



Mechanic - Belt Conveyor

QP Code: ISC/Q0904

Version: 2.0

NSQF Level: 3

Indian Iron and Steel Sector Skill Council || Karigari Bhawan 5th Floor, Room No-509
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ISC/Q0904: Mechanic - Belt Conveyor

Brief Job Description

The individual in this role perform maintenance of belt conveyor system including belts, idlers, motors, interlocking of belts, bunkers and control systems.

Personal Attributes

The person should be patient, organised, team-oriented and have the ability to work for long hours in adverse conditions. They must be able to plan and prioritise tasks effectively and have an eye for detail and quality.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. ISC/N0008: Use basic health and safety practices at the work place
- 2. ISC/N0009: Work effectively with others
- 3. ISC/N0922: Prepare for maintenance activities
- 4. ISC/N0923: Perform maintenance of belt conveyor
- 5. ISC/N0924: Perform post-maintenance activities

Qualification Pack (QP) Parameters

| Sector | Iron & Steel |
|---|--|
| Sub-Sector | Steel, Sponge iron, Ferro Alloys, Re-Rollers, Refractory |
| Occupation | Mechanical Maintenance |
| Country | India |
| NSQF Level | 3 |
| Aligned to NCO/ISCO/ISIC Code | NCO-2015/7233.0401 |
| Minimum Educational Qualification & Experience | 8th Class Pass with 1 year of relevant experience OR 10th Class Pass |
| Minimum Level of Education for Training in School | |
| Pre-Requisite License or Training | NA |





| Minimum Job Entry Age | 18 Years |
|-----------------------|----------|
| Last Reviewed On | NA |
| Next Review Date | NA |
| NSQC Approval Date | |
| Version | 2.0 |





ISC/N0008: Use basic health and safety practices at the work place

Description

This OS unit is about following safety and adopting sustainable practices for optimising use of resources.

Scope

The scope covers the following:

- · Maintain safe and secure working environment
- Emergencies, rescue and first aid procedures
- · Health and hygiene
- · Housekeeping and waste management
- Material and energy conservation

Elements and Performance Criteria

Maintain safe and secure working environment

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

- PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace
- PC2. follow safe working practices while dealing with hazards to ensure safety of self and others
- PC3. use appropriate protective clothing/equipment for specific tasks and work
- PC4. follow appropriate safety practices while working in and around trenches, elevated places and confined areas
- **PC5.** lift heavy objects safely using correct procedures
- PC6. carry out routine check of the machine for identifying potential hazards
- **PC7.** report any identified breaches in health, safety and security policies and procedures to the designated person

Emergencies, rescue and first aid procedures

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

- PC8. use appropriate type of fire extinguisher
- PC9. apply appropriate rescue techniques during fire hazard
- **PC10.** provide appropriate first aid procedure to victims wherever required eg.in case of bleeding, burns, choking, electric shock etc.
- PC11. follow emergency procedures such as raising alarm, safe evacuation etc.
- PC12. attend safety training and fire drills to respond promptly during an emergency

Health and hygiene

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

PC13. follow regular cleaning and disinfection practices at work place using appropriate techniques and materials





- PC14. follow hand hygiene practices at work place using appropriate techniques and materials
- PC15. report regarding the contagious illness of self or people in close contact
- PC16. avoid contact with ill people and self-isolate in a similar situation

Housekeeping and waste management

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

- PC17. follow the fundamentals of 5S for housekeeping
- PC18. ensure good housekeeping in order to prevent hazards and accidents
- PC19. store the material, tools and equipment in the correct location and in good condition
- PC20. segregate waste into different categories
- PC21. identify recyclable, non-recyclable and hazardous waste
- PC22. dispose non-recyclable, recyclable and reusable waste appropriately at identified location

Material and energy conservation

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

- PC23. identify ways to optimize usage of material in various tasks/activities/processes
- PC24. check for spills/leakages in various tasks/activities/processes
- PC25. plug spills/leakages and escalate to appropriate authority if unable to rectify
- PC26. check if the equipment/machine is functioning normally before commencing work and rectify wherever required
- PC27. ensure electrical equipment and appliances are properly connected and turned off when not in

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** organisation procedures for health, safety and security, individual role and responsibilities in this context
- **KU2.** the organisation's emergency procedures for different emergency situations and the importance of following the same
- KU3. evacuation procedures for workers and visitors
- KU4. how and when to report hazards
- KU5. potential hazards, risks and threats based on the nature of work
- KU6. preventative and remedial actions to be taken in case of exposure to toxic material
- KU7. various types of fire extinguisher
- KU8. various types of safety signs and their meaning
- **KU9.** appropriate first aid treatment relevant to different condition e.g. bleeding, minor burns, eye injuries etc.
- KU10. relevant standards, procedures and policies related to 5S followed in the company
- KU11. the various materials used and their storage norms
- KU12. efficient utilisation of material and water





- KU13. basics of electricity and prevalent energy efficient devices
- KU14. common practices of conserving electricity
- **KU15.** categorisation of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics
- KU16. usage of different colors of dustbins
- KU17. waste management techniques

Generic Skills (GS)

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

- GS1. read safety instructions/guidelines
- GS2. modify work practices to improve them
- GS3. ask for clarifications from superior about the job requirement
- GS4. work with supervisors/team members to carry out work related tasks
- GS5. complete tasks efficiently and accurately within stipulated time
- GS6. inform/report to concerned person in case of any problem
- GS7. make timely decisions for efficient utilization of resources
- GS8. write reports such as accident report, in at least English/regional language
- GS9. be punctual and utilize time efficiently





Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|-----------------|--------------------|------------------|---------------|
| Maintain safe and secure working environment | 10 | 14 | - | 6 |
| PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace | 2 | 2 | - | 1 |
| PC2. follow safe working practices while dealing with hazards to ensure safety of self and others | 2 | 3 | - | 1 |
| PC3. use appropriate protective clothing/ equipment for specific tasks and work | 1 | 2 | - | 1 |
| PC4. follow appropriate safety practices while working in and around trenches, elevated places and confined areas | 2 | 1 | - | - |
| PC5. lift heavy objects safely using correct procedures | 1 | 2 | - | 1 |
| PC6. carry out routine check of the machine for identifying potential hazards | 1 | 2 | - | 1 |
| PC7. report any identified breaches in health, safety and security policies and procedures to the designated person | 1 | 2 | - | 1 |
| Emergencies, rescue and first aid procedures | 6 | 9 | - | 5 |
| PC8. use appropriate type of fire extinguisher | 1 | 1 | - | 1 |
| PC9. apply appropriate rescue techniques during fire hazard | 1 | 2 | - | 1 |
| PC10.provide appropriate first aid procedure to victims wherever required eg.in case of bleeding, burns, choking, electric shock etc. | 2 | 2 | - | 1 |
| PC11.follow emergency procedures such as raising alarm, safe evacuation etc. | 1 | 2 | - | 1 |
| PC12.attend safety training and fire drills to respond promptly during an emergency | 1 | 2 | - | 1 |
| Health and hygiene | 2 | 6 | - | 2 |
| PC13.follow regular cleaning and disinfection practices at work place using appropriate techniques and materials | 1 | 2 | - | 1 |





Transforming the skill landscape

| | | | Transforming the | skili landscape |
|--|----|----|------------------|-----------------|
| PC14.follow hand hygiene practices at work place using appropriate techniques and materials | 1 | 2 | - | 1 |
| PC15.report regarding the contagious illness of self or people in close contact | - | 1 | - | - |
| PC16.avoid contact with ill people and self-isolate in a similar situation | - | 1 | - | - |
| Housekeeping and waste management | 7 | 12 | - | 5 |
| PC17.follow the fundamentals of 5S for housekeeping | 2 | 3 | - | 2 |
| PC18.ensure good housekeeping in order to prevent hazards and accidents | 1 | 2 | - | - |
| PC19.store the material, tools and equipment in the correct location and in good condition | 1 | 2 | - | - |
| PC20.segregate waste into different categories | 1 | 2 | - | 1 |
| PC21.identify recyclable, non-recyclable and hazardous waste | 1 | 1 | - | 1 |
| PC22.dispose non-recyclable, recyclable and reusable waste appropriately at identified location | 1 | 2 | - | 1 |
| Material and energy conservation | 5 | 9 | - | 2 |
| PC23.identify ways to optimize usage of material in various tasks/activities/processes | 1 | 2 | - | - |
| PC24.check for spills/leakages in various tasks/ activities/processes | 1 | 2 | - | 1 |
| PC25.plug spills/leakages and escalate to appropriate authority if unable to rectify | 1 | 2 | - | 1 |
| PC26.check if the equipment/machine is functioning normally before commencing work and rectify wherever required | 1 | 2 | - | - |
| PC27.ensure electrical equipment and appliances are properly connected and turned off when not in use | 1 | 1 | - | - |
| NOS Total | 30 | 50 | - | 20 |
| | | | | |





National Occupational Standards (NOS) Parameters

| NOS Code | ISC/N0008 |
|---------------------|---|
| NOS Name | Use basic health and safety practices at the work place |
| Sector | Iron & Steel |
| Sub-Sector | Generic |
| Occupation | Generic |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | NA |
| Next Review Date | NA |
| NSQC Clearance Date | |





ISC/N0009: Work effectively with others

Description

This OS unit is about communicating with colleagues/superiors and others, either in own work group or in other work groups within organisation.

Scope

The scope covers the following:

- Communicate effectively with colleagues and others
- Interact with supervisor
- Follow appropriate behaviour at work place

Elements and Performance Criteria

Communicate effectively with colleagues and others

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

- PC1. coordinate with colleagues to share work, as per the workload in order to achieve team goals
- **PC2.** maintain clear communication with colleagues and others, wherever needed, through all means i.e. face-to-face, telephonic or written
- PC3. adjust communication styles to reflect gender and persons with disability (PwD) sensitivity
- PC4. respect all colleagues and co-workers
- PC5. resolve conflicts by communicating with colleagues and other departments

Interact with supervisor

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

- PC6. identify work requirements by receiving instructions from reporting supervisor
- PC7. escalate problems to supervisors that cannot be handled
- PC8. report the completed work
- PC9. interact with the reporting supervisor about any possible hazards and safety concerns

Follow appropriate behaviour at work place

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

- PC10. extend help to people with Disability (PwD) at workplace, if required
- PC11. empathize with people with disability
- PC12. adopt a gender neutral behavior
- PC13. adopt responsible and disciplined behaviours at the workplace

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:





- **KU1.** the importance of effective communication and establishing good working relationships with colleagues and supervisor
- KU2. different methods of communication as per the circumstances
- KU3. importance of teamwork in organization and individual success
- KU4. various components of effective communication
- **KU5.** barriers to effective communication
- KU6. common reasons for interpersonal conflict
- KU7. what constitutes disciplined behaviour for a working professional
- KU8. gender concepts, issues & legislation
- KU9. organisational policies and procedures related to gender equality
- KU10. challenges faced by PWD and the ways to help them overcome the same

Generic Skills (GS)

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

- **GS1.** read instructions/guidelines/procedures
- GS2. listen effectively and orally communicate information
- GS3. ask for clarification and advice from the concerned person
- GS4. maintain positive and effective relationships with colleagues
- GS5. evaluate the possible solution(s) to the problem
- GS6. spot and communicate potential areas of disruptions in the work process and report the same
- GS7. complete written work with attention to detail
- GS8. check that the work meets customer requirements





Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|-----------------|--------------------|------------------|---------------|
| Communicate effectively with colleagues and others | 13 | 20 | - | 9 |
| PC1. coordinate with colleagues to share work, as per the workload in order to achieve team goals | 3 | 5 | - | 2 |
| PC2. maintain clear communication with colleagues and others, wherever needed, through all means i.e. face-to-face, telephonic or written | 5 | 7 | - | 3 |
| PC3. adjust communication styles to reflect gender and persons with disability (PwD) sensitivity | 3 | 4 | - | 2 |
| PC4. respect all colleagues and co-workers | 1 | 2 | - | 1 |
| PC5. resolve conflicts by communicating with colleagues and other departments | 1 | 2 | - | 1 |
| Interact with supervisor | 8 | 14 | - | 6 |
| PC6. identify work requirements by receiving instructions from reporting supervisor | 2 | 3 | - | 1 |
| PC7. escalate problems to supervisors that cannot be handled | 2 | 3 | - | 2 |
| PC8. report the completed work | 2 | 3 | - | 1 |
| PC9. interact with the reporting supervisor about any possible hazards and safety concerns | 2 | 5 | - | 2 |
| Follow appropriate behaviour at work place | 9 | 16 | - | 5 |
| PC10.extend help to people with Disability (PwD) at workplace, if required | 2 | 4 | - | 2 |
| PC11.empathize with people with disability | 2 | 4 | - | 1 |
| PC12.adopt a gender neutral behavior | 2 | 4 | - | 1 |
| PC13.adopt responsible and disciplined behaviours at the workplace | 3 | 4 | - | 1 |
| NOS Total | 30 | 50 | - | 20 |





National Occupational Standards (NOS) Parameters

| NOS Code | ISC/N0009 |
|---------------------|------------------------------|
| NOS Name | Work effectively with others |
| Sector | Iron & Steel |
| Sub-Sector | Generic |
| Occupation | Generic |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | NA |
| Next Review Date | NA |
| NSQC Clearance Date | |





ISC/N0922: Prepare for maintenance activities

Description

This OS unit is about preparing for maintenance of conveyor system.

Scope

The scope covers the following:

- Identify work requirements
- Prepare for maintenance activities

Elements and Performance Criteria

Identify work requirements

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

- PC1. identify the conveyor system, its manufacturer's specifications and functioning from the user manual
- PC2. read maintenance schedule and checklist and plan the time and schedule for conducting the maintenance
- PC3. identify the tools, equipment, consumables and spare parts required during the task

Prepare for maintenance activities

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

- PC4. use appropriate Personal Protective Equipment (PPE) for safe working in workshop
- PC5. select and arrange the right tools, equipment, consumables and spare parts as per the SOP and job requirements
- PC6. plan sequence of activities for carrying out the belt conveyor maintenance work
- PC7. check the tools, equipment, consumables and spare parts for any defects and that they are as per the required quality standards
- PC8. check and calibrate the tools and equipment before use
- PC9. prepare tools, tackles, spares, lifting equipment etc. as per SOP/WI
- PC10. report damaged / defective components of equipment and tools as per the escalation matrix

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. company's maintenance standards and processes
- KU2. risk and impact of not following defined procedures/work instructions
- KU3. working principle of belt conveyor system
- **KU4.** functioning and use of associated systems, accessories and components such as gear box, driving system, idlers, pulleys etc. of conveyor system
- KU5. different types of mechanical and electrical equipment with control system





- **KU6.** optimal working condition of conveyor operating components e.g. driving motor, gear box, driving couplers including driving pulleys and other attachments
- KU7. Standard Operating Procedures (SOP) recommended by OEM for using tools and equipment
- **KU8.** how to read maintenance schedules and checklists recommended by the conveyor manufacturer
- **KU9.** visual checks to identify belt damage, defects, conditions of idlers, belt joints, safety switches etc. beforehand
- KU10. corrective actions for common faults and failures in machine and its components
- KU11. documentation required regarding repair, maintenance and service performed
- KU12. how to collect and store consumables, spare parts, tools etc. as per organizational procedures
- **KU13.** use of appropriate PPE, material handling equipment and tools for completing the maintenance tasks

Generic Skills (GS)

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

- GS1. read work instructions, equipment manuals and process documents
- GS2. communicate the process requirements to the supervisor and co-workers
- GS3. attentively listen and comprehend the information given by the supervisor/team members
- GS4. write work related information in English/regional language
- GS5. recognise a workplace problem and take suitable action
- **GS6.** analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS7. plan and organise work according to the work requirements
- GS8. complete the assigned tasks with minimum supervision
- GS9. report to the supervisor or deal with a colleague individually, depending on the type of concern





Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|-----------------|--------------------|------------------|---------------|
| Identify work requirements | 9 | 9 | - | 6 |
| PC1. identify the conveyor system, its manufacturer's specifications and functioning from the user manual | 2 | 3 | - | 1 |
| PC2. read maintenance schedule and checklist and plan the time and schedule for conducting the maintenance | 2 | 3 | - | 2 |
| PC3. identify the tools, equipment, consumables and spare parts required during the task | 5 | 3 | - | 3 |
| Prepare for maintenance activities | 21 | 41 | - | 14 |
| PC4. use appropriate Personal Protective Equipment (PPE) for safe working in workshop | 2 | 3 | - | 1 |
| PC5. select and arrange the right tools, equipment, consumables and spare parts as per the SOP and job requirements | 4 | 9 | - | 3 |
| PC6. plan sequence of activities for carrying out the belt conveyor maintenance work | 2 | 3 | - | 1 |
| PC7. check the tools, equipment, consumables and spare parts for any defects and that they are as per the required quality standards | 4 | 9 | - | 3 |
| PC8. check and calibrate the tools and equipment before use | 3 | 5 | - | 2 |
| PC9. prepare tools, tackles, spares, lifting equipment etc. as per SOP/WI | 4 | 9 | - | 3 |
| PC10.report damaged / defective components of equipment and tools as per the escalation matrix | 2 | 3 | - | 1 |
| NOS Total | 30 | 50 | - | 20 |





National Occupational Standards (NOS) Parameters

| NOS Code | ISC/N0922 |
|---------------------|--|
| NOS Name | Prepare for maintenance activities |
| Sector | Iron & Steel |
| Sub-Sector | Steel, Sponge iron, Ferro Alloys, Re-Rollers, Refractory |
| Occupation | Mechanical Maintenance |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | NA |
| Next Review Date | NA |
| NSQC Clearance Date | |





ISC/N0923: Perform maintenance of belt conveyor

Description

This OS unit is about performing the maintenance of belt conveyor as per the SOP.

Scope

The scope covers the following:

• Perform maintenance of conveyor system

Elements and Performance Criteria

Perform maintenance of conveyor system

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

- PC1. enquire with the user/operator about any problems/unusual conditions noticed on the belt conveyor system
- PC2. follow safety practices during maintenance activities as per organisational SOP
- PC3. perform basic health check-up of conveyor system as specified in the maintenance checklist
- PC4. check the conveyor system parts i.e. conveyor belt, idler, pulley, motor, driving couplings, brake control system etc. for any wear and tear, damage, improper functioning etc.
- PC5. repair or replace damaged belt joints, belt cuts and damaged portion of conveyor belt as per the requirement
- **PC6.** repair or replace damaged components as per the requirement
- PC7. carry out lubrication of all bearings and maintain lubrication oil level in the all gear boxes
- PC8. clean the conveyor gallery and walkway, stair cases, hand railings etc. for safe movement
- PC9. drain water accommodated in the tail end pulley pits to avoid belt slippage
- PC10. ensure all pulley laggings are in good condition and bunker gates are working properly
- PC11. assess when the problem is beyond his competence and report the problem to suitably qualified/designated and competent personnel
- PC12. dispose off waste materials such as failed parts/aggregates, as per organisation's policies

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. company's maintenance standards and processes
- KU2. risk and impact of not following defined procedures/work instructions
- KU3. functioning and use of associated systems, accessories and components such as gear box, driving system, idlers, pulleys etc. of conveyor system
- KU4. different types of mechanical and electrical equipment with control system
- **KU5.** optimal working condition of conveyor operating components e.g. driving motor, gear box, driving couplers including driving pulleys and other attachments





- KU6. Standard Operating Procedures (SOP) recommended by OEM for using tools and equipment
- **KU7.** how to read maintenance schedules and checklists recommended by the conveyor manufacturer
- **KU8.** checks to identify belt damage, defects, conditions of idlers, belt joints, safety switches etc. beforehand
- KU9. corrective actions for common faults and failures in machine and its components
- KU10. procedure of belt jointing/belt clipping/belt changing etc.
- **KU11.** various techniques of joint preparation e.g. mechanical (fastening) and vulcanizing (cold and hot)
- **KU12.** use of appropriate PPE, material handling equipment and tools for completing the maintenance tasks

Generic Skills (GS)

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

- GS1. read signals, work instructions, equipment manuals and process documents
- GS2. communicate the process requirements to the supervisor and co-workers
- GS3. attentively listen and comprehend the information given by the supervisor/team members
- GS4. write work related information in English/regional language
- GS5. recognise a workplace problem and take suitable action
- **GS6.** analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS7. plan and organise work according to the work requirements
- GS8. complete the assigned tasks with minimum supervision
- GS9. report to the supervisor or deal with a colleague individually, depending on the type of concern





Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|-----------------|--------------------|------------------|---------------|
| Perform maintenance of conveyor system | 30 | 50 | - | 20 |
| PC1. enquire with the user/operator about any problems/unusual conditions noticed on the belt conveyor system | 2 | 3 | - | 1 |
| PC2. follow safety practices during maintenance activities as per organisational SOP | 1 | 2 | - | - |
| PC3. perform basic health check-up of conveyor system as specified in the maintenance checklist | 4 | 7 | - | 3 |
| PC4. check the conveyor system parts i.e. conveyor belt, idler, pulley, motor, driving couplings, brake control system etc. for any wear and tear, damage, improper functioning etc. | 4 | 8 | - | 3 |
| PC5. repair or replace damaged belt joints, belt cuts and damaged portion of conveyor belt as per the requirement | 4 | 7 | - | 3 |
| PC6. repair or replace damaged components as per the requirement | 3 | 5 | - | 2 |
| PC7. carry out lubrication of all bearings and maintain lubrication oil level in the all gear boxes | 2 | 3 | - | 1 |
| PC8. clean the conveyor gallery and walkway, stair cases, hand railings etc. for safe movement | 2 | 3 | - | 2 |
| PC9. drain water accommodated in the tail end pulley pits to avoid belt slippage | 2 | 3 | - | 1 |
| PC10.ensure all pulley laggings are in good condition and bunker gates are working properly | 2 | 3 | - | 2 |
| PC11.assess when the problem is beyond his competence and report the problem to suitably qualified/designated and competent personnel | 2 | 3 | - | 1 |
| PC12.dispose off waste materials such as failed parts/aggregates, as per organisation's policies | 2 | 3 | - | 1 |
| NOS Total | 30 | 50 | _ | 20 |





National Occupational Standards (NOS) Parameters

| NOS Code | ISC/N0923 |
|---------------------|--|
| NOS Name | Perform maintenance of belt conveyor |
| Sector | Iron & Steel |
| Sub-Sector | Steel, Sponge iron, Ferro Alloys, Re-Rollers, Refractory |
| Occupation | Mechanical Maintenance |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | NA |
| Next Review Date | NA |
| NSQC Clearance Date | |





ISC/N0924: Perform post-maintenance activities

Description

This OS unit is about performing post-maintenance activities such as trials, storage, housekeeping etc.

Scope

The scope covers the following:

- Conducting trials and documentation
- Perform post-maintenance activities

Elements and Performance Criteria

Conducting trials and documentation

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

- PC1. conduct trials of the conveyor system and verify that specified parameters are attained with no abnormalities
- PC2. change the maintenance due/status sticker
- PC3. ensure that all maintenance points are adequately considered and report the superiors about maintenance activity done
- PC4. record all repairs carried out, time taken and unplanned tasks encountered during the maintenance activities

Perform post-maintenance activities

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

- PC5. clean and store all the tools and equipment after completion of work
- PC6. clean the work area after completion of work
- PC7. remove the tools and equipment being from the work site before handing over
- PC8. inform supervisor and concerned person regarding the job completion

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. relevant standards and procedures followed in the company
- KU2. Standard Operating Procedures (SOP) recommended by OEM for using tools and equipment required
- KU3. how to conduct trails of belt conveyor system
- KU4. how to collect and store consumables, spare parts, tools, etc. as per organizational procedures
- KU5. documentation required regarding repair, maintenance and service performed





Generic Skills (GS)

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

- GS1. read work instructions, equipment manuals and process documents
- GS2. communicate the process requirements to the supervisor and co-workers
- GS3. attentively listen and comprehend the information given by the supervisor/team members
- GS4. write work related information in English/regional language
- GS5. recognise a workplace problem and take suitable action
- **GS6.** analyse and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS7. plan and organise work according to the work requirements
- GS8. complete the assigned tasks with minimum supervision
- GS9. report to the supervisor or deal with a colleague individually, depending on the type of concern





Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|-----------------|--------------------|------------------|---------------|
| Conducting trials and documentation | 14 | 23 | - | 10 |
| PC1. conduct trials of the conveyor system and verify that specified parameters are attained with no abnormalities | 6 | 10 | - | 4 |
| PC2. change the maintenance due/status sticker | 3 | 5 | - | 2 |
| PC3. ensure that all maintenance points are adequately considered and report the superiors about maintenance activity done | 2 | 3 | - | 2 |
| PC4. record all repairs carried out, time taken and unplanned tasks encountered during the maintenance activities | 3 | 5 | - | 2 |
| Perform post-maintenance activities | 16 | 27 | - | 10 |
| PC5. clean and store all the tools and equipment after completion of work | 5 | 9 | - | 3 |
| PC6. clean the work area after completion of work | 5 | 8 | - | 3 |
| PC7. remove the tools and equipment being from the work site before handing over | 3 | 5 | - | 2 |
| PC8. inform supervisor and concerned person regarding the job completion | 3 | 5 | - | 2 |
| NOS Total | 30 | 50 | - | 20 |





National Occupational Standards (NOS) Parameters

| NOS Code | ISC/N0924 |
|---------------------|--|
| NOS Name | Perform post-maintenance activities |
| Sector | Iron & Steel |
| Sub-Sector | Steel, Sponge iron, Ferro Alloys, Re-Rollers, Refractory |
| Occupation | Mechanical Maintenance |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | NA |
| Next Review Date | NA |
| NSQC Clearance Date | |





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

Assessment Weightage

Compulsory NOS

| National Occupational Standards | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage |
|--|-----------------|--------------------|------------------|---------------|----------------|-----------|
| ISC/N0008. Use basic health and safety practices at the work place | 30 | 50 | 0 | 20 | 100 | 15 |
| ISC/N0009. Work effectively with others | 30 | 50 | 0 | 20 | 100 | 15 |
| ISC/N0922. Prepare for maintenance activities | 30 | 50 | 0 | 20 | 100 | 20 |
| ISC/N0923. Perform maintenance of belt conveyor | 30 | 50 | 0 | 20 | 100 | 40 |
| ISC/N0924. Perform post- maintenance activities | 30 | 50 | 0 | 20 | 100 | 10 |
| Total | 150 | 250 | 0 | 100 | 500 | 100 |





Acronyms

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





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. |





| 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. |