



Qualification Pack



Foreman Fabrication

QP Code: CON/Q1208

Version: 2.0

NSQF Level: 5

Construction Skill Development Council of India || CPB 103 & 104 (1st Floor), Block 4B, DLF Corporate Park, Phase III, MG Road
Gurgaon-122002 || email:jancy@csdcindia.org



Qualification Pack

Contents

CON/Q1208: Foreman Fabrication	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
CON/N1213: Ensure completion of joint preparation activities for fabrication	5
CON/N1214: Ensure completion of joint connection activities	12
CON/N0726: Supervise heavy lifting of structural assemblies at construction sites	17
CON/N0727: Execute erection works as per drawing/ specification	23
CON/N7001: Plan, arrange and manage resources for execution of relevant work	30
CON/N8001: Work effectively in a team to deliver desired results at the workplace	36
CON/N9002: Manage workplace for safe and healthy work environment	40
Assessment Guidelines and Weightage	45
<i>Assessment Guidelines</i>	45
<i>Assessment Weightage</i>	46
Acronyms	48
Glossary	49



Qualification Pack

CON/Q1208: Foreman Fabrication

Brief Job Description

Foreman Fabrication is responsible for ensuring that the fabrication and erection activities are carried out as per execution plan and allocated resources are optimally used. The individual should possess sound technical knowledge, should be able to monitor and maintain safe and quality working practices

Personal Attributes

The Foreman Fabrication is expected to be physically fit to work across various locations with varied environmental conditions. The person should be organized, diligent, methodical, safety-conscious, and a prompt decision-maker. In addition to being a team player, the individual should have good communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- [1. CON/N1213: Ensure completion of joint preparation activities for fabrication](#)
- [2. CON/N1214: Ensure completion of joint connection activities](#)
- [3. CON/N0726: Supervise heavy lifting of structural assemblies at construction sites](#)
- [4. CON/N0727: Execute erection works as per drawing/ specification](#)
- [5. CON/N7001: Plan, arrange and manage resources for execution of relevant work](#)
- [6. CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
- [7. CON/N9002: Manage workplace for safe and healthy work environment](#)

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
Country	India
NSQF Level	5



Qualification Pack

Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3122.4300
Minimum Educational Qualification & Experience	10th Class + I.T.I (2 years) with 2 Years of experience in same occupation OR 12th Class with 4 Years of experience in same occupation OR Certificate-NSQF (level 4) with 2 Years of experience in same occupation
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NIL
Minimum Job Entry Age	18 Years
Last Reviewed On	31/03/2022
Next Review Date	31/03/2025
NSQC Approval Date	31/03/2022
Version	2.0
Reference code on NQR	2022/CON/CSDCI/05616
NQR Version	1.0



Qualification Pack

CON/N1213: Ensure completion of joint preparation activities for fabrication

Description

This unit describes the skills and knowledge required to ensure completion of joint preparation activities for fabrication

Scope

The scope covers the following :

- Supervise joint preparation and related activities

Elements and Performance Criteria

Supervise joint preparation and related activities

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

- PC1.** identify sections and other materials required for fabrication work
- PC2.** check the compliance of identified materials with work requirement and specification such as grade, shape and size
- PC3.** check that the type of consumables, selection of process parameters, thermal treatment etc. as per welding procedure specification
- PC4.** check the quality certification marks on consumables and other tools and materials
- PC5.** ensure the plates and sections are free from damage and visible defects
- PC6.** ensure surface cleaning is done prior to cutting of section
- PC7.** check the approved drawing number and revisions.
- PC8.** ensure that markings and measurements are carried out using appropriate instruments and devices as per instructions and drawings
- PC9.** ensure the shrinkage allowance, cutting and grinding allowances are considered in marking of sections and plate
- PC10.** check the dimensions of the cut sections and identify the requirements of scalloping and edge preparation from shop drawings
- PC11.** ensure that prepared edge and scallop is as per design requirements shown in drawings
- PC12.** check the lifting accessories, tools and gears for proper working conditions
- PC13.** oversee preparatory works for platforms undertaken by subordinates and provide instructions and guidance as per requirement
- PC14.** estimate and cross-check the requirements of materials, tools or other resources as provided by subordinates and report the same to superiors
- PC15.** oversee the pre -heating/inter-pass temperature and post weld heat treatment if required and continuously monitor the heating parameters to ensure the quality and optimal utilization of resources
- PC16.** check the weld equipment calibration and ensure proper connections of electrode holder and earth connections



Qualification Pack

- PC17.** check the climate condition and wind speed before beginning of work
- PC18.** check the availability of quivers for storing of electrode
- PC19.** check clamping arrangements before beginning the fit-up
- PC20.** check the locations identified by fitter for erection of temporary anchorages and instruct any change required in same
- PC21.** check the joint configuration (groove angle, root gap and root face) wherever applicable and inform the quality inspector for fit-up inspection if required
- PC22.** check that the grooves and adjacent surfaces are free from moisture, oil, grease, rust etc.
- PC23.** ensure qualified welder is engaged for tack weld and welding
- PC24.** ensure that sections are placed in proper position and correct orientation
- PC25.** check the location of tack weld for sufficiency
- PC26.** ensure the tack weld is free from defects and is of required length
- PC27.** oversee that the weld is deposited as per the approved welding procedure and monitor the welding process parameters
- PC28.** oversee the de-clamping of component to ensure safe working
- PC29.** ensure the de-slugging of weld joint after the completion of welding
- PC30.** ensure removal of spatters if any from the vicinity of weld joint
- PC31.** carry out checks for fitted components and sections to ensure that the dimensions of the components are complying with the drawings
- PC32.** complete work and inform superiors for the quality checking procedures
- PC33.** instruct subordinates for repair or removal of any divergences found by quality inspectors as per requirement
- PC34.** ensure that the work is completed safely in specified time with required quality
- PC35.** ensure the traceability of the fabricated component by using proper marking tool

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for fabrication works
- KU2.** safety rules and regulation for storing of gases for welding and cutting
- KU3.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- KU4.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- KU5.** service request procedures for tools, materials and equipment as per organizational norms
- KU6.** procedure for maintenance of tools and equipment
- KU7.** statutory compliance requirement related to workmen engagement
- KU8.** different materials required during joint preparation activities
- KU9.** how to read and interpret drawings and weld symbol.
- KU10.** method statement and work instruction
- KU11.** how to implement safety requirements for the workman and the fabrication location



Qualification Pack

- KU12.** welding procedure specification and welder qualification
- KU13.** different welding process
- KU14.** selection of welding consumable as per welding procedure specification
- KU15.** different size and grades of fasteners
- KU16.** selection of the different bolt tightening methods for assembly as per method statement
- KU17.** quality certification marks, identification of their originality and their importance
- KU18.** various deformities found in sections and their causes
- KU19.** method of use of different measuring devices, their least count and area of application
- KU20.** equipment used for gas cutting, its settings and adjustments and there results, working principles, range of operation
- KU21.** safety considerations and parameters while working with gas cutting and beveling equipment
- KU22.** various equipment used for grinding, their settings and adjustments and there results, working principles, range of operation, different accessories and consumables
- KU23.** safety considerations and parameters while working with grinding equipment
- KU24.** various equipments used for load lifting, working principles, range of operation, different accessories
- KU25.** safety considerations and parameters while working with load lifting equipment
- KU26.** how to estimate the quantities of resources (men, materials and machines) used in a fabrication workshop
- KU27.** various equipment used for anchoring and clamping, their settings and adjustments and there results, working principles, range of operation, different accessories and consumables
- KU28.** safety considerations and parameters while working with anchoring and clamping equipment
- KU29.** need and importance of tack weld
- KU30.** how to carry out dimensional check of components consumables

Generic Skills (GS)

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

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local language at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates
- GS9.** evaluate the complexity of the tasks
- GS10.** identify any violation of safety norms during the work



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Supervise joint preparation and related activities</i>	40	60	-	-
PC1. identify sections and other materials required for fabrication work	-	-	-	-
PC2. check the compliance of identified materials with work requirement and specification such as grade, shape and size	-	-	-	-
PC3. check that the type of consumables, selection of process parameters, thermal treatment etc. as per welding procedure specification	-	-	-	-
PC4. check the quality certification marks on consumables and other tools and materials	-	-	-	-
PC5. ensure the plates and sections are free from damage and visible defects	-	-	-	-
PC6. ensure surface cleaning is done prior to cutting of section	-	-	-	-
PC7. check the approved drawing number and revisions.	-	-	-	-
PC8. ensure that markings and measurements are carried out using appropriate instruments and devices as per instructions and drawings	-	-	-	-
PC9. ensure the shrinkage allowance, cutting and grinding allowances are considered in marking of sections and plate	-	-	-	-
PC10. check the dimensions of the cut sections and identify the requirements of scalloping and edge preparation from shop drawings	-	-	-	-
PC11. ensure that prepared edge and scallop is as per design requirements shown in drawings	-	-	-	-
PC12. check the lifting accessories, tools and gears for proper working conditions	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. oversee preparatory works for platforms undertaken by subordinates and provide instructions and guidance as per requirement	-	-	-	-
PC14. estimate and cross-check the requirements of materials, tools or other resources as provided by subordinates and report the same to superiors	-	-	-	-
PC15. oversee the pre -heating/inter-pass temperature and post weld heat treatment if required and continuously monitor the heating parameters to ensure the quality and optimal utilization of resources	-	-	-	-
PC16. check the weld equipment calibration and ensure proper connections of electrode holder and earth connections	-	-	-	-
PC17. check the climate condition and wind speed before beginning of work	-	-	-	-
PC18. check the availability of quivers for storing of electrode	-	-	-	-
PC19. check clamping arrangements before beginning the fit-up	-	-	-	-
PC20. check the locations identified by fitter for erection of temporary anchorages and instruct any change required in same	-	-	-	-
PC21. check the joint configuration (groove angle, root gap and root face) wherever applicable and inform the quality inspector for fit-up inspection if required	-	-	-	-
PC22. check that the grooves and adjacent surfaces are free from moisture, oil, grease, rust etc.	-	-	-	-
PC23. ensure qualified welder is engaged for tack weld and welding	-	-	-	-
PC24. ensure that sections are placed in proper position and correct orientation	-	-	-	-
PC25. check the location of tack weld for sufficiency	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC26. ensure the tack weld is free from defects and is of required length	-	-	-	-
PC27. oversee that the weld is deposited as per the approved welding procedure and monitor the welding process parameters	-	-	-	-
PC28. oversee the de-clamping of component to ensure safe working	-	-	-	-
PC29. ensure the de-slugging of weld joint after the completion of welding	-	-	-	-
PC30. ensure removal of spatters if any from the vicinity of weld joint	-	-	-	-
PC31. carry out checks for fitted components and sections to ensure that the dimensions of the components are complying with the drawings	-	-	-	-
PC32. complete work and inform superiors for the quality checking procedures	-	-	-	-
PC33. instruct subordinates for repair or removal of any divergences found by quality inspectors as per requirement	-	-	-	-
PC34. ensure that the work is completed safely in specified time with required quality	-	-	-	-
PC35. ensure the traceability of the fabricated component by using proper marking tool	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N1213
NOS Name	Ensure completion of joint preparation activities for fabrication
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



Qualification Pack

CON/N1214: Ensure completion of joint connection activities

Description

This unit describes the skills and knowledge required to ensure completion of joint connection activities

Scope

The scope covers the following :

- Coordinate joint connection and related activities

Elements and Performance Criteria

Coordinate joint connection and related activities

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

- PC1.** check the joints prepared for accurate dimensions and smoothness
- PC2.** check the edge preparation nomenclature of the members
- PC3.** check the surface preparation of base metal before beginning of weld
- PC4.** extract weld specifications from drawings and other technical documents
- PC5.** interact and communicate with welders to identify the cause of improper welding
- PC6.** measure the weld bead profile by weld gauge
- PC7.** identify other defects in welds such as undercut, lack of fusion, cracks, craters, spatters etc. and suggest corrective measures for avoiding these defects in future
- PC8.** conduct dimensional checks of the connected assemblies or components
- PC9.** check bolt holes for their size, position, shape and grouping
- PC10.** ensure that required amount of nuts, bolts and washers are available and have cleared quality inspection before commencing the work
- PC11.** extract the bolting requirements from drawings, standards or specifications
- PC12.** monitor observation of safe working practices as per organizational norms within workplace
- PC13.** complete work and inform superiors for initiating the quality checking procedures
- PC14.** instruct subordinates for repair or removal of any divergences found by quality inspectors as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for fabrication works
- KU2.** safety rules and regulations for handling and storing required fabrication tools, equipment and materials
- KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- KU4.** service request procedures for tools, materials and equipment as per organizational norms



Qualification Pack

- KU5.** procedure for maintenance of tools and equipment
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** welding terminologies like arc, flux, slag etc.
- KU8.** different materials used in fabrication
- KU9.** different welding parameters
- KU10.** correct calibration of welding Kit and various adjustments in the same
- KU11.** importance of proper joint finishing
- KU12.** how to read and interpret fabrication shop drawings
- KU13.** how to read and interpret various welding specifications from charts and tables
- KU14.** appropriate procedure for storage of electrodes
- KU15.** basics of SMAW, GMAW, GTAW, SAW and FCAW processes
- KU16.** effect of polarity on welding
- KU17.** correct handling and storage of gas cylinders for welding purposes
- KU18.** power ratings of welding equipment
- KU19.** relationship between wire feed, speed control and voltage
- KU20.** the gas regulation, rate of flow of shielding gas and its effects
- KU21.** components of welding gun, equipment and their functions
- KU22.** effects of welding fumes
- KU23.** consumable, their specification, types, usage, storage and handling
- KU24.** different types of shielding gases and their uses in different conditions
- KU25.** appropriate positions of welding, specific to requirements
- KU26.** patterns and position of welding and their application
- KU27.** grinding and gas cutting equipment specification and application

Generic Skills (GS)

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

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local language at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates
- GS9.** evaluate the complexity of the tasks
- GS10.** identify any violation of safety norms during the work



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Coordinate joint connection and related activities</i>	40	60	-	-
PC1. check the joints prepared for accurate dimensions and smoothness	-	-	-	-
PC2. check the edge preparation nomenclature of the members	-	-	-	-
PC3. check the surface preparation of base metal before beginning of weld	-	-	-	-
PC4. extract weld specifications from drawings and other technical documents	-	-	-	-
PC5. interact and communicate with welders to identify the cause of improper welding	-	-	-	-
PC6. measure the weld bead profile by weld gauge	-	-	-	-
PC7. identify other defects in welds such as undercut, lack of fusion, cracks, craters, spatters etc. and suggest corrective measures for avoiding these defects in future	-	-	-	-
PC8. conduct dimensional checks of the connected assemblies or components	-	-	-	-
PC9. check bolt holes for their size, position, shape and grouping	-	-	-	-
PC10. ensure that required amount of nuts, bolts and washers are available and have cleared quality inspection before commencing the work	-	-	-	-
PC11. extract the bolting requirements from drawings, standards or specifications	-	-	-	-
PC12. monitor observation of safe working practices as per organizational norms within workplace	-	-	-	-
PC13. complete work and inform superiors for initiating the quality checking procedures	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. instruct subordinates for repair or removal of any divergences found by quality inspectors as per requirement	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N1214
NOS Name	Ensure completion of joint connection activities
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Fabrication
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



Qualification Pack

CON/N0726: Supervise heavy lifting of structural assemblies at construction sites

Description

This unit describes the skills and knowledge required to supervise the heavy lifting of structural assemblies at construction sites.

Scope

The scope covers the following :

- Supervise heavy lifting activities
- Provide signals to equipment operator by hand or using electronic device

Elements and Performance Criteria

Supervise heavy lifting activities

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

- PC1.** brief subordinates about heavy lifting plan and safety control measures prior to lifting
- PC2.** allocate activities to specified subordinates as per their level of expertise
- PC3.** analyze hazards related with lifting operations and report to concerned authority for any required action
- PC4.** conducting checks/trail runs on the equipment to ensure safe and desired functioning of lifting equipment
- PC5.** carry out physical checks on components, assemblies and its locations where sling is to be attached for lifting
- PC6.** check slinging tools and lifting tools for their usability and specifications according to load
- PC7.** ensure tightening of shackles, hooks, anchoring slings or belts during lifting of load
- PC8.** ensure exact locking of sling at hook of crane
- PC9.** ensure the use of tag line of adequate length to control motion of the suspended load
- PC10.** ensure free motion of crane boom load movement path is free from any static or mobile obstruction and is adequately illuminated
- PC11.** ensure erection of barricades surrounding heavy lifting location

Provide signals to equipment operator by hand or using electronic devices

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

- PC12.** maintain clear line of vision with the operator and suspended load while providing signal
- PC13.** provide appropriate verbal directions to equipment operator using communication devices
- PC14.** adhere to standard hand signal methods while providing signals
- PC15.** provide signals to guide suspended loads to appropriate location under critical conditions

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:



Qualification Pack

- KU1.** standard procedure for rigging works
- KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- KU4.** service request procedures for tools, materials and equipment as per organizational norms
- KU5.** procedure for maintenance of tools and equipment
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** how to read and interpret drawings, specifications relevant to task
- KU8.** agreed lifting plan and schedule for lifting operation
- KU9.** working mechanism of heavy lifting equipment like cranes, jacks, winches, derricks
- KU10.** load lifting capacity of lifting equipment under use
- KU11.** statutory requirements of lifting equipment and its operators for safe working at construction sites
- KU12.** preparatory works to be completed for using heavy lift equipment like area grading, base compaction, periodical maintenance
- KU13.** code of practices relevant to lifting operations
- KU14.** common hazards involved in heavy lifting and erection work
- KU15.** reporting procedures as per standard and organizational norms
- KU16.** factors influencing lifting and erection work like wind speed, visibility, shape and weight of object being lifted, presence of obstruction, counter weight etc.
- KU17.** load lifting capacity of the equipment under operation according to boom length and angle of boom
- KU18.** standard hand signals applicable to heavy load lifting operations by cranes
- KU19.** load chart applicable to lifting equipment
- KU20.** operation of communication devices
- KU21.** how to provide direction to lifting equipment operator using communication device

Generic Skills (GS)

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

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local language at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates



Qualification Pack

GS9. evaluate the complexity of the tasks

GS10. identify any violation of safety norms during the work



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Supervise heavy lifting activities</i>	28	42	-	-
PC1. brief subordinates about heavy lifting plan and safety control measures prior to lifting	-	-	-	-
PC2. allocate activities to specified subordinates as per their level of expertise	-	-	-	-
PC3. analyze hazards related with lifting operations and report to concerned authority for any required action	-	-	-	-
PC4. conducting checks/trail runs on the equipment to ensure safe and desired functioning of lifting equipment	-	-	-	-
PC5. carry out physical checks on components, assemblies and its locations where sling is to be attached for lifting	-	-	-	-
PC6. check slinging tools and lifting tools for their usability and specifications according to load	-	-	-	-
PC7. ensure tightening of shackles, hooks, anchoring slings or belts during lifting of load	-	-	-	-
PC8. ensure exact locking of sling at hook of crane	-	-	-	-
PC9. ensure the use of tag line of adequate length to control motion of the suspended load	-	-	-	-
PC10. ensure free motion of crane boom load movement path is free from any static or mobile obstruction and is adequately illuminated	-	-	-	-
PC11. ensure erection of barricades surrounding heavy lifting location	-	-	-	-
<i>Provide signals to equipment operator by hand or using electronic devices</i>	12	18	-	-
PC12. maintain clear line of vision with the operator and suspended load while providing signal	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. provide appropriate verbal directions to equipment operator using communication devices	-	-	-	-
PC14. adhere to standard hand signal methods while providing signals	-	-	-	-
PC15. provide signals to guide suspended loads to appropriate location under critical conditions	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N0726
NOS Name	Supervise heavy lifting of structural assemblies at construction sites
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



Qualification Pack

CON/N0727: Execute erection works as per drawing/ specification

Description

This unit describes the skills and knowledge required to execute erection works as per drawing/ specification

Scope

The scope covers the following :

- Carry out planning for basic erection work
- Execute erection work as per drawing/ specification

Elements and Performance Criteria

Carry out planning for basic erection work

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

- PC1.** interpret structural drawings to determine structural locations, orientations, critical erection points and resource required for executing the works
- PC2.** adhere to specified time line for completion of activities
- PC3.** sequence key activities related to lifting and erection of components or assemblies
- PC4.** manage required resources in coordination with superiors and other respective authorities
- PC5.** plan and establish safe access to the point of erection

Execute erection work as per drawing/ specification

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

- PC6.** obtain key survey markings at appropriate locations
- PC7.** develop hand sketches and provide it to subordinates as per requirement
- PC8.** supervise lowering, placing and positioning of components or assemblies by providing instructions to the subordinates to achieve desired outcome
- PC9.** oversee erection activity and ensure the orientation of structural components and assemblies is within tolerance limit, as per relevant drawings or instructions
- PC10.**
 - check the verticality, level, location, centre to centre distance, diagonal,
 - orientation of transvers truss, column, flatness of end plate, splice plate (close mating of plate) etc of the erected truss/ member/ assembly
- PC11.** check the terminals, edges, holes and joints for compliance as per quality control checklists or guidelines
- PC12.** check the bolt tightening of the assembly as per requirement (snug- tightening, torquing and DTI)
- PC13.** check the stick-out of the bolt as per specification
- PC14.** check the matching of holes and inform the supervisor of any deviation
- PC15.** confirm that all bolts used in the existing or precast components are of proper length, diameter and grade for the connections ,as per erection drawing
- PC16.** carry out grouting (if required) as per the specification, approved drawings



Qualification Pack

- PC17.** check that centre line of the base plate coincides with foundation pedestal axis (X, Y)
- PC18.** check that the foundation of bolts are free from damage and foundation packets are free from debris and foreign material
- PC19.** check the bolt assembly and remove any deviations such as missing bolt/ nut/ washer, short bolt, damaged bolt, excessive stand-off distance, incompatibility of bolt hole/washer etc.
- PC20.** check the depth of threaded inserts in the existing structures or RCC precast units to ensure minimum acceptable engagement for the bolt threads
- PC21.** ensure placing of grout pad, cleaning of gaps for grouting and caulking as per requirement
- PC22.** check lateral stability of part erected components and provide instructions for bracings and supports at required locations
- PC23.** complete work as per set standards and offer for quality control checks by superior and other concerned authorities
- PC24.** observe adherence to housekeeping and safety practices as per standard/ organizational norms during all concerned activities

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for rigging works
- KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- KU4.** service request procedures for tools, materials and equipment as per organizational norms
- KU5.** procedure for maintenance of tools and equipment
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** specified level, orientation of the structure to be erected
- KU8.** technical details (related to erection) applicable to the component, assembly
- KU9.** different standard sections of structural steel
- KU10.** dimensional checks to be performed as per requirement
- KU11.** different types of welding according to welding material, method and criticality in position
- KU12.** different types of bolts as per diameter and their functions
- KU13.** welded joints, bolt joints and rivet joints and their use
- KU14.** gas cutting and grinding works
- KU15.** working mechanism of heavy lifting equipment like cranes, jacks, winches, derricks
- KU16.** load lifting capacity of lifting equipment under use
- KU17.** common hazards involved in heavy lifting and erection work
- KU18.** factors having influence in lifting and erection work like wind speed, visibility, shape and weight of object being lifted, presence of obstruction, counter weight etc.
- KU19.** load lifting capacity of equipment according to angle of boom
- KU20.** maximum boom length of the equipment
- KU21.** methods of linear, areal and volumetric measurement



Qualification Pack

- KU22.** simple geometry and conversion of units
- KU23.** standard hand signals applicable to heavy load lifting operations by cranes
- KU24.** load chart applicable to lifting equipment
- KU25.** use of calculator, communication devices

Generic Skills (GS)

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

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local language at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates
- GS9.** evaluate the complexity of the tasks
- GS10.** identify any violation of safety norms during the work



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out planning for basic erection work</i>	12	18	-	-
PC1. interpret structural drawings to determine structural locations, orientations, critical erection points and resource required for executing the works	-	-	-	-
PC2. adhere to specified time line for completion of activities	-	-	-	-
PC3. sequence key activities related to lifting and erection of components or assemblies	-	-	-	-
PC4. manage required resources in coordination with superiors and other respective authorities	-	-	-	-
PC5. plan and establish safe access to the point of erection	-	-	-	-
<i>Execute erection work as per drawing/ specification</i>	28	42	-	-
PC6. obtain key survey markings at appropriate locations	-	-	-	-
PC7. develop hand sketches and provide it to subordinates as per requirement	-	-	-	-
PC8. supervise lowering, placing and positioning of components or assemblies by providing instructions to the subordinates to achieve desired outcome	-	-	-	-
PC9. oversee erection activity and ensure the orientation of structural components and assemblies is within tolerance limit, as per relevant drawings or instructions	-	-	-	-
PC10. <ul style="list-style-type: none"> • check the verticality, level, location, centre to centre distance, diagonal, • orientation of transvers truss, column, flatness of end plate, splice plate (close mating of plate) etc of the erected truss/ member/ assembly 	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. check the terminals, edges, holes and joints for compliance as per quality control checklists or guidelines	-	-	-	-
PC12. check the bolt tightening of the assembly as per requirement (snug- tightening, torqueing and DTI)	-	-	-	-
PC13. check the stick-out of the bolt as per specification	-	-	-	-
PC14. check the matching of holes and inform the supervisor of any deviation	-	-	-	-
PC15. confirm that all bolts used in the existing or precast components are of proper length, diameter and grade for the connections ,as per erection drawing	-	-	-	-
PC16. carry out grouting (if required) as per the specification, approved drawings	-	-	-	-
PC17. check that centre line of the base plate coincides with foundation pedestal axis (X, Y)	-	-	-	-
PC18. check that the foundation of bolts are free from damage and foundation packets are free from debris and foreign material	-	-	-	-
PC19. check the bolt assembly and remove any deviations such as missing bolt/ nut/ washer, short bolt, damaged bolt, excessive stand-off distance, incompatibility of bolt hole/washer etc.	-	-	-	-
PC20. check the depth of threaded inserts in the existing structures or RCC precast units to ensure minimum acceptable engagement for the bolt threads	-	-	-	-
PC21. ensure placing of grout pad, cleaning of gaps for grouting and caulking as per requirement	-	-	-	-
PC22. check lateral stability of part erected components and provide instructions for bracings and supports at required locations	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. complete work as per set standards and offer for quality control checks by superior and other concerned authorities	-	-	-	-
PC24. observe adherence to housekeeping and safety practices as per standard/ organizational norms during all concerned activities	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N0727
NOS Name	Execute erection works as per drawing/ specification
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



Qualification Pack

CON/N7001: Plan, arrange and manage resources for execution of relevant work

Description

This unit describes the knowledge and the skills required for an individual to plan and organize work in order to meet expected outcome.

Scope

The scope covers the following :

- Plan and prepare for work
- Arrange and manage manpower
- Arrange allocate and manage tools, material and equipment for completion of work, as per the plan

Elements and Performance Criteria

Plan and prepare for work

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

- PC1.** identify the targets and timelines for the work set by superiors
- PC2.** determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task
- PC3.** plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities
- PC4.** prepare the work areas in coordination with team members
- PC5.** plan for waste collection and disposal prior to and after completion of work

Arrange and manage manpower

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

- PC6.** determine quantum and nature of work under assigned activity
- PC7.** calculate requirement of manpower for assigned activities
- PC8.** submit manpower requirement to superiors
- PC9.** allocate and extract work as per plan
- PC10.** provide clear instructions to workmen for execution of work
- PC11.** ensure optimum utilization of manpower resources
- PC12.** record the daily labor attendance and their daily productivity

Arrange allocate and manage tools, material and equipment for completion of work, as per the plan

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

- PC13.** estimate requirement for material, components, fixtures, equipment, tools and accessories
- PC14.** submit material, equipment and tool requirement to superiors
- PC15.** allocate material, equipment and tools to workmen and extract the work as per plan
- PC16.** provide clear instructions for optimum use of resources



Qualification Pack

PC17. ensure the work processes adopted are in line with the specified standards and instructions

PC18. complete the work with the allocated resources within specified time

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for execution of relevant work
- KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- KU4.** service request procedures for tools, materials and equipment as per organizational norms
- KU5.** procedure for maintenance of tools and equipment
- KU6.** how to identify work activities that need to be planned and organized
- KU7.** how to undertake all aspect of planning and organizing the task, including interpretation of task, reading drawing/schedules, arranging resources, reporting problems etc.
- KU8.** manpower requirement on the basis of quantum of work and productivity
- KU9.** sequence and priority of activities
- KU10.** how to identify priority and critical activity of relevant task
- KU11.** method and technique on briefing team members about relevant work
- KU12.** different checks to evaluate progress and quality of relevant works
- KU13.** importance of daily productivity report
- KU14.** importance of daily attendance register
- KU15.** how to calculate quantum of relevant work
- KU16.** calculation of tools and material requirement
- KU17.** optimum use of available resources
- KU18.** computer basics

Generic Skills (GS)

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

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local language at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates



Qualification Pack

GS9. evaluate the complexity of the tasks

GS10. identify any violation of safety norms during the work



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan and prepare for work</i>	12	18	-	-
PC1. identify the targets and timelines for the work set by superiors	-	-	-	-
PC2. determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task	-	-	-	-
PC3. plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities	-	-	-	-
PC4. prepare the work areas in coordination with team members	-	-	-	-
PC5. plan for waste collection and disposal prior to and after completion of work	-	-	-	-
<i>Arrange and manage manpower</i>	12	18	-	-
PC6. determine quantum and nature of work under assigned activity	-	-	-	-
PC7. calculate requirement of manpower for assigned activities	-	-	-	-
PC8. submit manpower requirement to superiors	-	-	-	-
PC9. allocate and extract work as per plan	-	-	-	-
PC10. provide clear instructions to workmen for execution of work	-	-	-	-
PC11. ensure optimum utilization of manpower resources	-	-	-	-
PC12. record the daily labor attendance and their daily productivity	-	-	-	-
<i>Arrange allocate and manage tools, material and equipment for completion of work, as per the plan</i>	16	24	-	-
PC13. estimate requirement for material, components, fixtures, equipment, tools and accessories	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. submit material, equipment and tool requirement to superiors	-	-	-	-
PC15. allocate material, equipment and tools to workmen and extract the work as per plan	-	-	-	-
PC16. provide clear instructions for optimum use of resources	-	-	-	-
PC17. ensure the work processes adopted are in line with the specified standards and instructions	-	-	-	-
PC18. complete the work with the allocated resources within specified time	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N7001
NOS Name	Plan, arrange and manage resources for execution of relevant work
Sector	Construction
Sub-Sector	Generic, Real Estate and Infrastructure construction
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	3.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



Qualification Pack

CON/N8001: Work effectively in a team to deliver desired results at the workplace

Description

This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results

Scope

The scope covers the following :

- Interact and communicate in an effective manner
- Support co-workers to execute the project requirements
- Practice inclusion

Elements and Performance Criteria

Interact and communicate in an effective manner

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

- PC1.** pass on work related information/ requirement clearly to the team members
- PC2.** inform co-workers and superiors about any kind of deviations from work
- PC3.** report any unresolved problem to the supervisor immediately
- PC4.** obtain instructions from superiors and respond on the same
- PC5.** communicate to team members/subordinates for appropriate work technique and method
- PC6.** seek clarification and advice as per the requirement

Support co-workers to execute the project requirements

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

- PC7.** hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams
- PC8.** work together with co-workers in a synchronized manner

Practice inclusion

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

- PC9.** maintain cultural inclusivity at work place
- PC10.** maintain disability friendly work practices
- PC11.** follow gender neutral practices at workplace
- PC12.** address discriminatory and offensive behaviour in a professional manner as per organizational policy

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** own roles and responsibilities



Qualification Pack

- KU2.** importance of effective communication
- KU3.** the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
- KU4.** different modes of communication used at workplace
- KU5.** importance of creating healthy and cooperative work environment among the gangs of workers
- KU6.** different activities within the work area where interaction with other workers is required
- KU7.** applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement
- KU8.** importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site
- KU9.** importance and need of supporting co-workers facing problems for the smooth functioning of work
- KU10.** the fundamental concept of gender equality
- KU11.** how to recognise and be sensitive to issues of disability, culture and gender
- KU12.** legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation

Generic Skills (GS)

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

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read the communication regarding work completion, materials used, tools and tackles used, the resource required, etc,
- GS3.** speak in one or more languages, preferably in one of the local language of the site
- GS4.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- GS5.** communicate orally and effectively with co-workers considering their educational and social background
- GS6.** decide on what information is to be shared with co-workers within the team or to the interfacing gang of workers
- GS7.** plan work and organize the required resources in coordination with team members
- GS8.** complete all assigned task in coordination with team members
- GS9.** take initiative in resolving issues among co-workers or report the same to superiors
- GS10.** ensure best ways of coordination among team members
- GS11.** evaluate the complexity of task and determine if any guidance is required from superiors



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in an effective manner</i>	24	36	-	-
PC1. pass on work related information/ requirement clearly to the team members	-	-	-	-
PC2. inform co-workers and superiors about any kind of deviations from work	-	-	-	-
PC3. report any unresolved problem to the supervisor immediately	-	-	-	-
PC4. obtain instructions from superiors and respond on the same	-	-	-	-
PC5. communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
PC6. seek clarification and advice as per the requirement	-	-	-	-
<i>Support co-workers to execute the project requirements</i>	8	12	-	-
PC7. hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams	-	-	-	-
PC8. work together with co-workers in a synchronized manner	-	-	-	-
<i>Practice inclusion</i>	8	12	-	-
PC9. maintain cultural inclusivity at work place	-	-	-	-
PC10. maintain disability friendly work practices	-	-	-	-
PC11. follow gender neutral practices at workplace	-	-	-	-
PC12. address discriminatory and offensive behaviour in a professional manner as per organizational policy	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N8001
NOS Name	Work effectively in a team to deliver desired results at the workplace
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	5
Credits	TBD
Version	9.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



Qualification Pack

CON/N9002: Manage workplace for safe and healthy work environment

Description

This unit describes the skill and knowledge required to maintain a healthy & safe working environment for the group of people working under an individual

Scope

The scope covers the following :

- Ensure effective implementation of health, safety and environment policies and procedures
- Identify and respond to risks / fire and emergencies associated with the work practices and workplace
- Ensure sanitization and infection control guidelines are followed at construction site

Elements and Performance Criteria

Ensure effective implementation of health, safety and environment policies and procedures

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

- PC1.** implement safe handling and stacking methods at workplace /store
- PC2.** ensure the adequate availability and placing of safety and protection installations at site
- PC3.** ensure that safe access ways are available at work place for movement of workers and materials
- PC4.** ensure the safe use of tools and tackles by teammates as per work requirements
- PC5.** ensure ergonomic principles are adopted by the teammates while lifting and shifting of construction materials, tools and equipment
- PC6.** ensure appropriate use of following Personal Protective Equipment (PPE) as per work requirement of head protection, ear protection, fall protection, foot protection, face and eye protection, hand and body protection, respiratory protection
- PC7.** maintain entry and exit pathways from confined spaces, excavated pits and other location as per safety parameters/instructions
- PC8.** ensure proper housekeeping at workplace
- PC9.** ensure that subordinates adhere to health and safety plans

Identify and respond to risks / fire and emergencies associated with the work practices and workplace

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

- PC10.** identify any hazard at workplace and report/notify the same to appropriate authorities.
- PC11.** follow procedures for accident recording and reporting as per organizational and statutory requirements
- PC12.** ensure effective adherence to emergency response procedures / protocols
- PC13.** select and operate different types of fire extinguishers corresponding to types of fires as per EHS guideline
- PC14.** obtain 'height pass' clearance as per EHS guideline



Qualification Pack

PC15. implement control measures to reduce risks ,meeting legislative requirements within the scope of own role and expertise, as per organizational policies

Ensure sanitization and infection control guidelines are followed at construction site

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

PC16. promote awareness about latest hygiene and sanitation regulations

PC17. ensure disinfection procedure related to material, tools and supplies are followed properly

PC18. respond to infection prevention and control and its non-compliance , within scope of own role or report to required personnel

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the policies, procedures and protocol set up by the EHS Department with respect to Health , Safety and Environment at the respective construction site

KU2. reporting procedures in cases of breaches or hazards in site safety, accidents or emergency situations

KU3. safe working practices for tools, tackles and equipment

KU4. workplace policies and health and safety requirements for dealing with potential risks as defined by the EHS department

KU5. how to respond to accidents and emergencies

KU6. the appropriate personal protective equipment to be used based on various working conditions

KU7. how to use necessary material ,tools, tackles and equipment in a safe and appropriate manner as specified by site EHS for each level and respective workman gang

KU8. ways of transmission of infection

KU9. ways to manage infectious risks at the workplace

KU10. different methods of cleaning, disinfection, sterilization and sanitization

KU11. symptoms of infection like fever, cough, redness, swelling and inflammation

KU12. actions be taken during a medical emergency

KU13. current guidelines, national legislation, local policies and protocols regarding spread of infectious disease.

Generic Skills (GS)

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

GS1. write in at least one language, preferably in the local language of the site

GS2. read instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site

GS3. speak in one or more language, preferably one of the local language at the site

GS4. listen and follow instructions shared by site EHS and superiors regarding site safety

GS5. communicate reporting of site conditions, hazards, accidents, etc.

GS6. analyze the safety aspect of the workplace



Qualification Pack

GS7. identify any violation of safety norms during the work



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure effective implementation of health, safety and environment policies and procedures</i>	20	30	-	-
PC1. implement safe handling and stacking methods at workplace /store	-	-	-	-
PC2. ensure the adequate availability and placing of safety and protection installations at site	-	-	-	-
PC3. ensure that safe access ways are available at work place for movement of workers and materials	-	-	-	-
PC4. ensure the safe use of tools and tackles by teammates as per work requirements	-	-	-	-
PC5. ensure ergonomic principles are adopted by the teammates while lifting and shifting of construction materials, tools and equipment	-	-	-	-
PC6. ensure appropriate use of following Personal Protective Equipment (PPE) as per work requirement of head protection, ear protection, fall protection, foot protection, face and eye protection, hand and body protection, respiratory protection	-	-	-	-
PC7. maintain entry and exit pathways from confined spaces, excavated pits and other location as per safety parameters/instructions	-	-	-	-
PC8. ensure proper housekeeping at workplace	-	-	-	-
PC9. ensure that subordinates adhere to health and safety plans	-	-	-	-
<i>Identify and respond to risks / fire and emergencies associated with the work practices and workplace</i>	12	18	-	-
PC10. identify any hazard at workplace and report/notify the same to appropriate authorities.	-	-	-	-
PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements	-	-	-	-
PC12. ensure effective adherence to emergency response procedures / protocols	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. select and operate different types of fire extinguishers corresponding to types of fires as per EHS guideline	-	-	-	-
PC14. obtain 'height pass' clearance as per EHS guideline	-	-	-	-
PC15. implement control measures to reduce risks ,meeting legislative requirements within the scope of own role and expertise, as per organizational policies	-	-	-	-
<i>Ensure sanitization and infection control guidelines are followed at construction site</i>	8	12	-	-
PC16. promote awareness about latest hygiene and sanitation regulations	-	-	-	-
PC17. ensure disinfection procedure related to material, tools and supplies are followed properly	-	-	-	-
PC18. respond to infection prevention and control and its non-compliance , within scope of own role or report to required personnel	-	-	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N9002
NOS Name	Manage workplace for safe and healthy work environment
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	3.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC)/ element 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/ element.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.



Qualification Pack

- The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
- After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
- In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
- Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

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
CON/N1213.Ensure completion of joint preparation activities for fabrication	40	60	-	-	100	20
CON/N1214.Ensure completion of joint connection activities	40	60	-	-	100	15
CON/N0726.Supervise heavy lifting of structural assemblies at construction sites	40	60	-	-	100	10
CON/N0727.Execute erection works as per drawing/ specification	40	60	-	-	100	15
CON/N7001.Plan, arrange and manage resources for execution of relevant work	40	60	-	-	100	20
CON/N8001.Work effectively in a team to deliver desired results at the workplace	40	60	-	-	100	5



Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9002.Manage workplace for safe and healthy work environment	40	60	-	-	100	15
Total	280	420	-	-	700	100



Qualification Pack

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)	<p>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.</p>
Organisational Context	<p>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.</p>
Technical Knowledge	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
Core Skills/ Generic Skills (GS)	<p>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.</p>
Electives	<p>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.</p>
Options	<p>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.</p>