative at the right place
- GS16. understand the requirement to be creative



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#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Maintaining the work area, tools and machines	17	20	-	13
<ol> <li>handle materials, machinery, equipment and tools with care and use them in the correct way</li> </ol>	2	2	-	1
2. use correct lifting and handling procedures	1	2	-	1
3. use materials to minimize waste	2	1	-	1
4. maintain a clean and hazard free working area	1	1	-	1
5. maintain tools and equipment	2	1	_	1
<b>6.</b> carry out running maintenance within agreed schedules	1	2	-	1
7. carry out maintenance and/or cleaning within ones responsibility	1	2	-	1
8. report unsafe equipment and other dangerous occurrences	1	2	-	-
<b>9.</b> ensure that the correct machine guards are in place	1	1	-	1
<b>10.</b> work in a comfortable position with the correct posture	1	1	-	1
<b>11.</b> use cleaning equipment and methods appropriate for the work to be carried out	1	1	-	1
<b>12.</b> dispose of waste safely in the designated location	1	2	-	1
13. store cleaning equipment safely after use	1	1	-	1
<b>14.</b> carry out cleaning according to schedules and limits of responsibility	1	1	-	1
NOS Total	17	20	-	13







# **National Occupational Standards (NOS) Parameters**

NOS Code	TSC/N9001
NOS Name	Maintain work area, tools, and machines
Sector	Textile
Sub-Sector	Spinning, Weaving, Processing, Knitting
Occupation	Textile Mill sector - Cotton
NSQF Level	3
Credits	TBD
Version	3.0
Last Reviewed Date	27/01/2022
Next Review Date	31/03/2025
NSQC Clearance Date	17/11/2022







# TSC/N9002: Working in a team

# Description

This unit is about working as a team member in the textile industry

#### Scope

The scope covers the following :

- commitment and trust
- communication
- adaptability
- creative freedom

## **Elements and Performance Criteria**

#### Commitment and trust

To be competent, the user/individual on the job must be able to:

- 1. be accountable to the own role in whole process
- 2. perform all roles with full responsibility
- 3. be effective and efficient at workplace

#### Communication

To be competent, the user/individual on the job must be able to:

- 4. properly communicate about company policies
- 5. report all problems faced during the process
- 6. talk politely with other team members and colleagues
- 7. submit daily report of own performance

#### Adaptability

To be competent, the user/individual on the job must be able to:

- 8. adjust in different work situations
- 9. give due importance to other's point of view
- **10.** avoid conflicting situations

#### Creative freedom

To be competent, the user/individual on the job must be able to:

- **11.** develop new ideas for work procedures
- **12.** improve upon the existing techniques to increase process efficiency

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** standard operating procedures (SOP) and regulations in a textile mill
- KU2. procedure followed to get the final output in the mill







- **KU3.** safe working practices to be adopted in textile mill
- KU4. reporting to the supervisor or higher authority about any grievances faced
- KU5. the importance of the previous and next step of the process
- **KU6.** process flow in a textile mill and the concerned workers
- **KU7.** material flow in a textile mill and the required person
- KU8. functions of different parts of the machine
- KU9. tools and equipments used
- **KU10.** guidelines for operating the machine
- **KU11.** safety procedures to be followed in the machine

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** write clear and short sentences
- GS2. write daily work report
- **GS3.** write grievance complaint application
- **GS4.** comprehend written instructions
- GS5. read any application sent by other colleagues
- GS6. communicate with supervisor appropriately
- GS7. talk to co-workers to convey information effectively
- GS8. identify the real reason of problem faced
- GS9. be able to find the most effective solution to the problems faced
- GS10. apply good attention to detail
- GS11. ensure every kind of communication is error free
- GS12. communicate effectively
- GS13. apply leadership skills wherever required
- GS14. take initiative at the right place
- GS15. understand the requirement to be creative









#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Commitment and trust	5	4	-	2
<ol> <li>be accountable to the own role in whole process</li> </ol>	2	1	-	1
2. perform all roles with full responsibility	2	1	-	1
3. be effective and efficient at workplace	1	2	-	-
Communication	6	7	-	4
<ol> <li>properly communicate about company policies</li> </ol>	1	2	-	1
5. report all problems faced during the process	1	2	-	1
<b>6.</b> talk politely with other team members and colleagues	2	1	-	1
7. submit daily report of own performance	2	2	-	1
Adaptability	5	4	-	3
8. adjust in different work situations	1	1	-	1
<b>9.</b> give due importance to other's point of view	2	1	-	1
<b>10.</b> avoid conflicting situations	2	2	-	1
Creative freedom	3	5	-	2
11. develop new ideas for work procedures	1	3	-	1
<b>12.</b> improve upon the existing techniques to increase process efficiency	2	2	-	1
NOS Total	19	20	-	11







# National Occupational Standards (NOS) Parameters

NOS Code	TSC/N9002
NOS Name	Working in a team
Sector	Textile
Sub-Sector	Spinning, Weaving, Processing, Knitting
Occupation	Textile Mill sector - Cotton
NSQF Level	3
Credits	TBD
Version	6.0
Last Reviewed Date	27/01/2022
Next Review Date	31/03/2025
NSQC Clearance Date	17/11/2022







# TSC/N9003: Maintain health, safety and security at workplace

## Description

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 minimize risk to self and others.

#### Scope

The scope covers the following :

- comply with health, safety and security requirements at work
- Recognizing the hazards
- Planning the safety techniques
- Implementing the programs

# **Elements and Performance Criteria**

#### Comply with health, Safety and security requirements at work

To be competent, the user/individual on the job must be able to:

- **1.** comply with health and safety related instructions applicable to the workplace
- 2. use and maintain personal protective equipment such as ear plug, nose mask , head cap etc., as per protocol
- 3. carry out own activities in line with approved guidelines and procedures
- 4. maintain a healthy lifestyle and guard against dependency on intoxicants
- 5. follow environment management system related procedures
- 6. identify and correct (if possible) malfunctions in machinery and equipment
- 7. report any service malfunctions that cannot be rectified
- 8. store materials and equipment in line with organisational requirements
- 9. safely handle and remove waste
- **10.** minimize health and safety risks to self and others due to own actions
- **11.** seek clarifications, from supervisors or other authorized personnel in case of perceived risks
- **12.** monitor the workplace and work processes for potential risks and threat
- **13.** carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned
- 14. report hazards and potential risks/ threats to supervisors or other authorized personnel
- 15. participate in mock drills/ evacuation procedures organized at the workplace
- 16. undertake first aid, fire-fighting and emergency response training, if asked to do so
- **17.** take action based on instructions in the event of fire, emergencies or accidents
- **18.** follow organisation procedures for shutdown and evacuation when required

#### Recognizing the hazards

To be competent, the user/individual on the job must be able to:







- **19.** identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry
- **20.** recognise other possible security issues existing in the workplace

Planning the safety techniques Implementing the programs

To be competent, the user/individual on the job must be able to:

- **21.** recognise different measures to curb the hazards
- 22. communicate the safety plan to everyone
- 23. attach disciplinary rules with the implementation

# Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. standard operating procedures (SOP) and regulations in a textile mill
- KU2. safe working practices to be adopted in textile mill
- KU3. quality systems and other processes practiced in the textile mill
- KU4. health and safety related practices applicable at the workplace
- KU5. potential hazards, risks and threats based on nature of operations
- **KU6.** organizational procedures for safe handling of equipment and machine operations
- KU7. potential risks due to own actions and methods to minimize these
- KU8. environmental management system related procedures at the workplace
- **KU9.** layout of the plant and details of emergency exits, escape routes, emergency equipment and assembly points
- KU10. potential accidents and emergencies and response to these scenarios
- KU11. reporting protocol and documentation required
- KU12. details of personnel trained in first aid, fire-fighting and emergency response
- **KU13.** actions to take in the event of a mock drills/ evacuation procedures or actual accident, emergency or fire
- KU14. occupational health and safety risks and methods
- KU15. personal protective equipment and method of use
- KU16. identification, handling and storage of hazardous substances
- KU17. proper disposal system for waste and by-products
- **KU18.** signage related to health and safety and their meaning
- **KU19.** importance of sound health, hygiene and good habits
- KU20. ill-effects of alcohol, tobacco and drugs

# **Generic Skills (GS)**

User/individual on the job needs to know how to:

- **GS1.** write clear and short sentences
- GS2. read and understand the company instructions







- GS3. read and understand work instructions
- GS4. read and understand the safety guidelines
- **GS5.** listen to others attentively
- **GS6.** respond to emergencies, accidents or fire at the workplace
- **GS7.** evacuate the premises and help others in need while doing so
- GS8. the value of physical fitness, personal hygiene and good habits
- **GS9.** talk with others politely
- GS10. identify correct safety measure for particular hazard
- **GS11.** make required safety plans as and when required
- **GS12.** raise alarm in case of emergency
- GS13. know the use of correct safety measure whenever required
- **GS14.** be attentive to details
- **GS15.** be careful to avoid occurrence of hazards
- **GS16.** maintenance of neatness at work
- GS17. procedure for reporting unwanted behavior



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#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Comply with health, Safety and security requirements at work	27	35	-	23
<ol> <li>comply with health and safety related instructions applicable to the workplace</li> </ol>	2	2	-	2
<ol> <li>use and maintain personal protective equipment such as ear plug, nose mask , head cap etc., as per protocol</li> </ol>	2	2	-	2
<b>3.</b> carry out own activities in line with approved guidelines and procedures	2	2	-	2
<ol> <li>maintain a healthy lifestyle and guard against dependency on intoxicants</li> </ol>	2	2	-	2
5. follow environment management system related procedures	2	2	-	2
<b>6.</b> identify and correct (if possible) malfunctions in machinery and equipment	2	2	-	1
<ol> <li>report any service malfunctions that cannot be rectified</li> </ol>	2	2	-	1
8. store materials and equipment in line with organisational requirements	2	2	-	1
9. safely handle and remove waste	2	2	-	1
<b>10.</b> minimize health and safety risks to self and others due to own actions	1	2	-	1
<b>11.</b> seek clarifications, from supervisors or other authorized personnel in case of perceived risks	1	2	-	2
<b>12.</b> monitor the workplace and work processes for potential risks and threat	1	2	-	1
<b>13.</b> carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned	1	2	-	1
<b>14.</b> report hazards and potential risks/ threats to supervisors or other authorized personnel	1	2	-	1







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>15.</b> participate in mock drills/ evacuation procedures organized at the workplace	1	2	-	-
<b>16.</b> undertake first aid, fire-fighting and emergency response training, if asked to do so	1	2	_	1
<b>17.</b> take action based on instructions in the event of fire, emergencies or accidents	1	2	-	1
<b>18.</b> follow organisation procedures for shutdown and evacuation when required	1	1	-	1
Recognizing the hazards	2	2	-	2
<b>19.</b> identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry	1	1	-	1
<b>20.</b> recognise other possible security issues existing in the workplace	1	1	-	1
<i>Planning the safety techniques Implementing the programs</i>	3	3	-	3
<b>21.</b> recognise different measures to curb the hazards	1	1	_	1
<b>22.</b> communicate the safety plan to everyone	1	1	-	1
<b>23.</b> attach disciplinary rules with the implementation	1	1	_	1
NOS Total	32	40	-	28







# **National Occupational Standards (NOS) Parameters**

NOS Code	TSC/N9003
NOS Name	Maintain health, safety and security at workplace
Sector	Textile
Sub-Sector	Spinning, Weaving, Processing, Knitting
Occupation	Textile Mill sector - Cotton
NSQF Level	3
Credits	TBD
Version	5.0
Last Reviewed Date	27/01/2022
Next Review Date	31/03/2025
NSQC Clearance Date	17/11/2022







# TSC/N9004: Comply with industry and organizational requirement

# Description

This unit is about knowing, understanding, and complying with the requirements of the organization and the textile industry

## Scope

The scope covers the following :

- self development
- team work
- organizational standards
- industry standards

## **Elements and Performance Criteria**

#### Self development

To be competent, the user/individual on the job must be able to:

- 1. perform own duties effectively
- 2. take responsibility for own actions
- 3. be accountable towards the job role and assigned duties
- 4. take initiative and innovate the existing methods
- 5. focus on self-learning and improvement

#### Team work

To be competent, the user/individual on the job must be able to:

- 6. co-ordinate with all the team members and colleagues
- 7. communicate politely
- 8. avoid conflicts and miscommunication

#### Organisational standards

To be competent, the user/individual on the job must be able to:

- 9. know the organisational standards
- 10. implement them in your performance
- 11. motivate others to follow them

#### Industry standards

To be competent, the user/individual on the job must be able to:

- 12. monitor the workplace and work processes for potential risks and threat
- 13. align them with organisation standards

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:







- KU1. standard operating procedures (SOP) and regulations in a textile mill
- KU2. reporting to the supervisor or higher authority
- KU3. knowledge of organisational standards
- **KU4.** knowledge of industry standards
- **KU5.** process and material flow in a textile mill
- KU6. importance of complying with the standards
- **KU7.** guidelines for cleaning the various parts of machine

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1. write clear and short sentences
- GS2. read the given instructions
- GS3. comprehend written instructions
- GS4. talk effectively with others
- GS5. put forward your point
- GS6. listen to others
- **GS7.** Organizational requirements
- GS8. your responsibilities at the workplace
- GS9. procedure to comply with the industry standards



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## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Self development	5	9	-	7
1. perform own duties effectively	1	2	-	2
2. take responsibility for own actions	1	2	-	2
<b>3.</b> be accountable towards the job role and assigned duties	1	2	-	1
<b>4.</b> take initiative and innovate the existing methods	1	1	-	1
5. focus on self-learning and improvement	1	2	-	1
Team work	3	5	-	4
6. co-ordinate with all the team members and colleagues	1	2	-	1
7. communicate politely	1	1	-	2
8. avoid conflicts and miscommunication	1	2	-	1
Organisational standards	3	4	-	3
9. know the organisational standards	1	1	-	1
10. implement them in your performance	1	2	-	1
<b>11.</b> motivate others to follow them	1	1	-	1
Industry standards	4	2	-	1
<b>12.</b> monitor the workplace and work processes for potential risks and threat	2	1	-	-
13. align them with organisation standards	2	1	_	1
NOS Total	15	20	-	15







# National Occupational Standards (NOS) Parameters

NOS Code	TSC/N9004
NOS Name	Comply with industry and organizational requirement
Sector	Textile
Sub-Sector	Spinning, Weaving, Processing, Knitting
Occupation	Textile Mill sector - Cotton
NSQF Level	3
Credits	TBD
Version	3.0
Last Reviewed Date	27/01/2022
Next Review Date	31/03/2025
NSQC Clearance Date	17/11/2022







# DGT/VSQ/N0101: Employability Skills (30 Hours)

# Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

## Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

## **Elements and Performance Criteria**

### Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

PC1. understand the significance of employability skills in meeting the job requirements

#### Constitutional values - Citizenship

To be competent, the user/individual on the job must be able to:

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

#### Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, selfmotivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

### Basic English Skills

To be competent, the user/individual on the job must be able to:

PC4. speak with others using some basic English phrases or sentences

### Communication Skills

To be competent, the user/individual on the job must be able to:

- PC5. follow good manners while communicating with others
- PC6. work with others in a team



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#### **Qualification Pack**



#### **Diversity & Inclusion**

To be competent, the user/individual on the job must be able to:

- PC7. communicate and behave appropriately with all genders and PwD
- PC8. report any issues related to sexual harassment

### Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

- PC9. use various financial products and services safely and securely
- PC10. calculate income, expenses, savings etc.
- **PC11.** approach the concerned authorities for any exploitation as per legal rights and laws *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

- PC12. operate digital devices and use its features and applications securely and safely
- PC13. use internet and social media platforms securely and safely

### Entrepreneurship

To be competent, the user/individual on the job must be able to:

PC14. identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges *Customer Service* 

To be competent, the user/individual on the job must be able to:

- PC16. identify different types of customers
- PC17. identify customer needs and address them appropriately
- PC18. follow appropriate hygiene and grooming standards

## Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

- PC19. create a basic biodata
- PC20. search for suitable jobs and apply
- PC21. identify and register apprenticeship opportunities as per requirement

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. need for employability skills
- KU2. various constitutional and personal values
- KU3. different environmentally sustainable practices and their importance
- KU4. Twenty first (21st) century skills and their importance
- KU5. how to use basic spoken English language
- KU6. Do and dont of effective communication
- KU7. inclusivity and its importance
- KU8. different types of disabilities and appropriate communication and behaviour towards PwD
- KU9. different types of financial products and services







- **KU10.** how to compute income and expenses
- **KU11.** importance of maintaining safety and security in financial transactions
- **KU12.** different legal rights and laws
- **KU13.** how to operate digital devices and applications safely and securely
- KU14. ways to identify business opportunities
- KU15. types of customers and their needs
- KU16. how to apply for a job and prepare for an interview
- KU17. apprenticeship scheme and the process of registering on apprenticeship portal

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1. communicate effectively using appropriate language
- GS2. behave politely and appropriately with all
- **GS3.** perform basic calculations
- GS4. solve problems effectively
- **GS5.** be careful and attentive at work
- GS6. use time effectively
- GS7. maintain hygiene and sanitisation to avoid infection



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#### **Qualification Pack**

### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
<b>PC1.</b> understand the significance of employability skills in meeting the job requirements	-	-	-	-
Constitutional values – Citizenship	1	1	-	-
<b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	_
Becoming a Professional in the 21st Century	1	3	-	-
<b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
Basic English Skills	2	3	-	-
<b>PC4.</b> speak with others using some basic English phrases or sentences	-	-	-	-
Communication Skills	1	1	-	-
<b>PC5.</b> follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
Diversity & Inclusion	1	1	-	-
<b>PC7.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC8.</b> report any issues related to sexual harassment	-	-	-	-
Financial and Legal Literacy	3	4	-	-
<b>PC9.</b> use various financial products and services safely and securely	-	-	-	-







Transforming the skill landscape

## **Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. calculate income, expenses, savings etc.	-	-	-	-
<b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
Essential Digital Skills	4	6	-	-
<b>PC12.</b> operate digital devices and use its features and applications securely and safely	-	-	-	-
<b>PC13.</b> use internet and social media platforms securely and safely	-	-	-	-
Entrepreneurship	3	5	-	-
<b>PC14.</b> identify and assess opportunities for potential business	-	-	-	-
<b>PC15.</b> identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	2	2	-	-
PC16. identify different types of customers	-	-	-	-
<b>PC17.</b> identify customer needs and address them appropriately	-	-	-	-
<b>PC18.</b> follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
<b>PC21.</b> identify and register apprenticeship opportunities as per requirement	_	-	-	-
NOS Total	20	30	-	-







## National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

# Assessment Guidelines and Assessment Weightage

## **Assessment Guidelines**

1.Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 70







(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## **Assessment Weightage**

### Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TSC/N2407.Taking charge of shift and handing over shift to fitter Shuttle less Weaving Machine: Projectile	15	32	-	3	50	10
TSC/N2408.Maintain the shuttle-less Projectile loom	47	95	-	8	150	30
TSC/N9001.Maintain work area, tools, and machines	17	20	-	13	50	10
TSC/N9002.Working in a team	19	20	-	11	50	10
TSC/N9003.Maintain health, safety and security at workplace	32	40	-	28	100	20
TSC/N9004.Comply with industry and organizational requirement	15	20	-	15	50	10
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	0	0	50	10
Total	165	257	0	0	500	100







## Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training







## Glossary

Sector	Sector is a conglomeration of different business operations having similar business 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.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
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 (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) 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 (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by 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 a 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 quality of performance required.







Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation 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 (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment 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.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.