



Foreman - Erection

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CON/Q0708: Foreman - Erection

Brief Job Description

Foreman Erection is responsible for determining feasibility of heavy lifting operation at construction sites by inspecting lifting equipments, lifting locations and allocating manpower. Individuals in this job role execute heavy lifting by ensuring safe condition of rigging gears/ tools used for the job and providing signals to the lifting equipment operator for appropriate handling and placing of heavy load to desired location as per work plan. The job role is also responsible for erection of structural steel/ RCC precast units as per drawing and implementation of safety norms as applicable to heavy lifting and erection operations

Personal Attributes

This job role requires the individual to be physically and mentally fit to act as a head of a crew of riggers executing heavy lifting and erection works at construction sites. The individual should be having considerable domain expertise and factual knowledge in order to plan, organize sequence activities and allocate resources according to the work requirement. The job holder should preferably be free from vertigo problem, cardiovascular diseases as the nature of work involves handling heavy loads and working at heights.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [CON/N0725: Inspect and ensure feasibility of lifting operation](#)
2. [CON/N0726: Supervise heavy lifting of structural assemblies at construction sites](#)
3. [CON/N0727: Execute erection works as per drawing/ specification](#)
4. [CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
5. [CON/N8002: Plan and organize work to meet expected outcomes](#)
6. [CON/N9002: Manage workplace for safe and healthy work environment](#)

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging



Qualification Pack



Country	India
NSQF Level	5
Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO-2004/7214.90
Minimum Educational Qualification & Experience	10th Class with 3-5 Years of experience as a certified Chargehand Precast Erection or Structural Erection OR 10th Class with 10-15 Years of experience in case of a Non trained worker, in same occupation
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Recommended training period of 16-20 weeks as per QP of Foreman Erection
Minimum Job Entry Age	18 Years
Last Reviewed On	14/08/2015
Next Review Date	31/03/2022
Deactivation Date	31/03/2022
NSQC Approval Date	05/02/2018
Version	1.0
Reference code on NQR	2018/CON/CSDCI/02115
NQR Version	1.0



CON/N0725: Inspect and ensure feasibility of lifting operation

Description

This unit describes the skills and knowledge required to inspect and ensure feasibility of lifting operation

Scope

This unit/ task covers the following:

- Check and ensure safe working of equipments used for erection
- Check the work area and ensure suitable condition for heavy load lifting and erection

Elements and Performance Criteria

Check and ensure safe working of equipments used for erection

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

- PC1.** carry out inspection to the equipments visually or by conducting trial runs
- PC2.** check all certificates relevant to safe working of the lifting equipments
- PC3.** check counterweight attached to the equipment is as per specification and work requirement
- PC4.** check fuel requirement of equipments prior to lifting and report to concerned authority in case of insufficiency
- PC5.** carry out functional test of the emergency stop device
- PC6.** report for maintenance to the equipments to superior on break down or malfunction
- PC7.** fill up necessary checklists (if any) relevant to equipment fitness prior to lifting

Check the work area and ensure suitable condition for heavy load lifting and erection

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

- PC8.** ensure adequate compaction and base of base of lifting equipments
- PC9.** ensure area of operation (lifting, unloading and erection) is safely marked, barricaded, accessed and free from other hazardous effects
- PC10.** check the foundations or supports are adequately stable and completed in essential aspects to bear the load of erection to commence
- PC11.** instruct workers to use appropriate PPEs during activities
- PC12.** instruct subordinates to carry out checks to the lifting tools and tackles to ensure safe working
- PC13.** coordinate with equipment operators to assess feasibility of operation which includes safe wind speed, clear visibility, required clear area for swing of boom, clear access to the unloading location

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for rigging works



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- KU2.** safety rules and regulations for handling and storing relevant tools and equipment and materials for rigging works
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** how to read and interpret drawings, specifications relevant to task
- KU8.** basic computer literacy
- KU9.** working mechanism of heavy lifting equipments like cranes, jacks, winches, derricks
- KU10.** common checks to be carried out the lifting equipment and its components/ accessories to determine its fitness for working
- KU11.** load lifting capacity of lifting equipments under use and interpretation load chart provided with concerned equipments
- KU12.** statutory requirements of lifting equipments and its operators for safe working at construction sites
- KU13.** how to place counterweights to the lifting equipments as per equipment manual/ guidelines/ load lifting requirement
- KU14.** preparatory works to be completed for using heavy lift equipments like area grading, base compaction, periodical maintenance
- KU15.** common hazards involved in heavy lifting and erection work
- KU16.** 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.
- KU17.** approved work method statement, applicable safety norms and safety control measures as applicable to the heavy lifting/ erection works at site

Generic Skills (GS)

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

- GS1.** write in at least two language, preferably in the local language of the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality



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- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** decide whether the counterweight attached to the equipment is as per specification and work requirement
- GS15.** plan work & organize required resource in coordination with team members and superior
- GS16.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS17.** ensure completion of work as per agreed time schedule and quality
- GS18.** report to superior for maintenance to the equipments on break down or malfunction
- GS19.** resolve and solve any conflict within the team
- GS20.** assess quantity of materials for day work
- GS21.** optimize resources
- GS22.** minimize wastages
- GS23.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS24.** identify and assess how violation of any safety norms may lead to accidents
- GS25.** identify violation of any safety norms which may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check and ensure safe working of equipments used for erection</i>	27	40.5	-	-
PC1. carry out inspection to the equipments visually or by conducting trial runs	7	10.5	-	-
PC2. check all certificates relevant to safe working of the lifting equipments	4	6	-	-
PC3. check counterweight attached to the equipment is as per specification and work requirement	4	6	-	-
PC4. check fuel requirement of equipments prior to lifting and report to concerned authority in case of insufficiency	2	3	-	-
PC5. carry out functional test of the emergency stop device	4	6	-	-
PC6. report for maintenance to the equipments to superior on break down or malfunction	3	4.5	-	-
PC7. fill up necessary checklists (if any) relevant to equipment fitness prior to lifting	3	4.5	-	-
<i>Check the work area and ensure suitable condition for heavy load lifting and erection</i>	13	19.5	-	-
PC8. ensure adequate compaction and base of base of lifting equipments	2	3	-	-
PC9. ensure area of operation (lifting, unloading and erection) is safely marked, barricaded, accessed and free from other hazardous effects	2	3	-	-
PC10. check the foundations or supports are adequately stable and completed in essential aspects to bear the load of erection to commence	3	4.5	-	-
PC11. instruct workers to use appropriate PPEs during activities	2	3	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. instruct subordinates to carry out checks to the lifting tools and tackles to ensure safe working	2	3	-	-
PC13. coordinate with equipment operators to assess feasibility of operation which includes safe wind speed, clear visibility, required clear area for swing of boom, clear access to the unloading location	2	3	-	-
NOS Total	40	60	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0725
NOS Name	Inspect and ensure feasibility of lifting operation
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	14/08/2015
Next Review Date	31/03/2022
NSQC Clearance Date	05/02/2018



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

Description

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

Scope

This unit/ task covers the following:

- Supervise heavy lifting activity
- Provide signals to equipment operator by hand or using electronic devices

Elements and Performance Criteria

Supervise heavy lifting activity

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 start 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.** ensure safe and desired functioning of lifting equipments by conducting checks to the equipments and trial run by competent personnel
- PC5.** carry out physical checks on components, assemblies and its locations where sling is to be attached for lifting
- PC6.** check slinging tools, lifting tools for their usability and specification 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 use of tag line of adequate length to control motion of the suspended load
- PC10.** ensure motion of crane boom and load movement path is free from any static or mobile obstruction, adequately illuminated
- PC11.** check and ensure erection of barricade 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.** operate communication devices efficiently
- PC14.** provide verbal directions appropriately to equipment operator using communication devices
- PC15.** adhere to standard hand signal methods while providing signals
- PC16.** provide signals to guide suspended loads to appropriate location under critical conditions such as in case of obstacles, imperceptible erection spots, dimly lighted conditions

Knowledge and Understanding (KU)



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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 and equipment and materials for rigging works
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- 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 to be adhered during lifting operation
- KU9.** working mechanism of heavy lifting equipments like cranes, jacks, winches, derricks
- KU10.** load lifting capacity of lifting equipments under use
- KU11.** statutory requirements of lifting equipments and its operators for safe working at construction sites
- KU12.** preparatory works to be completed for using heavy lift equipments 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 having influence in 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
- KU18.** load lifting capacity of equipment according to angle of boom
- KU19.** standard hand signals applicable to heavy load lifting operations by cranes
- KU20.** load chart applicable to lifting equipment
- KU21.** operation of communication devices
- KU22.** 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 two language, preferably in the local language of the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits



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- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** decide whether the tools and equipments are safe and used according to load
- GS15.** decide whether the sling is locked properly at the hook of crane
- GS16.** plan work & organize required resource in coordination with team members and superior
- GS17.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** resolve and solve any conflict within the team
- GS20.** ensure the use of tag line of adequate length to control motion of the suspended load
- GS21.** ensure motion of equipments is free from any static or mobile obstruction
- GS22.** provide signals to guide suspended loads to appropriate location under critical conditions
- GS23.** assess quantity of materials for day work
- GS24.** optimize resources
- GS25.** minimize wastages
- GS26.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS27.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Supervise heavy lifting activity</i>	30	45	-	-
PC1. brief subordinates about heavy lifting plan and safety control measures prior to start lifting	2.5	3.75	-	-
PC2. allocate activities to specified subordinates as per their level of expertise	2.5	3.75	-	-
PC3. analyze hazards related with lifting operations and report to concerned authority for any required action	5	7.5	-	-
PC4. ensure safe and desired functioning of lifting equipments by conducting checks to the equipments and trial run by competent personnel	4	6	-	-
PC5. carry out physical checks on components, assemblies and its locations where sling is to be attached for lifting	4	6	-	-
PC6. check slinging tools, lifting tools for their usability and specification according to load	2	3	-	-
PC7. ensure tightening of shackles, hooks, anchoring slings or belts during lifting of load	2	3	-	-
PC8. ensure exact locking of sling at hook of crane	2	3	-	-
PC9. ensure use of tag line of adequate length to control motion of the suspended load	2	3	-	-
PC10. ensure motion of crane boom and load movement path is free from any static or mobile obstruction, adequately illuminated	2	3	-	-
PC11. check and ensure erection of barrication surrounding heavy lifting location	2	3	-	-
<i>Provide signals to equipment operator by hand or using electronic devices</i>	10	15	-	-
PC12. maintain clear line of vision with the operator and suspended load while providing signal	2	3	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. operate communication devices efficiently	1	1.5	-	-
PC14. provide verbal directions appropriately to equipment operator using communication devices	2	3	-	-
PC15. adhere to standard hand signal methods while providing signals	2	3	-	-
PC16. provide signals to guide suspended loads to appropriate location under critical conditions such as in case of obstacles, imperceptible erection spots, dimly lighted conditions	3	4.5	-	-
NOS Total	40	60	-	-



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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	1.0
Last Reviewed Date	14/08/2015
Next Review Date	31/03/2022
NSQC Clearance Date	05/02/2018



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

This unit/ task covers the following:

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

Elements and Performance Criteria

Carry out basic erection planning

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

- PC1.** read and interpret structural drawings to determine structural locations, orientations, critical erection points and resource required for executing the works
- PC2.** adhere to time line specified 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 to subordinates as and when required
- 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.** carry out measurements as required to check alignment, elevation and orientation of the erected components or assemblies
- PC11.** check terminals, edges, holes and joints as per quality control checklists or guidelines
- PC12.** check and 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
- PC13.** check the depth of threaded inserts in the existing structures or RCC precast units to ensure minimum acceptable engagement for the bolt threads
- PC14.** ensure placing of grout pad, cleaning of gaps for grouting and caulking as per requirement
- PC15.** check lateral stability of part erected component and instruct to provide bracings, supports at required locations
- PC16.** offer for quality control checking by superior and other concerned authorities



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- PC17.** inform respective concerned authorities for future fabrication activities such as bolting, welding, grinding
- PC18.** observe 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 and equipment and materials for rigging works
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- 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.** basic concept of different types of welding according to welding material, method and criticality in position
- KU12.** concept about different types of bolts as per diameter and their functions
- KU13.** basic concept of welded joints, bolt joints and rivet joints and their use
- KU14.** basic concept of gas cutting and grinding works
- KU15.** working mechanism of heavy lifting equipments like cranes, jacks, winches, derricks
- KU16.** load lifting capacity of lifting equipments 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
- KU22.** concept of 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 two language, preferably in the local language of the site and basic English



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- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** decide whether the tools and equipments are safe to use for erection works
- GS15.** decide whether the orientation of structural components and assemblies is within tolerance limit
- GS16.** plan work & organize required resource in coordination with team members and superior
- GS17.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** resolve and solve any conflict within the team
- GS20.** conduct quality control checking of erection works
- GS21.** inform respective concerned authorities for future fabrication activities such as bolting, welding, grinding
- GS22.** carry out measurements to ensure proper alignment, elevation and orientation of erected components assess quantity of materials for day work
- GS23.** optimize resources
- GS24.** minimize wastages
- GS25.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS26.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out basic erection planning</i>	13	19.5	-	-
PC1. read and interpret structural drawings to determine structural locations, orientations, critical erection points and resource required for executing the works	3	4.5	-	-
PC2. adhere to time line specified for completion of activities	2	3	-	-
PC3. sequence key activities related to lifting and erection of components or assemblies	3	4.5	-	-
PC4. manage required resources in coordination with superiors and other respective authorities	3	4.5	-	-
PC5. plan and establish safe access to the point of erection	2	3	-	-
<i>Execute erection work as per drawing/ specification</i>	27	40.5	-	-
PC6. obtain key survey markings at appropriate locations	2	3	-	-
PC7. develop hand sketches and provide to subordinates as and when required	3	4.5	-	-
PC8. supervise lowering, placing and positioning of components or assemblies by providing instructions to the subordinates to achieve desired outcome	2	3	-	-
PC9. oversee erection activity and ensure the orientation of structural components and assemblies is within tolerance limit as per relevant drawings or instructions	3	4.5	-	-
PC10. carry out measurements as required to check alignment, elevation and orientation of the erected components or assemblies	2.5	3.75	-	-
PC11. check terminals, edges, holes and joints as per quality control checklists or guidelines	2	3	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. check and 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	2	3	-	-
PC13. check the depth of threaded inserts in the existing structures or RCC precast units to ensure minimum acceptable engagement for the bolt threads	2	3	-	-
PC14. ensure placing of grout pad, cleaning of gaps for grouting and caulking as per requirement	2	3	-	-
PC15. check lateral stability of part erected component and instruct to provide bracings, supports at required locations	2	3	-	-
PC16. offer for quality control checking by superior and other concerned authorities	1	1.5	-	-
PC17. inform respective concerned authorities for future fabrication activities such as bolting, welding, grinding	1.5	2.25	-	-
PC18. observe housekeeping and safety practices as per standard/ organizational norms during all concerned activities	2	3	-	-
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	1.0
Last Reviewed Date	14/08/2015
Next Review Date	31/03/2022
NSQC Clearance Date	05/02/2018



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 effectively with co-workers, superiors and sub-ordinates across different teams
- Support co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task

Elements and Performance Criteria

Interact and communicate in effective and conclusive 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.** address the problems effectively and report if required to immediate supervisor appropriately
- PC4.** receive instructions clearly from superiors and respond effectively on the same
- PC5.** communicate to team members/subordinates for appropriate work technique and method
- PC6.** seek clarification and advice as per the requirement and applicability

Support co-workers to execute 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

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** own roles and responsibilities
- KU2.** importance of effective communication and establishing strong working
- KU3.** risks of a failure in teamwork in terms of effects on project outcomes, timelines, safety at the construction site, etc.
- KU4.** different modes of communication, and its appropriate usage
- KU5.** importance of creating healthy and cooperative work environment among the gangs of workers



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- KU6.** different activities within his work area where an 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
- KU9.** importance and need of supporting co-workers facing problems for smooth

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 in one or more languages, preferably the local language of the site
- GS3.** read communication from team members regarding work completed, materials used, tools and tackles used, support required
- GS4.** speak in one or more languages, preferably in one of the local language of the site
- GS5.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide on what information is to be shared with co-workers within the team or from interfacing gang of workers
- GS8.** plan work and organize required resources in coordination with team members
- GS9.** complete all assigned task in coordination with team members
- GS10.** take initiative in resolving issues among co-workers or report the same to superiors
- GS11.** ensure best ways of coordination among team members
- GS12.** communicate with co-workers considering their educational / social background
- GS13.** evaluate the complexity of task and determine if any guidance is required from superiors



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in effective and conclusive manner</i>	28	42	-	-
PC1. pass on work related information/ requirement clearly to the team members	4	6	-	-
PC2. inform co-workers and superiors about any kind of deviations from work	4	6	-	-
PC3. address the problems effectively and report if required to immediate supervisor appropriately	8	12	-	-
PC4. receive instructions clearly from superiors and respond effectively on the same	4	6	-	-
PC5. communicate to team members/subordinates for appropriate work technique and method	4	6	-	-
PC6. seek clarification and advice as per the requirement and applicability	4	6	-	-
<i>Support co-workers to execute project requirements</i>	12	18	-	-
PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams	6	9	-	-
PC8. work together with co-workers in a synchronized manner	6	9	-	-
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	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.2
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



CON/N8002: Plan and organize work to meet expected outcomes

Description

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

Elements and Performance Criteria

Prioritize work activities to achieve desired results

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

- PC1.** understand clearly the targets and timelines set by superiors
- PC2.** plan activities as per schedule and sequence
- PC3.** provide guidance to the subordinates to obtain desired outcome
- PC4.** plan housekeeping activities prior to and post completion of work

Organize desired resources prior to commencement of work

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

- PC5.** list and arrange required resources prior to commencement of work
- PC6.** select and employ correct tools, tackles and equipment for completion of desired work
- PC7.** complete the work with allocated resources
- PC8.** engage allocated manpower in an appropriate manner
- PC9.** use resources in an optimum manner to avoid any unnecessary wastage
- PC10.** employ tools, tackles and equipment with care to avoid damage to the same
- PC11.** organize work output, materials used, tools and tackles deployed
- PC12.** processes adopted to be in line with the specified standards and instructions

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** importance of proper housekeeping
- KU2.** policies, procedures and work targets set by superiors
- KU3.** roles and responsibilities in executing the work for subordinates and self
- KU4.** standard practices of work to be adopted for assigned task
- KU5.** how to use available resources in a judicious and appropriate manner to minimize wastages or damage

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.** list out the assigned works and targets



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- GS3.** read in one or more language, preferably the local language at the site
- GS4.** read communication from co-workers, superiors and notices from other departments as per requirement of the level
- GS5.** speak in one or more language, preferably one of the local language at the site
- GS6.** listen and follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc.
- GS7.** communicate effectively with co-workers and subordinates
- GS8.** decide on what sequence is to be adopted for execution of work
- GS9.** plan and organize the materials, tools, tackles and equipment required to execute the work
- GS10.** complete all assigned task with proper planning and organizing
- GS11.** arrange or seek help to arrange for material, tools and tackles in case of shortfall
- GS12.** analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles
- GS13.** evaluate potential solutions to minimize avoidable delays and wastages at the construction site



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prioritize work activities to achieve desired results</i>	17	25.5	-	-
PC1. understand clearly the targets and timelines set by superiors	5	7.5	-	-
PC2. plan activities as per schedule and sequence	4	6	-	-
PC3. provide guidance to the subordinates to obtain desired outcome	5	7.5	-	-
PC4. plan housekeeping activities prior to and post completion of work	3	4.5	-	-
<i>Organize desired resources prior to commencement of work</i>	23	34.5	-	-
PC5. list and arrange required resources prior to commencement of work	4	6	-	-
PC6. select and employ correct tools, tackles and equipment for completion of desired work	3	4.5	-	-
PC7. complete the work with allocated resources	3	4.5	-	-
PC8. engage allocated manpower in an appropriate manner	2	3	-	-
PC9. use resources in an optimum manner to avoid any unnecessary wastage	2	3	-	-
PC10. employ tools, tackles and equipment with care to avoid damage to the same	2	3	-	-
PC11. organize work output, materials used, tools and tackles deployed	4	6	-	-
PC12. processes adopted to be in line with the specified standards and instructions	3	4.5	-	-
NOS Total	40	60	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N8002
NOS Name	Plan and organize work to meet expected outcomes
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.1
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



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

This unit/task covers the following:

- Ensure healthy and safe working environment for subordinates.
- Ensure effective implementation of health, safety and environment policies and procedures
- Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed

Elements and Performance Criteria

Ensure healthy and safe working environment for subordinates

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

- PC1.** ensure proper housekeeping at workplace
- PC2.** implement safe handling , stacking methods at workplace / store
- PC3.** ensure that health and safety plan is followed by all subordinates
- PC4.** Identify any hazard in workplace and notify them to appropriate authority
- PC5.** ensure that all safety and protection installation are correctly placed & adequate
- PC6.** ensure safe access is available at work place for movement of workers & materials
- PC7.** ensure safe use of tools and tackles by the workmen as per applicability
- PC8.** ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: Head Protection (Helmets Ear Protection Fall Protection Foot Protection Face and Eye Protection, Hand &Body Protection Respiratory Protection
- PC9.** maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction from safety personals

Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed

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

- PC10.** ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: methods of receiving or sourcing information dealing with accidents and emergencies associated with the work and environment reporting stooping work evacuation fire risks and safe exit procedures
- PC11.** follow procedures for accident recording and reporting as per organizational and statutory requirements
- PC12.** ensure effective adherence to response to emergency procedures /protocols
- PC13.** report any case of emergency / risks to the concern people at the construction site
- PC14.** report any perceived risk hazards to the superiors / concerned EHS
- PC15.** demonstrate the use of fire protection equipments for different type of fire hazard



PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies

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 & 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.** monitoring working in workplace keeping safety & health in mind

Generic Skills (GS)

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

- GS1.** write in one or more language
- GS2.** read in one or more language
- GS3.** read instructions, rules, guidelines, sign boards related to safety as per the requirements
- GS4.** speak in one or more language, preferably one of the local language at the site
- GS5.** listen and follow instructions shared by site EHS and superiors regarding site safety
- GS6.** communicate reporting of site conditions, hazards, accidents, etc.
- GS7.** decide upon the appropriate application & installation of safety equipments like barricades and nets
- GS8.** decide upon the tools box talks contents
- GS9.** identify any hazards in workplace organize safety equipments prior to commencing work
- GS10.** work to ensure safe and healthy environmental conditions at workplace
- GS11.** identify analysis & report hazards, accidents, health and safety risks, etc. or seek help from the appropriate authorities to address the same as per the guidelines laid down by site EHS
- GS12.** analyze areas of work which are potential safety hazards and could result in damage to life or property for the respective gang at the construction site
- GS13.** respond to critical health risks or accidents on an urgent basis through appropriate actions



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure healthy and safe working environment for subordinates</i>	20	30	-	-
PC1. ensure proper housekeeping at workplace	2	3	-	-
PC2. implement safe handling , stacking methods at workplace / store	2	3	-	-
PC3. ensure that health and safety plan is followed by all subordinates	2	3	-	-
PC4. Identify any hazard in workplace and notify them to appropriate authority	2	3	-	-
PC5. ensure that all safety and protection installation are correctly placed & adequate	2	3	-	-
PC6. ensure safe access is available at work place for movement of workers & materials	2	3	-	-
PC7. ensure safe use of tools and tackles by the workmen as per applicability	4	6	-	-
PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: Head Protection (Helmets Ear Protection Fall Protection Foot Protection Face and Eye Protection, Hand &Body Protection Respiratory Protection	2	3	-	-
PC9. maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals	2	3	-	-
<i>Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed</i>	20	30	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: methods of receiving or sourcing information dealing with accidents and emergencies associated with the work and environment reporting stooping work evacuation fire risks and safe exit procedures	4	6	-	-
PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements	2	3	-	-
PC12. ensure effective adherence to response to emergency procedures /protocols	3	4.5	-	-
PC13. report any case of emergency / risks to the concern people at the construction site	3	4.5	-	-
PC14. report any perceived risk hazards to the superiors / concerned EHS	3	4.5	-	-
PC15. demonstrate the use of fire protection equipments for different type of fire hazard	3	4.5	-	-
PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies	2	3	-	-
NOS Total	40	60	-	-



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	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

- 1.Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70



Qualification Pack



(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/N0725. Inspect and ensure feasibility of lifting operation	40	60	-	-	100	10
CON/N0726. Supervise heavy lifting of structural assemblies at construction sites	40	60	-	-	100	20
CON/N0727. Execute erection works as per drawing/ specification	40	60	-	-	100	20
CON/N8001. Work effectively in a team to deliver desired results at the workplace	40	60	-	-	100	12
CON/N8002. Plan and organize work to meet expected outcomes	40	60	-	-	100	18
CON/N9002. Manage workplace for safe and healthy work environment	40	60	-	-	100	20
Total	240	360	-	-	600	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.
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.



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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.