

Qualification Pack



Jigger machine operator (Solar power drive attachment)

Options: Solar power drive attachment

QP Code: TSC/Q5207

Version: 1.0

NSQF Level: 4

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TSC/Q5207: Jigger machine operator (Solar power drive attachment)

Brief Job Description

A Jigger Machine Operator is responsible for scouring, bleaching and dyeing or any other process carried out on fabric on this machine. This job requires the individual to have thorough knowledge of process flow and material flow in a processing mill for fabric production and he should know the important functions and operations of a jigger machine.

Personal Attributes

A Jigger Machine Operator should have good eyesight, motor skills and vision. He/she should also have good interpersonal skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [TSC/N5201: Taking charge of shift and handing over shift to Jigger Machine Operator](#)
2. [TSC/N5202: Operating the Jigger Machine](#)
3. [TSC/N5203: Check the quality of a sample of the fabric processed at Jigger](#)
4. [TSC/N9001: Maintain work area, tools and machines](#)
5. [TSC/N9002: Working in a team](#)
6. [TSC/N9003: Maintain health, safety and security at workplace](#)
7. [TSC/N9004: Comply with industry and organizational requirement](#)

Options(Not mandatory):

Option : Solar power drive attachment

This NOS deals with the operation and maintenance procedures for solar attachment in the Textile machines under supervision by giving due importance to safety and environmental aspects.

1. [TSC/N7904: Operation and Maintenance of solar attachment](#)

Qualification Pack (QP) Parameters

Sector	Textile
Sub-Sector	Processing

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Occupation	Processing
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8154.1
Minimum Educational Qualification & Experience	10th Class (Preferably) with 2-3 Years of experience in textile processing (Experience is preferred but not mandatory)
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	3 to 6 months of training in textile processing department (Suggested but not mandatory)
Minimum Job Entry Age	18 Years
Last Reviewed On	09/08/2017
Next Review Date	31/03/2021
Deactivation Date	31/03/2021
NSQC Approval Date	05/02/2018
Version	1.0

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TSC/N5201: Taking charge of shift and handing over shift to Jigger Machine Operator

Description

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

Scope

This unit/task covers the following:

- taking charge of shift from Jigger machine operator
- handing over shift to Jigger machine operator

Elements and Performance Criteria

Taking charge of shift from Jigger machine operator

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

1. come at least 10 - 15 minutes earlier to the work place
2. bring the necessary operational tools to the department
3. meet the previous shift operator and discuss with him/ her regarding the issues faced by him with respect to the quality, production, spare, safety or any other specific instruction etc
4. understand the fabric being processed & process running on the machine
5. ensure the technical details are mentioned on the job card display on the machine
6. check for the availability of the spare trolley/batching trolley for unloading the fabric
7. check the next batch to be processed is ready near the machine
8. ensure the required dyes & chemicals are already weighed & prepared
9. check the cleanliness of the machines & other work areas
10. question the previous shift operator for any deviation in the above and bring the same to the knowledge of his/ her shift superior as well as that of the previous shift
11. take over the shift from the outgoing operator in a proper manner

Handing Over Shift to Jigger machine operator

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

12. ensure proper communication regarding fabric quality & the process running on the machine while providing the details
13. provide all relevant information regarding the stoppages or breakdown in the machine, any damage to the fabric or machine
14. ensure the empty trolley is near the machine for unloading the fabric
15. ensure the next lot to be processed, which is already stitched & arranged properly is ready near the machine
16. ensure the required dyes & chemicals for the next lot or next process are weighed & prepared
17. get clearance from the incoming counterpart before leaving the work spot

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18. report to his/ her shift superiors as well as that of the incoming shift operator in case his/ her counterpart doesn't report for the incoming shift
19. ensure ,the shift has to be properly handed over to the incoming shift operator
20. report to his/ her shift superior about the quality / production / safety issues/ any other issue faced in his/ her shift and leave the department only after getting concurrence for the same from his/ her superiors
21. collect the wastes from waste collection bags, weigh them and transport to storage area
22. ensure the machine and its work place is clean

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard operating procedure (SOP) and regulations in a processing unit
- KU2.** safe working practices to be adopted in processing unit
- KU3.** quality systems and other processes practiced in the processing unit
- KU4.** reporting to the supervisor or higher authority in case of emergency
- KU5.** color coding adopted for different products in the processing unit
- KU6.** the importance of quality & productivity
- KU7.** various defects in the fabric due to yarn, weaving or processing
- KU8.** reasons for various defects in the fabric due to processing& their remedy
- KU9.** process flow in a processing unit
- KU10.** material flow in a processing unit
- KU11.** functions of various controls of the machine
- KU12.** importance of material handling and types of material handling equipment being used
- KU13.** importance of cleanliness at workplace
- KU14.** functions and methodology for operating different material handling equipment
- KU15.** the functions of various alarm signals
- KU16.** guidelines for operating the machine
- 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 while operating the machine

Generic Skills (GS)

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

- GS1.** write clear and short sentences
- GS2.** read and comprehend written instructions
- GS3.** communicate with supervisor appropriately
- GS4.** talk to others to convey information effectively
- GS5.** apply problem-solving approaches in different situations

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- 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.** operation of machine
- GS11.** how to operate various valve & traps
- GS12.** how to operate different material handling tools and equipment
- GS13.** how to check the quality of processed fabric
- GS14.** maintenance of cleanliness 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 from Jigger machine operator</i>	9	22	-	5
1. come at least 10 - 15 minutes earlier to the work place	1	3	-	1
2. bring the necessary operational tools to the department	1	2	-	1
3. meet the previous shift operator and discuss with him/ her regarding the issues faced by him with respect to the quality, production, spare, safety or any other specific instruction etc	1	2	-	1
4. understand the fabric being processed & process running on the machine	1	2	-	1
5. ensure the technical details are mentioned on the job card display on the machine	1	1	-	1
6. check for the availability of the spare trolley/batching trolley for unloading the fabric	1	1	-	-
7. check the next batch to be processed is ready near the machine	1	1	-	-
8. ensure the required dyes & chemicals are already weighed & prepared	1	1	-	-
9. check the cleanliness of the machines & other work areas	1	3	-	-
10. question the previous shift operator for any deviation in the above and bring the same to the knowledge of his/ her shift superior as well as that of the previous shift	-	3	-	-
11. take over the shift from the outgoing operator in a proper manner	-	3	-	-
<i>Handing Over Shift to Jigger machine operator</i>	2	17	-	1
12. ensure proper communication regarding fabric quality & the process running on the machine while providing the details	1	2	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
13. provide all relevant information regarding the stoppages or breakdown in the machine, any damage to the fabric or machine	-	2	-	-
14. ensure the empty trolley is near the machine for unloading the fabric	-	1	-	-
15. ensure the next lot to be processed, which is already stitched & arranged properly is ready near the machine	-	1	-	-
16. ensure the required dyes & chemicals for the next lot or next process are weighed & prepared	-	1	-	-
17. get clearance from the incoming counterpart before leaving the work spot	-	2	-	-
18. report to his/ her shift superiors as well as that of the incoming shift operator in case his/ her counterpart doesn't report for the incoming shift	-	2	-	-
19. ensure ,the shift has to be properly handed over to the incoming shift operator	1	1	-	-
20. report to his/ her shift superior about the quality / production / safety issues/ any other issue faced in his/ her shift and leave the department only after getting concurrence for the same from his/ her superiors	-	2	-	-
21. collect the wastes from waste collection bags, weigh them and transport to storage area	-	1	-	-
22. ensure the machine and its work place is clean	-	2	-	-
NOS Total	11	39	-	6

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National Occupational Standards (NOS) Parameters

NOS Code	TSC/N5201
NOS Name	Taking charge of shift and handing over shift to Jigger Machine Operator
Sector	Textile
Sub-Sector	Processing
Occupation	Processing
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

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TSC/N5202: Operating the Jigger Machine

Description

This unit is about operating the Jigger Machine

Scope

This unit/task covers the following:

- carry out preparatory activities for operations in the machine
- operate the machine for the specified task as per work order
- clean the machine & carryout preventive maintenance activities

Elements and Performance Criteria

Carry out preparatory activities for operations in the machine

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

1. understand the task mentioned in the work order
2. ensure that the machine is empty & clean
3. load the fabric from the batch trolley in the center of the machine
4. ensure fabric is crease-less and evenly fed onto the machine
5. prepare the chemical/dye-stuff required for the batch
6. inject the chemical in the machine tank/dispenser

Operate the machine for specified tasks as per Work Order

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

7. know the operations of the machine & the plc/ control mechanism programs
8. read & understand the process being followed to do the task
9. check the ph, temp & other parameters during the process
10. maintain even temp across the width of machine
11. maintain even & minimum tension on the fabric
12. drain the machine once sample is approved
13. unload the fabric from the machine after completion of the process

Clean the machine on a regular basis and carryout preventive maintenance activities

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

14. make sure the machine is kept clean at all times ,before loading, while running & after unloading the fabric
15. follow the preventive maintenance schedule & ensure the machine is running smoothly
16. check that all controls are functioning properly
17. ensure the right quality of water , steam & air is available for proper functioning of machine
18. cool down the machine after completion of job

Knowledge and Understanding (KU)

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The individual on the job needs to know and understand:

- KU1.** standard operating procedure (SOP) and regulations in processing unit
- KU2.** procedure followed to get the final output in processing unit
- KU3.** safe working practices to be adopted in processing unit
- KU4.** how to report to the supervisor or higher authority about any grievances faced
- KU5.** importance of discipline & punctuality
- KU6.** importance of take over & handover in achieving quality & productivity
- KU7.** Knowledge about uneven or patchy dyeing, stoppage marks, csv, crease marks, colour specks etc.
- KU8.** Various types of fiber, yarn and fabric
- KU9.** process of scouring, bleaching & dyeing& washing
- KU10.** functioning of various control of machine
- KU11.** knowledge about various controls of machine
- KU12.** knowledge about the operations & functions of jigger dyeing machine
- KU13.** knowledge about injection / dosing according to the depth of the shade
- KU14.** understanding of various processes
- KU15.** functions and methodology for operating different material handling equipments
- KU16.** understanding the functions of different signal lamps
- KU17.** use of various checking tools such as thermometer, ph paper etc.
- KU18.** proper circulation of liquor either manually or by pump
- KU19.** adjusting of brake drums
- KU20.** spare the machine when its due for maintenance
- KU21.** controls functions of machine
- KU22.** requirement of water, steam & air pressure for functioning of various operations

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 in basic language orally
- 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

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- GS12.** make sure every kind of communication is error free
- GS13.** the various faults & their correction during operating
- GS14.** use the correct tools for cleaning the machine
- GS15.** use of proper cleaning tools
- GS16.** Effective communication
- GS17.** apply leadership skills wherever required
- GS18.** take initiative at the right place
- GS19.** the requirement of operation

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out preparatory activities for operations in the machine</i>	3	17	-	2
1. understand the task mentioned in the work order	1	2	-	1
2. ensure that the machine is empty & clean	1	3	-	1
3. load the fabric from the batch trolley in the center of the machine	1	3	-	-
4. ensure fabric is crease-less and evenly fed onto the machine	-	3	-	-
5. prepare the chemical/dye-stuff required for the batch	-	3	-	-
6. inject the chemical in the machine tank/dispenser	-	3	-	-
<i>Operate the machine for specified tasks as per Work Order</i>	2	17	-	2
7. know the operations of the machine & the plc/control mechanism programs	-	3	-	-
8. read & understand the process being followed to do the task	1	2	-	1
9. check the ph, temp & other parameters during the process	1	2	-	1
10. maintain even temp across the width of machine	-	3	-	-
11. maintain even & minimum tension on the fabric	-	3	-	-
12. drain the machine once sample is approved	-	2	-	-
13. unload the fabric from the machine after completion of the process	-	2	-	-
<i>Clean the machine on a regular basis and carryout preventive maintenance activities</i>	-	11	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
14. make sure the machine is kept clean at all times ,before loading, while running & after unloading the fabric	-	3	-	-
15. follow the preventive maintenance schedule & ensure the machine is running smoothly	-	3	-	-
16. check that all controls are functioning properly	-	2	-	-
17. ensure the right quality of water , steam & air is available for proper functioning of machine	-	2	-	1
18. cool down the machine after completion of job	-	1	-	-
NOS Total	5	45	-	5

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National Occupational Standards (NOS) Parameters

NOS Code	TSC/N5202
NOS Name	Operating the Jigger Machine
Sector	Textile
Sub-Sector	Processing
Occupation	Processing
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

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TSC/N5203: Check the quality of a sample of the fabric processed at Jigger

Description

This unit is about cutting, developing & checking the sample

Scope

This unit/task covers the following:

- cutting the sample after specified time /no. of turns
- developing ,soaping, washing & drying the sample
- comparing the sample with the standard

Elements and Performance Criteria

Cutting the sample after specified time/ no. of turns

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

1. cut sample as per the time / no. of turn mentioned in the work order to avoid any delay
2. cut proper size of the sample
3. cut the sample from same place every time
4. clean hands or cutting tools to avoid soiling of the sample

Developing , soaping, washing & drying the sample

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

5. Develop the sample as per developing techniques for various types of dyestuffs used in the process such as direct, reactive, vat, sulphur etc.
6. Soap the sample as per SOP for various types of dyestuffs
7. Dry the sample at clean & dust free place

Comparing the sample with the standard

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

8. compare the sample with the standard attached to the work order or in the master file
9. take the sample to your supervisor if the sample is not matching to the standard for decision

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** procedure followed to get the final output in processing unit
- KU2.** standard operating procedure (SOP) and regulations in processing unit
- KU3.** safe working practices to be adopted in processing unit
- KU4.** how to report to the supervisor or higher authority about any grievances faced
- KU5.** various dyestuffs used & the time or no. of turns required for exhaustion/ fixation of color.

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- KU6.** effect of chemicals/ detergents , time & temp of soaping /washing on the dyed fabric
- KU7.** sample should neither be too small or too big
- KU8.** sample to be cut from the middle of the batch
- KU9.** use of proper cutting tools such as scissor, knife etc.
- KU10.** dry the sample in clean & dust free place at specified temp without soiling
- KU11.** necessity of good eye sight & shouldnt be colour blind
- KU12.** how to take the sample to the supervisor immediately to avoid waste of time & production loss

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 with supervisor appropriately
- GS4.** talk to others to convey information effectively
- GS5.** identify the real reason of problem faced
- GS6.** apply problem-solving approaches in different situations
- GS7.** refer anomalies to the supervisor
- GS8.** seek clarification on problems from others
- GS9.** apply good attention to detail
- GS10.** check your work is complete and free from errors
- GS11.** make sure every kind of communication is error free
- GS12.** methods and chemicals used for developing different types of dyestuffs
- GS13.** good matching skills & knowledge about the colours

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Cutting the sample after specified time/ no. of turns</i>	3	9	-	3
1. cut sample as per the time / no. of turn mentioned in the work order to avoid any delay	1	2	-	1
2. cut proper size of the sample	1	2	-	1
3. cut the sample from same place every time	1	2	-	1
4. clean hands or cutting tools to avoid soiling of the sample	-	3	-	-
<i>Developing , soaping, washing & drying the sample</i>	3	5	-	3
5. Develop the sample as per developing techniques for various types of dyestuffs used in the process such as direct, reactive, vat, sulphur etc.	1	2	-	1
6. Soap the sample as per SOP for various types of dyestuffs	1	2	-	1
7. Dry the sample at clean & dust free place	1	1	-	1
<i>Comparing the sample with the standard</i>	-	3	-	-
8. compare the sample with the standard attached to the work order or in the master file	-	2	-	-
9. take the sample to your supervisor if the sample is not matching to the standard for decision	-	1	-	-
NOS Total	6	17	-	6

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National Occupational Standards (NOS) Parameters

NOS Code	TSC/N5203
NOS Name	Check the quality of a sample of the fabric processed at Jigger
Sector	Textile
Sub-Sector	Processing
Occupation	Processing
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

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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

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- 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
<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

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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

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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

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- 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:

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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

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- 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

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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:

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- 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

Qualification Pack

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

Qualification Pack

TSC/N7904: Operation and Maintenance of solar attachment

Description

The unit deals with necessary skills, knowledge and attributes required by an operator to run the machine equipped with solar power drive

Scope

This unit/task covers the following:

- Preparing the machine for operation
- Ensure proper maintenance of solar attachment

Elements and Performance Criteria

Preparing the machine for operation

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

1. clear the weed/ Grass near the solar panels if any
2. clean the surface of the solar panel for dust with wet sponge/cloth
3. ensure the charge controller, batteries are working properly as instructed
4. prepare solar powered handloom/ khadi machine for operation
5. switch on the main motor and start the machine for production

Ensuring proper maintenance of solar attachment

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

6. check periodically for the working of light indicators and display panel for voltage fluctuation
7. ensure that the battery is kept at a dry place
8. check the electrolyte level of battery and top up the electrolyte whenever required
9. check for electrolyte/ distilled water leak from batteries
10. clean the battery at prescribed intervals for fluff accumulation
11. clean the inverter, battery charger and charge controller for fiber dust
12. inspect and ensure the cleanliness of solar panel and terminal boxes
13. use PPEs while topping up of distilled water and cleaning
14. use appropriate tools such as cloth, brush for cleaning various parts of the power system

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** policies and procedures followed in the workplace relevant to own employment and performance conditions
- KU2.** relevant health and safety requirements applicable in the work place
- KU3.** importance of following health, hygiene, safety and quality standards and the impact of non-compliance of the standards on consumers and the business

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- KU4.** own job role and responsibilities and sources for information pertaining to employment terms, compensation, job role and responsibilities
- KU5.** relevant people and their responsibilities within the work area
- KU6.** various categories of people that one is required to communicate and coordinate within the organization
- KU7.** various types of batteries with their capacity ratings
- KU8.** main components of solar power system like solar panel, charge controller, battery, inverter etc.
- KU9.** AC and DC power supply
- KU10.** maintenance schedules of solar panel and other components
- KU11.** wiring and power terminals
- KU12.** buzzers, alarms and their indications
- KU13.** Personal Protective Equipment (PPE) and their importance
- KU14.** electrolyte, distilled water and its uses
- KU15.** different ways of minimizing waste
- KU16.** common faults and the methods to rectify the solar components
- KU17.** hazards likely to be encountered when conducting routine maintenance
- KU18.** different types of cleaning substances and their use
- KU19.** safe working practices for cleaning and the methods of carrying them out

Generic Skills (GS)

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

- GS1.** write instructions for communication, production data entry etc.
- GS2.** read technical specifications and instructions of the solar powered machine
- GS3.** talk to others and convey the information effectively
- GS4.** plan and perform the maintenance activity of solar power system/ machine
- GS5.** Repair the minor problems within the level of responsibility

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparing the machine for operation</i>	5	11	-	-
1. clear the weed/ Grass near the solar panels if any	1	2	-	-
2. clean the surface of the solar panel for dust with wet sponge/cloth	1	2	-	-
3. ensure the charge controller, batteries are working properly as instructed	1	2	-	-
4. prepare solar powered handloom/ khadi machine for operation	1	3	-	-
5. switch on the main motor and start the machine for production	1	2	-	-
<i>Ensuring proper maintenance of solar attachment</i>	12	22	-	-
6. check periodically for the working of light indicators and display panel for voltage fluctuation	2	3	-	-
7. ensure that the battery is kept at a dry place	1	3	-	-
8. check the electrolyte level of battery and top up the electrolyte whenever required	2	3	-	-
9. check for electrolyte/ distilled water leak from batteries	2	3	-	-
10. clean the battery at prescribed intervals for fluff accumulation	1	2	-	-
11. clean the inverter, battery charger and charge controller for fiber dust	1	2	-	-
12. inspect and ensure the cleanliness of solar panel and terminal boxes	1	2	-	-
13. use PPEs while topping up of distilled water and cleaning	1	2	-	-
14. use appropriate tools such as cloth, brush for cleaning various parts of the power system	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	17	33	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	TSC/N7904
NOS Name	Operation and Maintenance of solar attachment
Sector	Textile
Sub-Sector	Handloom & Khadi
Occupation	Handloom Weaving
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	09/08/2017
Next Review Date	09/08/2020
NSQC Clearance Date	

Qualification Pack

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/N5201.Taking charge of shift and handing over shift to Jigger Machine Operator	11	39	-	6	56	13
TSC/N5202.Operating the Jigger Machine	5	45	-	5	55	13
TSC/N5203.Check the quality of a sample of the fabric processed at Jigger	6	17	-	6	29	7
TSC/N9001.Maintain work area, tools and machines	17	20	-	13	50	11

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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TSC/N9002.Working in a team	19	20	-	11	50	11
TSC/N9003.Maintain health, safety and security at workplace	32	40	-	28	100	23
TSC/N9004.Comply with industry and organizational requirement	15	20	-	15	50	11
Total	105	201	-	84	390	89

Optional: 1 Solar power drive attachment

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TSC/N7904.Operation and Maintenance of solar attachment	17	33	-	-	50	11
Total	17	33	-	-	50	11

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.

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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.