

Qualification Pack



Shuttleless Loom Weaver - Projectile

QP Code: TSC/Q2202

Version: 1.0

NSQF Level: 4

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Qualification Pack

Contents

TSC/Q2202: Shuttleless Loom Weaver - Projectile	3
<i>Brief Job Description</i>	3
Applicable National Occupational Standards (NOS)	3
<i>Compulsory NOS</i>	3
<i>Qualification Pack (QP) Parameters</i>	3
TSC/N2203: Taking charge of shift and handing over shift to Shuttle-Less Loom Weaver-Projectile ...	5
TSC/N2204: Run Projectile loom efficiently	12
TSC/N9001: Maintain work area, tools and machines	20
TSC/N9002: Working in a team	24
TSC/N9003: Maintain health, safety and security at workplace	28
TSC/N9004: Comply with industry and organizational requirement	34
Assessment Guidelines and Weightage	38
<i>Assessment Guidelines</i>	38
<i>Assessment Weightage</i>	38
Acronyms	40
Glossary	41

Qualification Pack

TSC/Q2202: Shuttleless Loom Weaver - Projectile

Brief Job Description

A shuttleless loom weaver (projectile), is a job-role in a weaving department. The responsibility of Weaver Projectile loom is to run the loom efficiently so as to get maximum output with minimum defects giving due importance to safety and environment aspects

Personal Attributes

A shuttleless loom weaver (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. [TSC/N2203: Taking charge of shift and handing over shift to Shuttle-Less Loom Weaver-Projectile](#)
2. [TSC/N2204: Run Projectile loom efficiently](#)
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](#)

Qualification Pack (QP) Parameters

Sector	Textile
Sub-Sector	Weaving
Occupation	Weaving
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8152.99
Minimum Educational Qualification & Experience	10th Class (Preferably)

Qualification Pack

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	21/01/2015
Next Review Date	31/03/2021
Deactivation Date	31/03/2021
NSQC Approval Date	20/07/2015
Version	1.0

Qualification Pack

TSC/N2203: Taking charge of shift and handing over shift to Shuttle-Less Loom Weaver-Projectile

Description

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

Scope

This unit/task covers the following:

- Taking charge of shift from Shuttle-less loom weaver-projectile
- Handing over shift to Shuttle-less loom weaver-projectile

Elements and Performance Criteria

Taking charge of shift

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

1. come at least 10 - 15 minutes earlier to the work spot
2. bring the necessary operational tools like weaver's hook, weft wire knife etc.
3. meet the previous shift weaver, discuss with him/ her regarding the issues faced by them with respect to the quality, production, spare, safety or any other specific instruction
4. understand the type of fabric produced, specifications of fabrics followed in the shuttle-less loom - projectile for his allocated number of looms or machines
5. ensure the technical details are mentioned on the display board in the shuttleless loom - projectile machine
6. check for the availability of the weft cones & the condition of the same
7. check the condition of the running beams for cross ends, ends pulling out particularly at the selvages, catch cord etc.
8. check the availability of the thrums quality & condition of the same
9. check the cloth for the running damages like end out, wrong drawing, wrong denting, double end, reed mark, temple cut/ temple mark, let- off mark, take up fault, oil stain, hole, cloth torn, under tuck in, tails. etc.
10. check for the size of the cloth rolls & to see whether any indication is there in the cloth rolls
11. check the cleanliness of the machines & other work areas
12. check whether any spare/raw material/ tool / fabric/ any other material are thrown under the machines or in the other work areas.
13. question the previous shift weaver 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
14. proper functioning of shuttle-less loom - projectile machine parts and machine
15. ensure the wastes collection boxes are empty while taking charge of shift
16. ensure the work spot is clean

Handing over shift

Qualification Pack

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

17. hand over the shift to the incoming shuttle-less loom weaver - projectile in a proper manner
18. ensure in providing the details regarding fabric produced, colour coding followed in the shuttle-less loom - projectile for his allocated number of looms or machines
19. provide all relevant information regarding the type of fabric production, damaged machine parts if any
20. should get clearance from the incoming counterpart before leaving the work spot
21. report to his/ her shift superiors as well as that of the incoming shift operator in case his/ her counterpart doesn't report for duty
22. ensure the shift is properly handed over to the incoming shift operator
23. report to his/ her 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
24. collect the waste from waste collection bags, weigh them and transport to storage area
25. ensure the work spot is clean

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Standard Operating Procedures (SOP) and regulations in a weaving / textile mill
- KU2.** safe working practices to be adopted in weaving / textile mill
- KU3.** quality systems and other processes practiced in the weaving / textile mill
- KU4.** reporting to the supervisor or higher authority in case of emergency
- KU5.** color coding adopted for different products in the weaving/ textile mill
- KU6.** understanding the importance of: Types of fibres, Types of yarn, Yarn count, Types of fabric, Types of fabric defects, Types of weaving machines auto loom, projectile, rapier, air jet, water jet
- KU7.** process flow in a weaving / textile mill
- KU8.** material flow in a weaving / textile mill
- KU9.** functions of different parts of shuttle-less loom (projectile)
- KU10.** importance of colour coding followed for different products in weaving /textile mill
- KU11.** knowledge of waste collection system & equipments used
- KU12.** importance of material handling and types of material handling equipments used
- KU13.** importance of cleanliness at workplace
- KU14.** functions and methodology for operating different material handling equipments
- KU15.** understanding the functions of different signal lamps
- KU16.** guidelines for operating the shuttle-less loom (projectile)
- KU17.** guidelines for taking charge of shift from previous shift operator
- KU18.** guidelines for handing over the shift to the next shift operator
- KU19.** safety procedures to be followed in a Shuttle-less Loom (projectile)

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Generic Skills (GS)

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

- GS1.** write clear and short sentences
- GS2.** comprehend written instructions
- GS3.** communicate with supervisor appropriately
- GS4.** talk to others to convey information effectively
- GS5.** apply problem-solving approaches in different situations
- GS6.** refer anomalies to the supervisor
- GS7.** seek clarification on problems from others
- GS8.** apply good attention to detail
- GS9.** check your work is complete and free from errors
- GS10.** patrol around the shuttle-less loom projectile and identify warp and weft breakage
- GS11.** procedure for operating different material handling tools and equipments
- GS12.** procedure for patrolling around the shuttle-less loom projectile departments and identifying worn out or damaged machine parts
- GS13.** maintain neatness at work place

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Taking charge of shift</i>	15	38	-	11
1. come at least 10 - 15 minutes earlier to the work spot	-	4	-	-
2. bring the necessary operational tools like weaver's hook, weft wire knife etc.	-	4	-	-
3. meet the previous shift weaver, discuss with him/ her regarding the issues faced by them with respect to the quality, production, spare, safety or any other specific instruction	-	4	-	-
4. understand the type of fabric produced, specifications of fabrics followed in the shuttle-less loom - projectile for his allocated number of looms or machines	2	2	-	-
5. ensure the technical details are mentioned on the display board in the shuttleless loom - projectile machine	2	2	-	-
6. check for the availability of the weft cones & the condition of the same	2	2	-	-
7. check the condition of the running beams for cross ends, ends pulling out particularly at the selvages, catch cord etc.	-	2	-	2
8. check the availability of the thrums quality & condition of the same	2	2	-	-
9. check the cloth for the running damages like end out, wrong drawing, wrong denting, double end, reed mark, temple cut/ temple mark, let-off mark, take up fault, oil stain, hole, cloth torn, under tuck in, tails. etc.	2	2	-	-
10. check for the size of the cloth rolls & to see whether any indication is there in the cloth rolls	2	2	-	-
11. check the cleanliness of the machines & other work areas	1	2	-	1

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
12. check whether any spare/raw material/ tool / fabric/ any other material are thrown under the machines or in the other work areas.	-	2	-	2
13. question the previous shift weaver 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	-	2	-	2
14. proper functioning of shuttle-less loom - projectile machine parts and machine	-	2	-	2
15. ensure the wastes collection boxes are empty while taking charge of shift	-	2	-	2
16. ensure the work spot is clean	2	2	-	-
<i>Handing over shift</i>	15	12	-	9
17. hand over the shift to the incoming shuttle-less loom weaver - projectile in a proper manner	2	2	-	-
18. ensure in providing the details regarding fabric produced, colour coding followed in the shuttle-less loom - projectile for his allocated number of looms or machines	-	2	-	2
19. provide all relevant information regarding the type of fabric production, damaged machine parts if any	2	1	-	1
20. should get clearance from the incoming counterpart before leaving the work spot	2	1	-	1
21. report to his/ her shift superiors as well as that of the incoming shift operator in case his/ her counterpart doesn't report for duty	2	2	-	-
22. ensure the shift is properly handed over to the incoming shift operator	1	2	-	1
23. report to his/ her 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	2	-	-	2

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
24. collect the waste from waste collection bags, weigh them and transport to storage area	2	-	-	2
25. ensure the work spot is clean	2	2	-	-
NOS Total	30	50	-	20

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	TSC/N2203
NOS Name	Taking charge of shift and handing over shift to Shuttle-Less Loom Weaver-Projectile
Sector	Textile
Sub-Sector	Weaving
Occupation	Weaving
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	21/01/2015
Next Review Date	01/03/2016
NSQC Clearance Date	20/07/2015

Qualification Pack

TSC/N2204: Run Projectile loom efficiently

Description

This unit provides performance criteria, knowledge & understanding and skills & abilities required to run projectile loom, by attending to warp breakages, weft breakages so as to get maximum output & minimum defects, 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

This unit/task covers the following:

- Weaver's Knot
- Attending to warp break
- Attend the weft breakage

Elements and Performance Criteria

Weaver's knot

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

1. do tiny and firm weaver's knots
2. Ensure the weavers knot is of minimum size to pass easily through the heald wires and reed

Attending to Warp Break

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

3. check the indicating lamp for machine stoppage due to warp breakage
4. find out the broken warp end
5. find out the location of the broken end by bringing the hands under the dropper bars with mechanical droppers
6. use electrical warp stop motion to detect the location using the indication lamp and by bringing the hands over the droppers
7. mend the broken warp end in the sized beams with the thrums of the same yarn of the sized beams
8. draw the mended warp yarn through the healds properly as per the drawing order prescribed
9. start the loom without inching/ in one stroke
10. check the indicator lamp
11. find out the breakage place (whether it is before accumulator or in the accumulator or in the weft feeder or in the projectile)

Attend the weft breakage

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

12. use weft wire if the weft is cut before accumulator or in the accumulator
13. find out the last pick inserted in the produced cloth, by ensuring proper pick finding
14. start the loom without inching/ in one stroke

Other work practices

Qualification Pack

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

15. correct the fabric defects like wrong Drawing, Wrong Denting, End Out, Double End etc., immediately and also ensure that the other fabric defects too are corrected at the earliest, before continuing further production.
16. clean the machines and work area so as to ensure good working Atmosphere, without damaging the fabrics in the looms where the cleaning work is carried out as well as in the adjacent & opposite looms. Do not misuse Air. It has to be used for cleaning only in the areas where Air Cleaning is permitted
17. unweave if there are any floats & run the machine without Starting Mark or Crack
18. ensure that the loose threads are hanged in higher length (not more than 4 mm) after attending to the warp breaks. accordingly it has to be trimmed
19. draw catch cord ends properly
20. ensure proper size of the catch cord & the selvedge
21. weft yarn reserve packages have to be tied with tail ends of the running weft yarn package to ensure proper transfer
22. patrol the machines and do mending so as to minimize the stoppages
23. tie the waste bag & all the waste generated by the weavers are collected in the said waist bag, which can be ultimately disposed in the places/ bins provided
24. ensure that the correct weft yarn is used
25. 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
26. avoid pulling out warp ends or catch cord ends unnecessarily. if end is getting cut often in the selvedge or in the catch cord, the same has to be brought to the notice of the mechanics/ fitters/ superiors & get it corrected.
27. ensure that all the stop motions, indication lamps, preventive mechanisms etc. are functioning properly
28. ensure correct quality of thrums are there & see that the same are properly tied
29. check the knotted loom for knotting quality etc. double ends have to be removed
30. report to superiors for any deviation in the same & for any other quality issue
31. ensure that the looms are stopped for a minimum possible down time due to whatever reason to achieve maximum outputs
32. check the fabrics for the defects at least twice in a shift and sign on the cloth every time
33. ensure that cloth rolls are doffed whenever/ wherever necessary
34. 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
35. ensure that no raw material/ cloth/ spare/ tool / any other material is thrown under/ near the machines or in the other work areas.
36. check the reasons for frequent warp/ weft breaks& take corrective action. In case of any problem, report to the mechanics/ fitters/ superiors

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

Qualification Pack

- KU1.** the organization's policies and standard operating procedures (SOP)
- KU2.** should have an awareness, knowledge of customers
- KU3.** potential hazards associated with the machines and the safety precautions must be taken
- 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
- 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.** responsibilities under health, safety and environmental legislation
- KU14.** guidelines for storage & disposal of waste materials
- KU15.** minimum quality requirements of the product with respect to permissible/non-permissible defects
- KU16.** fabric quality particulars such as ends & picks per inch, width, weave etc.
- KU17.** yarns from natural fibres - cotton, silk, wool
- KU18.** yarns from manmade fibres - polyester, nylon, viscose
- KU19.** blended yarns - Polyester Cotton, Polyester Viscose
- KU20.** Hand loom
- KU21.** Power Loom- conventional loom
- KU22.** Auto Loom- Shuttle Loom
- KU23.** Shuttle less Loom-Rapier, Projectile, Air jet, Water jet
- 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, 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, Under Tick In, Tails
- KU28.** Spinning Faults - Thin Place, Thick Place, Neps, Kitties, Contamination,
- KU29.** Colour 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

Qualification Pack

- KU33.** British system of grading Cuttable faults, Warp way, Continuous faults, Specification deviation:- 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 grading Export Specification Deviation, Maximum 15 points for 100 Square meter standard -piece. B Grade Rejection, Deviation from A Grade lengths
- KU35.** Value reduction based on length wise defects:- between 40 metres to 79.75 metres (20% variation from buyer to buyer), above 80 metres - 80%
- KU36.** the safety mechanisms of the machines & should ensure that the same are in order
- KU37.** about the stop motions & should ensure that the same are in order
- KU38.** the indication lamps & should ensure that the same are in order
- KU39.** the functional operations of the machines, where He/ She is working

Generic Skills (GS)

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

- GS1.** write clear and short sentences
- GS2.** comprehend written instructions
- GS3.** communicate with supervisor appropriately
- GS4.** talk to others to convey information effectively
- GS5.** put minimum 15 knots/ minute
- GS6.** attend the weft break within 30 seconds
- GS7.** check your work is complete and free from errors
- GS8.** attend a single warp end through dropper, Heald and reed dent in 45 to 60 seconds depending on the automation of the machines/ type of weave etc.
- GS9.** weave fabric free from Weaver oriented damages such as Wrong Drawing, Wrong Denting, End Out, Double End etc.
- GS10.** willingly participate in the various programs/ meetings that are conducted by the superiors
- GS11.** willingly participate in the quality circles that are formed by the superiors extend voluntary supports 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.

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Weaver's knot</i>	4	10	-	2
1. do tiny and firm weaver's knots	4	4	-	-
2. Ensure the weavers knot is of minimum size to pass easily through the heald wires and reed	-	6	-	2
<i>Attending to Warp Break</i>	28	44	-	12
3. check the indicating lamp for machine stoppage due to warp breakage	-	4	-	4
4. find out the broken warp end	4	4	-	4
5. find out the location of the broken end by bringing the hands under the dropper bars with mechanical droppers	6	6	-	-
6. use electrical warp stop motion to detect the location using the indication lamp and by bringing the hands over the droppers	4	4	-	-
7. mend the broken warp end in the sized beams with the thrums of the same yarn of the sized beams	4	4	-	-
8. draw the mended warp yarn through the healds properly as per the drawing order prescribed	-	6	-	2
9. start the loom without inching/ in one stroke	-	6	-	2
10. check the indicator lamp	6	6	-	-
11. find out the breakage place (whether it is before accumulator or in the accumulator or in the weft feeder or in the projectile)	4	4	-	-
<i>Attend the weft breakage</i>	6	14	-	4
12. use weft wire if the weft is cut before accumulator or in the accumulator	2	6	-	-
13. find out the last pick inserted in the produced cloth, by ensuring proper pick finding	2	4	-	2
14. start the loom without inching/ in one stroke	2	4	-	2

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Other work practices</i>	56	114	-	6
15. correct the fabric defects like wrong Drawing, Wrong Denting, End Out, Double End etc., immediately and also ensure that the other fabric defects too are corrected at the earliest, before continuing further production.	4	4	-	-
16. clean the machines and work area so as to ensure good working Atmosphere, without damaging the fabrics in the looms where the cleaning work is carried out as well as in the adjacent & opposite looms. Do not misuse Air. It has to be used for cleaning only in the areas where Air Cleaning is permitted	2	6	-	-
17. unweave if there are any floats & run the machine without Starting Mark or Crack	2	6	-	-
18. ensure that the loose threads are hanged in higher length (not more than 4 mm) after attending to the warp breaks. accordingly it has to be trimmed	2	6	-	-
19. draw catch cord ends properly	4	4	-	-
20. ensure proper size of the catch cord & the selvedge	4	4	-	-
21. weft yarn reserve packages have to be tied with tail ends of the running weft yarn package to ensure proper transfer	4	4	-	-
22. patrol the machines and do mending so as to minimize the stoppages	4	4	-	-
23. tie the waste bag & all the waste generated by the weavers are collected in the said waist bag, which can be ultimately disposed in the places/ bins provided	4	4	-	-
24. ensure that the correct weft yarn is used	3	5	-	-
25. 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	3	5	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
26. avoid pulling out warp ends or catch cord ends unnecessarily. if end is getting cut often in the selvage or in the catch cord, the same has to be brought to the notice of the mechanics/ fitters/ superiors & get it corrected.	3	5	-	-
27. ensure that all the stop motions, indication lamps, preventive mechanisms etc. are functioning properly	4	4	-	-
28. ensure correct quality of thrums are there & see that the same are properly tied	2	6	-	-
29. check the knotted loom for knotting quality etc. double ends have to be removed	2	6	-	-
30. report to superiors for any deviation in the same & for any other quality issue	2	6	-	-
31. ensure that the looms are stopped for a minimum possible down time due to whatever reason to achieve maximum outputs	-	4	-	4
32. check the fabrics for the defects at least twice in a shift and sign on the cloth every time	3	5	-	-
33. ensure that cloth rolls are doffed whenever/ wherever necessary	2	4	-	2
34. 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	-	8	-	-
35. ensure that no raw material/ cloth/ spare/ tool / any other material is thrown under/ near the machines or in the other work areas.	-	8	-	-
36. check the reasons for frequent warp/ weft breaks& take corrective action. In case of any problem, report to the mechanics/ fitters/ superiors	2	6	-	-
NOS Total	94	182	-	24

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	TSC/N2204
NOS Name	Run Projectile loom efficiently
Sector	Textile
Sub-Sector	Weaving
Occupation	Weaving
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	21/01/2015
Next Review Date	01/03/2016
NSQC Clearance Date	20/07/2017

Qualification Pack

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

This unit/task 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

Qualification Pack

- 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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintaining the work area, tools and machines</i>	17	20	-	13
1. handle materials, machinery, equipment and tools with care and use them in the correct way	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
6. 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	-	-
9. ensure that the correct machine guards are in place	1	1	-	1
10. work in a comfortable position with the correct posture	1	1	-	1
11. use cleaning equipment and methods appropriate for the work to be carried out	1	1	-	1
12. dispose of waste safely in the designated location	1	2	-	1
13. store cleaning equipment safely after use	1	1	-	1
14. carry out cleaning according to schedules and limits of responsibility	1	1	-	1
NOS Total	17	20	-	13

Qualification Pack

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	1.0
Last Reviewed Date	25/02/2015
Next Review Date	01/03/2016
NSQF Clearance Date	05/08/2015

Qualification Pack

TSC/N9002: Working in a team

Description

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

Scope

This unit/task 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

Qualification Pack

- 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

Qualification Pack

Assessment Criteria

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

Qualification Pack

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	4
Credits	TBD
Version	1.0
Last Reviewed Date	25/02/2015
Next Review Date	01/03/2016
NSQC Clearance Date	05/08/2015

Qualification Pack

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

This unit/task 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:

Qualification Pack

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

Qualification Pack

- 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

Qualification Pack

Assessment Criteria

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

Qualification Pack

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

Qualification Pack

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	4
Credits	TBD
Version	1.0
Last Reviewed Date	25/02/2015
Next Review Date	01/03/2016
NSQC Clearance Date	05/08/2015

Qualification Pack

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

This unit/task 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:

Qualification Pack

- 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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Self development</i>	5	9	-	7
1. perform own duties effectively	1	2	-	2
2. take responsibility for own actions	1	2	-	2
3. be accountable towards the job role and assigned duties	1	2	-	1
4. take initiative and innovate the existing methods	1	1	-	1
5. focus on self-learning and improvement	1	2	-	1
<i>Team work</i>	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
<i>Organisational standards</i>	3	4	-	3
9. know the organisational standards	1	1	-	1
10. implement them in your performance	1	2	-	1
11. motivate others to follow them	1	1	-	1
<i>Industry standards</i>	4	2	-	1
12. 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

Qualification Pack

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	4
Credits	TBD
Version	1.0
Last Reviewed Date	25/02/2015
Next Review Date	01/03/2016
NSQC Clearance Date	05/08/2015

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/N2203.Taking charge of shift and handing over shift to Shuttle-Less Loom Weaver-Projectile	30	50	-	20	100	15
TSC/N2204.Run Projectile loom efficiently	94	182	-	24	300	46
TSC/N9001.Maintain work area, tools and machines	17	20	-	13	50	8
TSC/N9002.Working in a team	19	20	-	11	50	8

Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TSC/N9003.Maintain health, safety and security at workplace	32	40	-	28	100	15
TSC/N9004.Comply with industry and organizational requirement	15	20	-	15	50	8
Total	207	332	-	111	650	100

Acronyms

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

Qualification Pack

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.

Qualification Pack

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.