



## Qualification Pack



# Khalasi (Assistant Rigger)

QP Code: CON/Q0701

Version: 2.0

NSQF Level: 3

Construction Skill Development Council of India || Construction Skill Development CPB 103 & 104 (1st Floor), Block 4B, DLF Corporate Park, Phase III, MG Road, Gurgaon-122002  
Telephone: 0124-4513915 to 18



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## CON/Q0701: Khalasi (Assistant Rigger)

### Brief Job Description

The job role is responsible for shifting, preparing surface of heavy structural steel/ RCC precast units, laying concrete pump lines, assisting in erection of staging for heavy RCC structures and pile foundation works by using appropriate rigging gears, hand tools and PPEs at construction or erection site

### Personal Attributes

The individual is expected to be physically fit and should be able to work across various locations in extreme weather/site conditions. The job holder should preferably be physically sound, free from vertigo problem, cardiovascular diseases as the nature of work involves handling heavy loads and sometimes working at height.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [CON/N0701: Shift RCC Precast / Structural Steel units at construction site](#)
2. [CON/N0702: Prepare surface of RCC precast units or structural steel units prior to erection](#)
3. [CON/N0703: Lay and dismantle pump-line for concreting](#)
4. [CON/N0704: Assist in carrying out staging for heavy RCC work](#)
5. [CON/N0705: Assist in in-situ RCC piling works](#)
6. [CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
7. [CON/N9001: Work according to personal health, safety and environment protocol at construction site](#)

### Qualification Pack (QP) Parameters

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



## Qualification Pack

<b>NSQF Level</b>	3
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2004/7215.10
<b>Minimum Educational Qualification &amp; Experience</b>	5th Class with 1-2 Years of experience For non-trained worker, minimum 2 years site experience in same occupation OR 5th Class with 1-2 Years of experience Minimum 1 year experience as a certified Helper Shuttering Carpenter/Helper Bar Bender and steel fixer/Helper Fabrication
<b>Minimum Level of Education for Training in School</b>	Not Applicable
<b>Pre-Requisite License or Training</b>	NIL
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	19/06/2020
<b>Next Review Date</b>	24/07/2023
<b>Deactivation Date</b>	24/07/2023
<b>NSQC Approval Date</b>	22/08/2019
<b>Version</b>	2.0
<b>Reference code on NQR</b>	2019/CON/CSDCI/3294
<b>NQR Version</b>	2



## Qualification Pack

# CON/N0701: Shift RCC Precast / Structural Steel units at construction site

## Description

This unit describes the skills and knowledge required to shift RCC Precast / Structural Steel units at construction site.

## Scope

The scope covers the following :

- Select and use appropriate rigging gears, hand tools and PPEs
- Carry out preparatory work prior to lifting operations
- Shift RCC precast units or steel components as per instructions

## Elements and Performance Criteria

### *Select and use appropriate rigging gears, hand tools and PPEs*

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

- PC1.** identify and select appropriate rigging gears required for heavy material lifting and shifting works at construction site
- PC2.** isolate faulty rigging gears and store them separately as per instruction
- PC3.** select appropriate hand tools to be used for heavy material rigging works
- PC4.** select and use appropriate ppes for lifting operations

### *Carry out preparatory work prior to lifting operations*

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

- PC5.** carry out checks to the rigging gears and hand tools for its usability during and prior to material lifting and shifting work
- PC6.** remove obstructions (if any) from equipment movement route as per instructions
- PC7.** check location of lifting for suitability of unloading of loads as per instructions
- PC8.** prepare loads for lifting as per instructions
- PC9.** assist to the earth moving equipments or compactors in order to prepare base for heavy lifting equipments

### *Shift RCC precast units or steel components as per instructions*

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

- PC10.** check for presence of safety signage, illumination, barricading at the route of material shifting as per agreed work plan
- PC11.** report clearly and concisely to senior in case of unsafe condition for material lifting and shifting
- PC12.** place prescribed supports, frames, blocking and cushioning at the deck of transporting vehicle to prevent in-transit damage of the unit or vehicle as per instruction
- PC13.** anchor units to the right locations and hook up with the prescribed lifting equipment by using slings, shackle, rope or lifting hooks and secure properly against slipping or deflection as per instruction



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- PC14.** assist in loading of precast or structural steel units to the transporting vehicle as per instruction
- PC15.** control position of suspended components while being shifted directly by using equipments by pulling efficiently by ropes as per instruction
- PC16.** offload units from vehicle to ground at heavy lifting point by assisting lifting equipments under close supervision
- PC17.** place suitable materials like wooden sleepers, stools etc on the base as per instruction to create ground clearance to the materials and provision for further lifting
- PC18.** offload, place and de-sling material on the sleepers safely as per instructions

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for construction rigging works
- KU2.** safety rules and regulations for construction rigging works
- KU3.** personal protection including use of safety gears and equipment
- KU4.** safe working methods and movements while performing relevant tasks
- KU5.** request procedure for tools & materials
- KU6.** housekeeping & other administrative rules
- KU7.** standard practices for shifting and stacking of heavy structural members
- KU8.** safety rules and PPE for shifting and stacking of heavy structural members
- KU9.** service request procedures for material and tools
- KU10.** linear measurement
- KU11.** selection and use of hand tools and rigging gears like pulley, chain block, slings, heavy lifting chains, shackles, hooks, ropes, hammers etc.
- KU12.** how to interpret signage during erection procedures
- KU13.** procedures for attaching of slings to load directly or using lifting gears
- KU14.** standard procedure for creating provisions for further lifting of heavy components or assemblies
- KU15.** basic knowledge of hand signaling used for load lifting operations
- KU16.** dos and donts for carrying out rigging operations at construction sites
- KU17.** method of barricading and clear distance to be covered surrounding lifting area
- KU18.** safe posture of load lifting equipments while lifting load

## Generic Skills (GS)

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

- GS1.** write in one or more language, preferably in the local language of the site
- GS2.** read in one or more language, preferably in the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules, safety tags and instructions related to exit routes during emergency at the workplace



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- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen and follow instructions / communication shared by superiors/ coworkers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide whether the workplace is safe for working and also check that the relevant work is not creating hazardous conditions for others
- GS8.** decide on the use of rigging gears considering the type of loads
- GS9.** decide on the usability of the rigging gears and reject if found damaged
- GS10.** identify and use relevant tools effectively
- GS11.** complete work as per agreed time schedule and quality norms
- GS12.** minimize wastages
- GS13.** revert to superior for selection/sorting of materials
- GS14.** identify location at which violation of any safety norms may lead to accidents



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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select and use appropriate rigging gears, hand tools and PPEs</i>	<b>6</b>	<b>14</b>	-	-
<b>PC1.</b> identify and select appropriate rigging gears required for heavy material lifting and shifting works at construction site	-	-	-	-
<b>PC2.</b> isolate faulty rigging gears and store them separately as per instruction	-	-	-	-
<b>PC3.</b> select appropriate hand tools to be used for heavy material rigging works	-	-	-	-
<b>PC4.</b> select and use appropriate ppes for lifting operations	-	-	-	-
<i>Carry out preparatory work prior to lifting operations</i>	<b>9</b>	<b>21</b>	-	-
<b>PC5.</b> carry out checks to the rigging gears and hand tools for its usability during and prior to material lifting and shifting work	-	-	-	-
<b>PC6.</b> remove obstructions (if any) from equipment movement route as per instructions	-	-	-	-
<b>PC7.</b> check location of lifting for suitability of unloading of loads as per instructions	-	-	-	-
<b>PC8.</b> prepare loads for lifting as per instructions	-	-	-	-
<b>PC9.</b> assist to the earth moving equipments or compactors in order to prepare base for heavy lifting equipments	-	-	-	-
<i>Shift RCC precast units or steel components as per instructions</i>	<b>15</b>	<b>35</b>	-	-
<b>PC10.</b> check for presence of safety signage, illumination, barricading at the route of material shifting as per agreed work plan	-	-	-	-
<b>PC11.</b> report clearly and concisely to senior in case of unsafe condition for material lifting and shifting	-	-	-	-





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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> place prescribed supports, frames, blocking and cushioning at the deck of transporting vehicle to prevent in-transit damage of the unit or vehicle as per instruction	-	-	-	-
<b>PC13.</b> anchor units to the right locations and hook up with the prescribed lifting equipment by using slings, shackle, rope or lifting hooks and secure properly against slipping or deflection as per instruction	-	-	-	-
<b>PC14.</b> assist in loading of precast or structural steel units to the transporting vehicle as per instruction	-	-	-	-
<b>PC15.</b> control position of suspended components while being shifted directly by using equipments by pulling efficiently by ropes as per instruction	-	-	-	-
<b>PC16.</b> offload units from vehicle to ground at heavy lifting point by assisting lifting equipments under close supervision	-	-	-	-
<b>PC17.</b> place suitable materials like wooden sleepers, stools etc on the base as per instruction to create ground clearance to the materials and provision for further lifting	-	-	-	-
<b>PC18.</b> offload, place and de-sling material on the sleepers safely as per instructions	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0701
<b>NOS Name</b>	Shift RCC Precast / Structural Steel units at construction site
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	



## Qualification Pack

# CON/N0702: Prepare surface of RCC precast units or structural steel units prior to erection

## Description

This unit describes the skills and knowledge required to prepare surface of RCC precast units or structural steel units prior to erection.

## Scope

The scope covers the following :

- Carry out abrasive blasting to structural steel and precast RCC sections
- Carry out epoxy gluing in segmental RCC precast construction works

## Elements and Performance Criteria

### *Carry out abrasive blasting to structural steel and precast RCC sections*

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

- PC1.** check surroundings to ensure safe condition for sandblasting
- PC2.** erect obstructing arrangement surrounding to the area of sand blasting operations as per instruction
- PC3.** adjust the air compressor and sandblaster gauges to the correct or desired pressure
- PC4.** grade abrasive materials as per instruction prior to start blasting operation
- PC5.** connect compressor and blasting equipment prior to undertake blasting activity
- PC6.** carry out sandblasting as per instruction and ensure proper cleaning of unwanted substances from rcc or metal surface

### *Carry out epoxy gluing in segmental RCC precast construction works*

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

- PC7.** clean existing dust, laitance, unwanted articles from the joints between rcc precast components where gluing is to be done as per instruction
- PC8.** prepare glue-mix (if required) as per instruction
- PC9.** apply glue to the concrete surface as per specification or instruction using suitable means of application

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for construction rigging works
- KU2.** safety rules and regulations for construction rigging works
- KU3.** personal protection including use of safety gears and equipment
- KU4.** safe working methods and movements while performing relevant tasks
- KU5.** request procedure for tools & materials



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- KU6.** housekeeping & other administrative rules
- KU7.** procedure of handling sand blasting gun
- KU8.** abrasives to be used in sandblasting and their physical properties
- KU9.** safety rules and use of protective jacket, ear plugs, goggles, gloves during sandblasting work
- KU10.** procedure for carrying out sandblasting and wire brushing
- KU11.** properties of epoxy bonding agent
- KU12.** appropriate temperature for application of epoxy bonding agent
- KU13.** manufacturers instructions for application of epoxy bonding agent

## Generic Skills (GS)

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

- GS1.** write in one or more language, preferably in the local language of the site
- GS2.** read in one or more language, preferably in the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules, safety tags and instructions related to exit routes during emergency at the workplace
- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen and follow instructions communicated by supervisors
- GS6.** orally and efficiently communicate with team members
- GS7.** decide whether the workplace is safe for working and also the relevant work is not creating hazardous conditions for others
- GS8.** decide on the distance of protective arrangement (eg. Curtaining) from the abrasive blasting point
- GS9.** plan self-work as per the direction /close supervision of a level-3 riggers and above
- GS10.** ensure work is done within time and as per desired quality as per instructions provided by superiors
- GS11.** identify location at which violation of any safety norms may lead to accident



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out abrasive blasting to structural steel and precast RCC sections</i>	<b>20</b>	<b>50</b>	-	-
<b>PC1.</b> check surroundings to ensure safe condition for sandblasting	-	-	-	-
<b>PC2.</b> erect obstructing arrangement surrounding to the area of sand blasting operations as per instruction	-	-	-	-
<b>PC3.</b> adjust the air compressor and sandblaster gauges to the correct or desired pressure	-	-	-	-
<b>PC4.</b> grade abrasive materials as per instruction prior to start blasting operation	-	-	-	-
<b>PC5.</b> connect compressor and blasting equipment prior to undertake blasting activity	-	-	-	-
<b>PC6.</b> carry out sandblasting as per instruction and ensure proper cleaning of unwanted substances from rcc or metal surface	-	-	-	-
<i>Carry out epoxy gluing in segmental RCC precast construction works</i>	<b>10</b>	<b>20</b>	-	-
<b>PC7.</b> clean existing dust, laitance, unwanted articles from the joints between rcc precast components where gluing is to be done as per instruction	-	-	-	-
<b>PC8.</b> prepare glue-mix (if required) as per instruction	-	-	-	-
<b>PC9.</b> apply glue to the concrete surface as per specification or instruction using suitable means of application	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0702
<b>NOS Name</b>	Prepare surface of RCC precast units or structural steel units prior to erection
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	



## Qualification Pack

### CON/N0703: Lay and dismantle pump-line for concreting

#### Description

This unit describes the skills and knowledge required to lay and dismantle pump-line for concreting

#### Scope

The scope covers the following :

- Shift, stack and clean pipe segments as per requirements
- Lay, join and dismantle pump-line for concreting

#### Elements and Performance Criteria

##### *Shift, stack and clean pipe segments as per requirements*

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

- PC1.** carry out visual checks to the pipe segments for usability
- PC2.** shift and stack pipe segments as per instruction to appropriate location
- PC3.** select and shift clamps and required hand tools to the work location as per instruction
- PC4.** carry out cleaning of pipe segments as per requirement prior and during concreting work

##### *Lay, join and dismantle pump-line for concreting*

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

- PC5.** join pipe segments using clamps, turn-buckles, hand tools and supporting tools under supervision
- PC6.** construct working platforms at intervals for maintenance of pump line
- PC7.** lift pipe segments at heights using rigging tools as per work requirement
- PC8.** carry out ramming of external pipes in order to check continuity of flow of concrete during concreting works as per instruction
- PC9.** align pipeline efficiently providing required support at instructed locations to provide stability and water tightness
- PC10.** use standard bent pipes as per instruction to ensure desired flow of concrete in pipeline
- PC11.** join, cut, clean and realign pump lines according to need of concreting works as per instruction
- PC12.** dismantle, lower pump line safely, using appropriate hand tools

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for construction rigging works
- KU2.** safety rules and regulations for construction rigging works
- KU3.** personal protection including use of safety gears and equipment
- KU4.** safe working methods and movements while performing relevant tasks



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- KU5.** request procedure for tools & materials
- KU6.** housekeeping & other administrative rules
- KU7.** selection and use of common lifting tools and tackles like pulley, chain block, slings, shackles, hooks, ropes, hammers etc.
- KU8.** standard procedure of laying and aligning concrete pump line
- KU9.** how to clean concrete from pipe segments without damaging the same
- KU10.** use of standard bent pipes as per requirements
- KU11.** how to use clamps, safety chains, wire strops, anchor brackets, etc. to secure the concrete pipeline

## Generic Skills (GS)

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

- GS1.** write in one or more language, preferably in the local language of the site
- GS2.** read in one or more language, preferably in the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules, safety tags and instructions related to exit routes during emergency at the workplace
- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen and follow instructions communicated by supervisors
- GS6.** orally and efficiently communicate with team members
- GS7.** decide whether the workplace is safe for working and also the relevant work is not creating hazardous conditions for others
- GS8.** decide on the rigging tools are to be used for laying pump-line as per work requirement
- GS9.** plan method of supporting to be provided to the pipe assembly
- GS10.** plan handling and stacking methods of pipe segments during shifting and erection
- GS11.** ensure work is done within time and as per desired quality as per instructions provided by superiors
- GS12.** identify location at which violation of any safety norms may lead to accident





## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Shift, stack and clean pipe segments as per requirements</i>	<b>10</b>	<b>25</b>	-	-
<b>PC1.</b> carry out visual checks to the pipe segments for usability	-	-	-	-
<b>PC2.</b> shift and stack pipe segments as per instruction to appropriate location	-	-	-	-
<b>PC3.</b> select and shift clamps and required hand tools to the work location as per instruction	-	-	-	-
<b>PC4.</b> carry out cleaning of pipe segments as per requirement prior and during concreting work	-	-	-	-
<i>Lay, join and dismantle pump-line for concreting</i>	<b>20</b>	<b>45</b>	-	-
<b>PC5.</b> join pipe segments using clamps, turn-buckles, hand tools and supporting tools under supervision	-	-	-	-
<b>PC6.</b> construct working platforms at intervals for maintenance of pump line	-	-	-	-
<b>PC7.</b> lift pipe segments at heights using rigging tools as per work requirement	-	-	-	-
<b>PC8.</b> carry out ramming of external pipes in order to check continuity of flow of concrete during concreting works as per instruction	-	-	-	-
<b>PC9.</b> align pipeline efficiently providing required support at instructed locations to provide stability and water tightness	-	-	-	-
<b>PC10.</b> use standard bent pipes as per instruction to ensure desired flow of concrete in pipeline	-	-	-	-
<b>PC11.</b> join, cut, clean and realign pump lines according to need of concreting works as per instruction	-	-	-	-
<b>PC12.</b> dismantle, lower pump line safely, using appropriate hand tools	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0703
<b>NOS Name</b>	Lay and dismantle pump-line for concreting
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	



## Qualification Pack

# CON/N0704: Assist in carrying out staging for heavy RCC work

## Description

This unit describes the skills and knowledge required to assist in carrying out staging for heavy RCC work

## Scope

The scope covers the following :

- Identify and handle staging components
- Assist in erection and dismantling of staging

## Elements and Performance Criteria

### *Identify and handle staging components*

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

- PC1.** identify and select staging components such as trestles, heavy duty H- frames, acrospans, base jacks, clamps etc
- PC2.** carry out visual checks on staging components to ensure their physical condition is safe for working
- PC3.** shift and stack required staging materials at proper location as per direction
- PC4.** shift and stack chain pulleys, ropes, hooks, shackles required for erection of staging to the work location as per instruction

### *Assist in erection and dismantling of staging*

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

- PC5.** check base of scaffolding for adequate compaction or rigidity and level
- PC6.** assist in erection of vertical and bracing components at specified intervals as per instruction
- PC7.** assist in lifting staging components at required locations using appropriate tools and tackles like chain hoist, pulley, hooks etc
- PC8.** provide supports at appropriate location using appropriate formwork component as per direction
- PC9.** carry out housekeeping work at work site as per instruction

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for construction rigging works
- KU2.** safety rules and regulations for construction rigging works
- KU3.** personal protection including use of safety gears and equipment
- KU4.** safe working methods and movements while performing relevant tasks
- KU5.** request procedure for tools & materials
- KU6.** housekeeping & other administrative rules



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- KU7.** use and name of hand tools and rigging gears which are commonly used for staging works such as hammer, pulley, rope, spanner etc.
- KU8.** components required for staging work for heavy RCC structure like trestles, Hframes, acrospans, base jacks, timber, clamps, MS channels etc.
- KU9.** standard procedure of lifting heavy material components using rigging tools and tackles
- KU10.** standard procedure of shifting, storing and stacking staging materials at worksite

## Generic Skills (GS)

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

- GS1.** write in one or more languages, preferably in the local language of the site
- GS2.** read in one or more language, preferably in the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules, safety tags and instructions related to exit routes during emergency at the workplace
- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen and follow instructions / communication shared by superiors/ coworkers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide whether the workplace is safe for working and also the relevant work is not creating hazardous conditions for others
- GS8.** decide on the usability and type of rigging gears to be used for staging works
- GS9.** plan self-work as per the direction /close supervision of a level-3 riggers and above
- GS10.** ensure work is done within time and as per desired quality as per instructions provided by superiors
- GS11.** determine any violation from organizational and standard safety norms



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Identify and handle staging components</i>	<b>10</b>	<b>25</b>	-	-
<b>PC1.</b> identify and select staging components such as trestles, heavy duty H- frames, acrospans, base jacks, clamps etc	-	-	-	-
<b>PC2.</b> carry out visual checks on staging components to ensure their physical condition is safe for working	-	-	-	-
<b>PC3.</b> shift and stack required staging materials at proper location as per direction	-	-	-	-
<b>PC4.</b> shift and stack chain pulleys, ropes, hooks, shackles required for erection of staging to the work location as per instruction	-	-	-	-
<i>Assist in erection and dismantling of staging</i>	<b>20</b>	<b>45</b>	-	-
<b>PC5.</b> check base of scaffolding for adequate compaction or rigidity and level	-	-	-	-
<b>PC6.</b> assist in erection of vertical and bracing components at specified intervals as per instruction	-	-	-	-
<b>PC7.</b> assist in lifting staging components at required locations using appropriate tools and tackles like chain hoist, pulley, hooks etc	-	-	-	-
<b>PC8.</b> provide supports at appropriate location using appropriate formwork component as per direction	-	-	-	-
<b>PC9.</b> carry out housekeeping work at work site as per instruction	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0704
<b>NOS Name</b>	Assist in carrying out staging for heavy RCC work
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	



## Qualification Pack

### CON/N0705: Assist in in-situ RCC piling works

#### Description

This unit describes the skills and knowledge required to assist in in-situ RCC piling works

#### Scope

The scope covers the following :

- Carry out preparatory works
- Assist in piling works

#### Elements and Performance Criteria

##### *Carry out preparatory works*

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

- PC1.** identify, shift and stack tools and accessories required for piling works at specified work location as per instruction
- PC2.** assist in erection of piling tripod at appropriate positions
- PC3.** assist in establishing winch, pumps and pipelines required for piling operation at specified locations
- PC4.** erect barricading, safety signage at the work location as per instruction
- PC5.** clean piling tools and accessories as per requirement prior and post concreting work

##### *Assist in piling works*

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

- PC6.** apply bentonite to the earth - pit as per requirement and instruction
- PC7.** clean sludge, muck generated from the boreholes manually and dispose the same at appropriate location
- PC8.** carry out cleaning and greasing of concreting tremie, funnel and other accessories as per requirement
- PC9.** assist in shifting and lowering of reinforcement cage in to the bored hole of the pile prior to concreting work
- PC10.** carry out manual earthwork according to work requirement and as per instruction

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for construction rigging works
- KU2.** safety rules and regulations for construction rigging works
- KU3.** personal protection including use of safety gears and equipment
- KU4.** safe working methods and movements while performing relevant tasks
- KU5.** request procedure for tools & materials



## Qualification Pack

- KU6.** housekeeping & other administrative rules
- KU7.** tools used for piling works such as tripod, funnel, auger chisel, tremie etc..
- KU8.** use of lifting tools and equipments in bore hole piling works such as pulley, chain block, winch machine, wire rope etc.
- KU9.** how to operate tremie pipes during manual boring and concreting work
- KU10.** how to erect tripod and its accessories
- KU11.** method of barricading at worksite
- KU12.** use of bentonite in piling works and its physical properties
- KU13.** cleaning of muck and debris from earth pit
- KU14.** signage requirements at piling site

## Generic Skills (GS)

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

- GS1.** write in one or more languages, preferably in the local language of the site
- GS2.** read in one or more language, preferably in the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules, safety tags and instructions related to exit routes during emergency at the workplace
- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen and follow instructions / communication shared by superiors/ coworkers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide whether the workplace is safe for working and also the relevant work is not creating hazardous conditions for others
- GS8.** decide on the usability and type of rigging gears to be used for piling works
- GS9.** plan self-work as per the direction /close supervision of a level-3 riggers and above
- GS10.** ensure work is done within time and as per desired quality as per instructions provided by superiors
- GS11.** determine any violation from organizational and standard safety norms





## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out preparatory works</i>	<b>15</b>	<b>35</b>	-	-
<b>PC1.</b> identify, shift and stack tools and accessories required for piling works at specified work location as per instruction	-	-	-	-
<b>PC2.</b> assist in erection of piling tripod at appropriate positions	-	-	-	-
<b>PC3.</b> assist in establishing winch, pumps and pipelines required for piling operation at specified locations	-	-	-	-
<b>PC4.</b> erect barricading, safety signage at the work location as per instruction	-	-	-	-
<b>PC5.</b> clean piling tools and accessories as per requirement prior and post concreting work	-	-	-	-
<i>Assist in piling works</i>	<b>15</b>	<b>35</b>	-	-
<b>PC6.</b> apply bentonite to the earth - pit as per requirement and instruction	-	-	-	-
<b>PC7.</b> clean sludge, muck generated from the boreholes manually and dispose the same at appropriate location	-	-	-	-
<b>PC8.</b> carry out cleaning and greasing of concreting tremie, funnel and other accessories as per requirement	-	-	-	-
<b>PC9.</b> assist in shifting and lowering of reinforcement cage in to the bored hole of the pile prior to concreting work	-	-	-	-
<b>PC10.</b> carry out manual earthwork according to work requirement and as per instruction	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0705
<b>NOS Name</b>	Assist in in-situ RCC piling works
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	



## 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 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



## Qualification Pack

- 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



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in effective and conclusive manner</i>	<b>18</b>	<b>42</b>	-	-
<b>PC1.</b> pass on work related information/ requirement clearly to the team members	-	-	-	-
<b>PC2.</b> inform co-workers and superiors about any kind of deviations from work	-	-	-	-
<b>PC3.</b> address the problems effectively and report if required to immediate supervisor appropriately	-	-	-	-
<b>PC4.</b> receive instructions clearly from superiors and respond effectively on the same	-	-	-	-
<b>PC5.</b> communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
<b>PC6.</b> seek clarification and advice as per the requirement and applicability	-	-	-	-
<i>Support co-workers to execute project requirements</i>	<b>12</b>	<b>28</b>	-	-
<b>PC7.</b> hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams	-	-	-	-
<b>PC8.</b> work together with co-workers in a synchronized manner	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N8001
<b>NOS Name</b>	Work effectively in a team to deliver desired results at the workplace
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	4.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	



## Qualification Pack

# CON/N9001: Work according to personal health, safety and environment protocol at construction site

## Description

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocol at construction site

## Scope

The scope covers the following :

- Follow safety norms as defined by organization
- Adopt healthy & safe work practices
- Implement good housekeeping and environment protection process and activities

## Elements and Performance Criteria

### *Follow safety norms as defined by organization*

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

- PC1.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- PC2.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- PC3.** follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable
- PC4.** participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site
- PC5.** select and operate different types of fire extinguishers corresponding to types of fires as per EHS guideline
- PC6.** identify near miss , unsafe condition and unsafe act

### *Adopt healthy & safe work practices*

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

- PC7.** use appropriate Personal Protective Equipment (PPE) as per work requirements including: Head Protection (Helmets), Ear protection Fall Protection, Foot Protection, Face and Eye Protection, Hand and Body Protection, Respiratory Protection (if required)
- PC8.** handle all required tools, tackles , materials & equipment safely
- PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC10.** install and apply properly all safety equipment as instructed
- PC11.** follow safety protocol and practices as laid down by site EHS department
- PC12.** undertake and pass height pass test as per EHS guideline

### *Implement good housekeeping practices*

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

- PC13.** collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes
- PC14.** apply ergonomic principles wherever required



## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines
- KU2.** types of safety hazards at construction sites
- KU3.** basic ergonomic principles as per applicability
- KU4.** the procedure for responding to accidents and other emergencies at site
- KU5.** use of appropriate personal protective equipment to be used based on various working conditions
- KU6.** importance of handling tools, equipment and materials as per applicable
- KU7.** health and environments effect of construction materials as per applicability
- KU8.** various environmental protection methods as per applicability
- KU9.** storage of waste including the following at appropriate location: non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non-hazardous), any other hazardous wastes and any other flammable wastes
- KU10.** how to use hazardous material, in a safe and appropriate manner as per applicability
- KU11.** types of fire
- KU12.** procedure of operating different types of fire extinguishers
- KU13.** safety relevant to tools, tackles, & requirement as per applicability
- KU14.** housekeeping activities relevant to task

## 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.** fill safety formats for near miss, unsafe conditions and safety suggestions
- GS3.** read in one or more language, preferably in the local language of the site
- GS4.** read sign boards, notice boards relevant to safety
- GS5.** speak in one or more language, preferably in one of the local language of the site
- GS6.** listen instructions / communication shared by site EHS and superiors regarding site safety, and conducting tool box talk
- GS7.** communicate reporting of site conditions, hazards, accidents, etc.
- GS8.** not create unsafe conditions for others
- GS9.** keep the workplace clean and tidy
- GS10.** identify safety risks that affect the health, safety and environment for self and others working in the vicinity, tackle it if within limit or report to appropriate authority
- GS11.** assess and analyze areas which may affect health, safety and environment protocol on the site
- GS12.** ensure personal safety behavior





**GS13.** respond to emergency



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Follow safety norms as defined by organization</i>	<b>9</b>	<b>21</b>	-	-
<b>PC1.</b> identify and report any hazards, risks or breaches in site safety to the appropriate authority	-	-	-	-
<b>PC2.</b> follow emergency and evacuation procedures in case of accidents, fires, natural calamities	-	-	-	-
<b>PC3.</b> follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable	-	-	-	-
<b>PC4.</b> participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site	-	-	-	-
<b>PC5.</b> select and operate different types of fire extinguishers corresponding to types of fires as per EHS guideline	-	-	-	-
<b>PC6.</b> identify near miss , unsafe condition and unsafe act	-	-	-	-
<i>Adopt healthy &amp; safe work practices</i>	<b>15</b>	<b>35</b>	-	-
<b>PC7.</b> use appropriate Personal Protective Equipment (PPE) as per work requirements including: Head Protection (Helmets), Ear protection Fall Protection, Foot Protection, Face and Eye Protection, Hand and Body Protection, Respiratory Protection (if required)	-	-	-	-
<b>PC8.</b> handle all required tools, tackles , materials & equipment safely	-	-	-	-
<b>PC9.</b> follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	-	-	-	-
<b>PC10.</b> install and apply properly all safety equipment as instructed	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> follow safety protocol and practices as laid down by site EHS department	-	-	-	-
<b>PC12.</b> undertake and pass height pass test as per EHS guideline	-	-	-	-
<i>Implement good housekeeping practices</i>	<b>6</b>	<b>14</b>	-	-
<b>PC13.</b> collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes	-	-	-	-
<b>PC14.</b> apply ergonomic principles wherever required	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N9001
<b>NOS Name</b>	Work according to personal health, safety and environment protocol at construction site
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	4.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Clearance Date</b>	

### 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) 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 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 50%. To pass the Qualification Pack, every trainee should score a minimum of 50% 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

7. 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.
8. After the certain number of iterations as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. 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 time frame set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

### Minimum Aggregate Passing % at QP Level : 50

**(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/N0701.Shift RCC Precast / Structural Steel units at construction site	30	70	-	-	100	15
CON/N0702.Prepare surface of RCC precast units or structural steel units prior to erection	30	70	-	-	100	15
CON/N0703.Lay and dismantle pump-line for concreting	30	70	-	-	100	15
CON/N0704.Assist in carrying out staging for heavy RCC work	30	70	-	-	100	15
CON/N0705.Assist in in-situ RCC piling works	30	70	-	-	100	15
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	-	-	100	10



### Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9001.Work according to personal health, safety and environment protocol at construction site	30	70	-	-	100	15
<b>Total</b>	<b>210</b>	<b>490</b>	<b>-</b>	<b>-</b>	<b>700</b>	<b>100</b>



## Qualification Pack

### Acronyms

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



## Qualification Pack

### Glossary

<b>Sector</b>	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.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	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.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	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.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	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.
<b>Scope</b>	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

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