



What are Occupational Standards (OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding



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Introduction

Qualifications Pack – Iron & Steel - Excavator Operator

SECTOR: IRON & STEEL

SUB-SECTOR: Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling

REFERENCE ID: ISC/Q0004

ALIGNED TO: NCO-2004 /8332.18

Title of Job: An Excavator operator drives and controls an excavator which is a self-propelled machine used to dig and dump above the base level of the machine. It is often used to excavate coal, rock, ore, over-burden. In addition to an operator cabin that has all control-systems, it has a fixed boom, a movable dipper stick and a forward opening bucket.

Personal Attributes: This job requires the individual to concentrate on the job at hand and complete it efficiently and effectively without any accidents so diligence and hard-working are desired attributes for individuals in this role. He must also demonstrate strong work ethics, courteously with co-workers, and must be good with following instructions of the supervisor.



Job Details	Qualifications Pack Code	ISC/Q0004		
	Job Role	Iron & Steel - Excavator Operator		
	Credits(NSQF)	TBD	Version number	1.0
	Industry	Iron & Steel	Drafted on	21/07/2014
	Sub-sector	Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling	Last reviewed on	30/12/2014
	Occupation	Driving	Next review date	30/12/2015



Job Role	Iron & Steel - Excavator Operator
Role Description	Drives and controls an excavating machine which is a self-propelled machine used to dig and dump above the base level of the machine
NSQF level	3
Minimum Educational Qualifications	Class X / literate with 3 years of experience Driving license mandatory
Maximum Educational Qualifications	ITI Pass
Training (Suggested but not mandatory)	<ul style="list-style-type: none"> • Technical and gallery training • Refresher training if absent from works for a period of one year or more before re-employment
Experience	In lieu of minimum qualification, the incumbent should have 5 years' experience of driving heavy vehicles. Must have driving license and no previous history of accidents
Occupational Standards (OS)	<p>Compulsory:</p> <p>ISC/N0039 : Prepare excavator for operations ISC/N0040 : Perform excavator Operations ISC/N0041 : Perform basic maintenance and troubleshooting on excavator ISC/N0036 : Carry out reporting and logging ISC/N0031 : Health and Safety</p> <p>Optional:</p> <p>N/A</p>
Performance Criteria	As described in the relevant NOS units



Definitions

Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Scope	Scope is the 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 the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar businesses 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.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Unit Code	Unit Code is a unique identifier for a NOS unit, which can be denoted with an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Keywords /Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack
5 S	Technique of maintaining orderliness –Japanese terminology
CP	Control Plan
WI	Work Instructions

Acronyms



ISC/N0039: Prepare Excavator for operations



National Occupational Standards

Overview

This unit is about preparing the Excavator for activities that need to be carried out during a shift.



Unit Code	ISC/N0039
Unit Title (Task)	Prepare Excavator for operations
Description	This unit is about preparing the Excavator for activities that need to be carried out during a shift prior to starting of operations
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> • Conducting pre-operation checks to ensure the Excavator is safe to use. • Recording details of checking and maintenance
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Conducting pre-operation checks to ensure the excavator is safe to use	To be competent, the user/individual on the job must be able to: PC1. Adhere to time limits given by supervisor PC2. Check oil levels of engine, transmission, radiator coolant and brake PC3. Check differential and hydraulic oil levels PC4. Check the hydraulic hose and ram for leakages PC5. Check condition of parking brake, main horn, reverse horn, and head light. PC6. Check the various controls, gauges, warning lamp and other safety devices PC7. Check fan belt tension, electrolyte level and terminal tightness PC8. Check and adjust driving position, rear and side mirrors, seat belts PC9. Clean air filter dust bowls PC10. Drain water and sediment from the fuel tank PC11. Top up coolant and oil in engine, transmission, etc. if necessary. PC12. Apply grease to all greasing pins and pivot points PC13. Ensure the locking bar is in position to prevent the front and rear chassis moving and creating a crushing zone (articulated machines only) PC14. Keep footplates and steps clean and free from mud, dirt and oil
Recording details of Checking & maintenance	To be competent, the user/individual on the job must be able to: PC15. Maintain a checking/maintenance logbook to record all activities performed before starting the Excavator PC16. Report defects precisely to the supervisor if beyond scope of his role
Element	Knowledge and Understanding
A. Organisational Context (Knowledge of the Company/ Organisation and its processes)	The user/individual on the job needs to know and understand: KA1. Job specific documents e.g. daily maintenance checklist and importance of the same KA2. Safety policy of the company KA3. Emergency organisation of the specific work site KA4. Risk and impact of not following defined procedures/work instructions KA5. Escalation matrix for reporting identified problems KA6. Cost of equipment and loss for the company that result from damage of equipment and direct / indirect cost of accidents KA7. Implications of delays in process to the company



<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Different types of excavators and their specific use KB2. Introduction to engine, transmission, their use and function KB3. Different types of hydraulic mechanisms KB4. Principles of friction KB5. Steering mechanisms and correct way of steering on slopes KB6. Significance of greasing and oiling parts of excavator that need routine lubrication KB7. Instrument panel, their location and operation KB8. Controls, levers and switches in order to operate the excavator properly KB9. Optimal working condition of Excavator components e.g. hoist, propel system, power train and other attachments KB10. Optimal engine oil pressure, radiator coolant temperature KB11. Visual checks to identify damage, defects, cracks or leaks beforehand</p>
<p>Skills (S) w.r.t. the scope</p>	
<p>Element</p>	<p>Skills</p>
<p>A. Core Skills/ Generic Skills</p>	<p>Writing skills and reading Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps SA2. Create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process SA3. Use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc. SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements SA6. Answer the queries raised by the operative team as well as intercompany departments SA7. Effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc. SA8. Discuss task lists, schedules, and work-loads with the operative team members SA9. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker</p> <p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p>



	SA10. Communicate with people in a polite manner using respectful language SA11. Resolve difficulties in relationships with colleagues amicably
	Motivation
	The user/individual on the job needs to know and understand how to: SA12. Take responsibility for completing one's own work assignment SA13. Take initiative to enhance/learn skills in one's area of work SA14. Reflect and act upon one's learning from experience
	Reliability
B. Professional Skills	The user/individual on the job needs to know and understand how to: SA15. Avoid absenteeism SA16. Work in a disciplined environment SA17. Be punctual
	Time Management
	The user/individual on the job needs to know and understand how to: SB1. Prioritize and execute tasks within the scheduled time limits
	Analytical Thinking
	The user/individual on the job should be able to: SB2. Suggest methods to avoid accidents/errors while operating Excavator SB3. Identify possible ways to improve operational efficiency
	Organizational Skills
	The user/individual on the job needs to know and understand how to: SB4. Be a team player and achieve collective goals
	Fault Diagnostic and Maintenance
The user/individual on the job needs to know and understand how to: SB5. Check for damage in Excavator components e.g. engine components, tracks, hydraulic ram, brakes, horn, etc. SB6. Conduct maintenance tasks e.g. checking and topping up engine oil levels	



NOS Version Control

NOS Code	ISC/N0039		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and steel	Drafted on	21/07/2014
Industry Sub-sector	Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling	Last reviewed on	30/12/2014
Occupation	Driving	Next review date	30/12/2015





ISC/N0040: Perform Excavator Operations



National Occupational Standards

Overview

This unit is about performing operations while using the Excavator



Unit Code	ISC/N0040
Unit Title (Task)	Perform excavator operations
Description	This unit is about operating the Excavator
Scope	<p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> Starting and driving the Excavator safely to the operations area Loading and hauling the load to the designated destination Discharging the load in correct way by tipping the dump with careful maneuvering of hoist lever
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Starting and driving the Excavator safely to the operations area	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Plan and organize the job according to given instructions PC2. Inspect the worksite to identify any loose soil, hidden deep trenches or marshy patches where Excavator could get stuck. PC3. Start the engine using the pushbutton switch and key switch together PC4. Use the priming pump and pre-heater to start the engine in cold weather conditions</p>
Loading and hauling the load to the designated destination	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC5. Operate the shifting quadrant device for selecting the correct gear range PC6. Ensure Excavator load and operating speed is within limits specified by the manufacturer PC7. Look out for people working and hazards such as trenches, potholes and cables PC8. Adhere to time limits given by supervisor PC9. Perform in-operation visual checks on critical temperature and pressure gauges. PC10. Select and use the right type of brake in different situations and conditions. PC11. Ensure that walkway rules e.g. operating the Excavator within the permissible/allocated areas are followed PC12. Utilize judiciously various signalling devices available in the Excavator such as turn signal, parking indicator, air horn etc. PC13. Keep a safe distance from a tip edge and use an approved stop block before tipping over an edge PC14. Keep a safe distance from other plant or vehicles</p>
Discharging the load in correct way by tipping the dump with careful maneuvering of hoist lever	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC15. Ensure that Excavator is always parked on firm, level ground; with handbrake applied and drive and controls disengaged PC16. Operate the body hoist control handle to maneuver the hydraulic ram that tips the dump. PC17. Discharge the load safely at the position and in the manner designated by the</p>



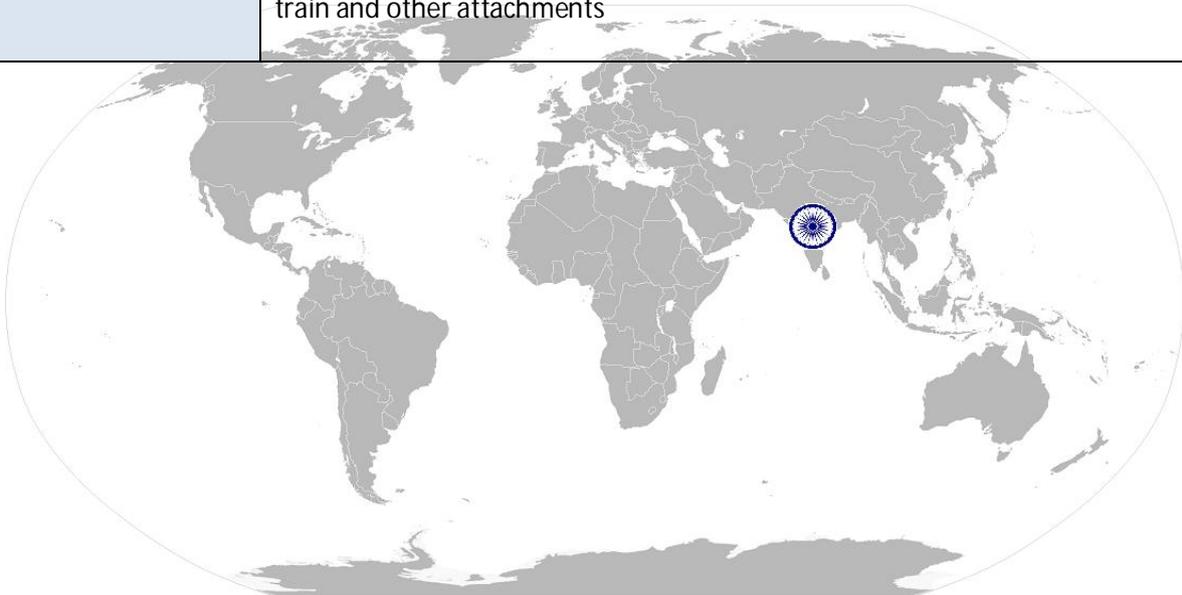
	<p>supervisor PC18. Ensure that no other operators travel on or stand near the Excavator PC19. Inform supervisor of any problems while operating the Excavator</p>
Element	Knowledge and Understanding
A. Organisational Context (Knowledge of the Company/ Organisation and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Job specific documents e.g. daily maintenance checklist and importance of the same KA2. Safety policy of the company KA3. Emergency organisation of the specific work site KA4. Risk and impact of not following defined procedures/work instructions KA5. Escalation matrix for reporting identified problems KA6. Cost of equipment and loss for the company that result from damage of equipment and direct / indirect cost of accidents KA7. Implications of delays in process to the company</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Different types of excavators and their specific use KB2. Introduction to engine, transmission, their use and function KB3. Different types of hydraulic mechanisms KB4. Principles of friction KB5. Steering mechanisms and correct way of steering on slopes KB6. Significance of greasing and oiling. Parts of Excavator that need routine lubrication KB7. Instrument panel, their location and operation KB8. Controls, levers and switches in order to operate the excavator properly KB9. Optimal working condition of Excavator components e.g. hoist, propel system, power train and other attachments KB10. Optimal engine oil pressure, radiator coolant temperature KB11. Visual checks to identify damage, defects or leaks beforehand KB12. General safety rules vis-à-vis digging and stacking KB13. Dangers of digging in vicinity of misfired shots KB14. Signage, mining area signs and other safety and emergency signals KB15. Correct maintenance procedures for Excavator KB16. Response to emergencies e.g. correct way to use fire extinguisher</p>
Skills (S) w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	<p>Writing skills and reading Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps SA2. Create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process SA3. Use emails and other business correspondence methods (internal memos,</p>



	<p>circular etc.) for communicating with other team members/ vendors/ suppliers etc.</p> <p>SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better</p>
	<p>Oral Communication (Listening and Speaking skills)</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements</p> <p>SA6. Answer the queries raised by the operative team as well as intercompany departments</p> <p>SA7. Effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc.</p> <p>SA8. Discuss task lists, schedules, and work-loads with the operative team members</p> <p>SA9. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker</p>
	<p>Integrity</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA10. Maintain integrity with respect to company property and time</p> <p>SA11. Communicate with people in a polite manner using respectful language</p> <p>SA12. Resolve difficulties in relationships with colleagues amicably</p>
	<p>Motivation</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Take responsibility for completing one's own work assignment</p> <p>SA14. Take initiative to enhance/learn skills in one's area of work</p> <p>SA15. Reflect and act upon one's learning from experience</p>
	<p>Reliability</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Avoid absenteeism</p> <p>SA17. Work in a disciplined environment</p> <p>SA18. Be punctual</p>
B. Professional Skills	<p>Time Management</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Prioritize and execute tasks within the scheduled time limits</p>
	<p>Analytical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Suggest methods to avoid accidents/errors while operating Excavator</p> <p>SB3. Identify possible ways to improve operational efficiency</p>
	<p>Organizational Skills</p>



	<p>The user/individual on the job needs to know and understand how to: SB4. Be a team player and achieve collective goals SB5. Concentrate on task at hand and complete it without errors</p>
	<p>Excavator operations</p>
	<p>The user/individual on the job needs to know and understand how to: SB6. Perform driving operations such as forward, reverse, 'U' turn, tight spot maneuvering, etc. SB7. Select and use the correct combination of levers to operate the Excavator. SB8. Maneuver the rear attachments to achieve various tasks</p>
	<p>Fault Diagnostic and Maintenance</p>
	<p>The user/individual on the job needs to know and understand how to: SB9. Check for damage in Excavator components e.g. hoist, propel system, power train and other attachments</p>





NOS Version Control

NOS Code	ISC/N0040		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and steel	Drafted on	21/07/2014
Industry Sub-sector	Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling	Last reviewed on	30/12/2014
Occupation	Driving	Next review date	30/12/2015





Overview

This unit is about performing routine maintenance and troubleshooting on the Excavator



Unit Code	ISC/N0041
Unit Title (Task)	Performing routine maintenance and troubleshooting
Description	This unit is about performing routine maintenance and troubleshooting tasks on the Excavator
Scope	<p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> • Routine maintenance in accordance with the manufacturer’s recommendations and company procedures • Basic diagnostics and Troubleshooting
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Routine maintenance in accordance with the manufacturer’s recommendations and company procedures	<p>To be a competent, the individual on the job must also be able to:</p> <p>PC1. Track machine operating hours to assess the right service schedule. PC2. Clean air filter dust bowls PC3. Clean footplates, pedals and steps free from mud, dirt, ice and snow PC4. Drain water and sediment /fuel separators PC5. Replenish coolants, lubricants and fluids PC6. Grease all greasing pins and pivot points PC7. Check battery levels and condition of the terminals and carrying out minor adjustments if required PC8. Check and maintain the tyre rims, air pressure, wheel nuts and treads PC9. Complete timely and legibly daily/weekly maintenance sheets as provided by the company</p>
Basic diagnostics and Troubleshooting	<p>To be a competent, the individual on the job must also be able to:</p> <p>PC10. Ensure the machine is on firm and level ground before attempting to carry out any maintenance; track machine operating hours to assess the right service schedule PC11. Clean air filter dust bowls PC12. Clean footplates, pedals and steps free from mud, dirt, ice and snow PC13. Drain water and sediment /fuel separators PC14. Replenish coolants, lubricants and fluids PC15. Grease all greasing pins and pivot points PC16. Check battery levels and condition of the terminals and carrying out minor adjustments if required PC17. Check and maintain the tyre rims, air pressure, wheel nuts and treads PC18. Complete timely and legibly daily/weekly maintenance sheets as provided by the company PC19. Ensure the locking bar is in position to prevent the front and rear chassis moving and creating a crushing zone (articulated machines only) PC20. Ensure that suitable props/support devices are used and the bucket is not raised while performing maintenance</p>



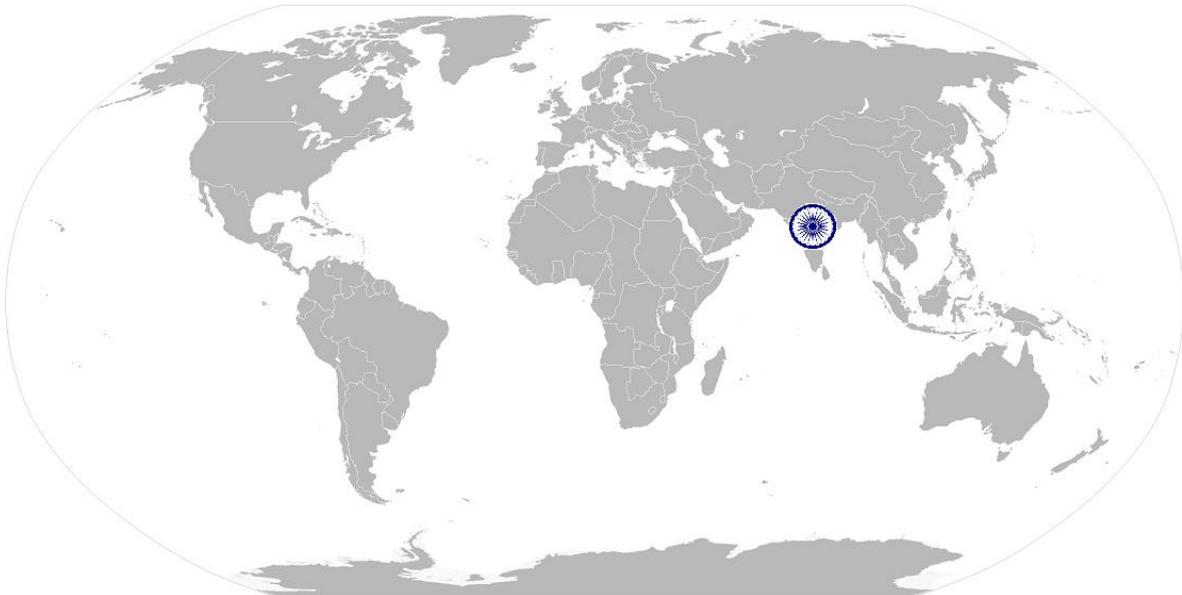
	<p>PC21. Ensure that no maintenance task on the engine is performed when running or still hot</p> <p>PC22. Assess when the problem is beyond his competence and report the problem to suitably qualified and competent personnel</p> <p>PC23. Complete timely and legibly daily/weekly defect sheets</p>
Element	Knowledge and Understanding
A. Organisational Context (Knowledge of the Company/ Organisation and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Types of documentation in organization e.g. daily maintenance checklist and importance of the same</p> <p>KA2. Risk and impact of not following defined procedures/work instructions</p> <p>KA3. Rules and regulations of work as per standard operating procedure (SOP)</p> <p>KA4. Risk and impact of not following company's SOP</p> <p>KA5. Escalation matrix for reporting identified problems</p> <p>KA6. Cost of delays , equipment damage and accidents for the company</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Controls and switches needed to operate the Excavator properly</p> <p>KB2. Basic physics and mechanics involved in various functions of the Excavator</p> <p>KB3. Response to emergencies e.g. fire</p> <p>KB4. Safety regulations while handling the Excavator</p> <p>KB5. The optimal levels of control indicators e.g. fuel gauge, engine oil pressure and temperature</p> <p>KB6. Possible sources of any unusual sound emanating from the engine</p>
Skills (S) w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	<p>Writing skills and reading Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps</p> <p>SA2. Create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process</p> <p>SA3. Use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.</p> <p>SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better</p>
	<p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements</p> <p>SA6. Answer the queries raised by the operative team as well as intercompany</p>



	<p>departments</p> <p>SA7. Effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc.</p> <p>SA8. Discuss task lists, schedules, and work-loads with the operative team members</p> <p>SA9. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker</p>
	<p>Integrity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA10. Maintain integrity with respect to company property and time</p> <p>SA11. Communicate with people in a polite manner using respectful language</p> <p>SA12. Resolve difficulties in relationships with colleagues amicably</p>
	<p>Motivation</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA13. Take responsibility for completing one's own work assignment</p> <p>SA14. Take initiative to enhance/learn skills in one's area of work</p> <p>SA15. Reflect and act upon one's learning from experience</p>
	<p>Reliability</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. Avoid absenteeism</p> <p>SA17. Work in a disciplined environment</p> <p>SA18. Be punctual</p>
B. Professional Skills	<p>Time Management</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Prioritize and execute tasks within the scheduled time limits</p>
	<p>Analytical Thinking</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Suggest methods to avoid accidents/errors while operating Excavator</p> <p>SB3. Identify possible ways to improve operational efficiency</p>
	<p>Operations</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. Perform driving operations such as forward, reverse, 'U' turn, tight spot maneuvering, etc.</p> <p>SB5. Select and use the correct combination of levers to operate the Excavator.</p> <p>SB6. Maneuver the blade and rear attachments to achieve various tasks</p>
	<p>Organizational Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. Adjust according to capacity and manpower needs during peak and non-peak hours</p> <p>SB8. Be a team player and achieve collective goals</p>



	<p>SB9. Concentrate on task at hand and complete it without errors SB9. Ensure adequate knowledge sharing with supervisors and subordinates</p>
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NOS Version Control

NOS Code	ISC/N0041		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and steel	Drafted on	21/07/2014
Industry Sub-sector	Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling	Last reviewed on	30/12/2014
Occupation	Driving	Next review date	30/12/2015





ISC/N0036: Carry out Reporting and Logging



Overview

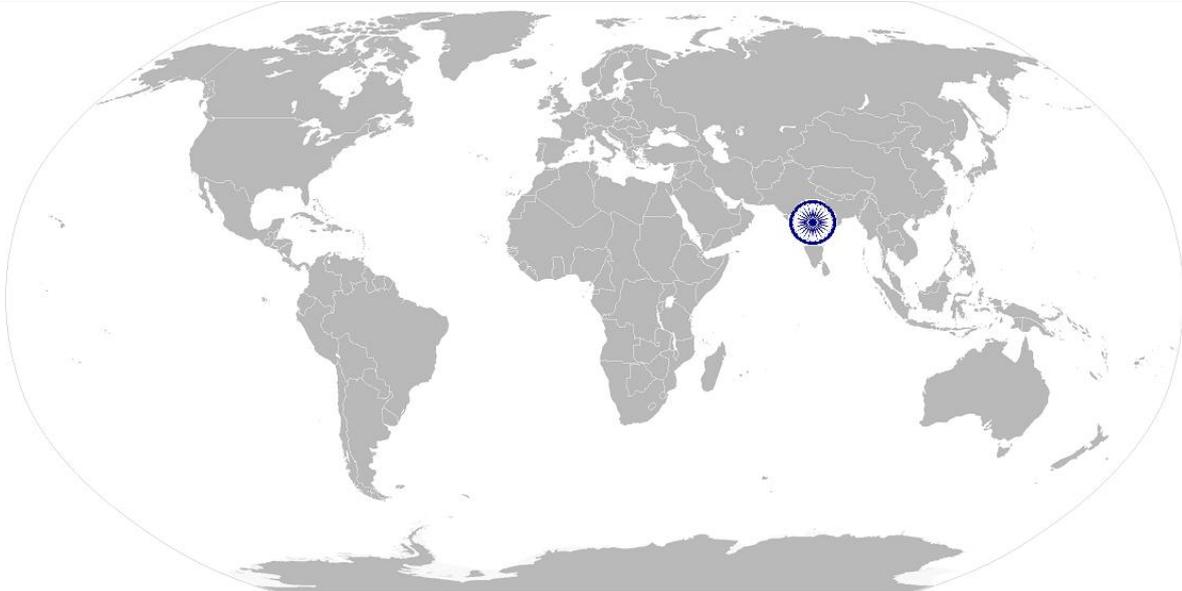
This unit is about reporting and documentation



Unit Code	ISC/N0036
Unit Title (Task)	Carry out reporting and logging
Description	This unit is about carrying out reporting and documentation
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Reporting of problem/incidents • Reporting and Documentation
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Reporting	To be competent, the user/individual on the job must be able to: PC1. Report problems/incidents as applicable in a timely manner PC2. Report to the appropriate authority as laid down by the employer PC3. Follow reporting procedures as prescribed by the employer
Recording and Documentation	To be competent, the user/individual on the job must be able to: PC4. Identify documentation to be completed relating to one's role PC5. Record details accurately using the appropriate format PC6. Complete all documentation within stipulated time. PC7. Ensure documents are available to appropriate authorities to inspect
Element	Knowledge and Understanding
A. Organisational Context (Knowledge of the Company/ Organisation and its processes)	The user/individual on the job needs to know and understand: KA1. Job specific documents e.g. daily maintenance checklist and importance of the same KA2. Safety policy of the company KA3. Risk and impact of not following defined procedures/work instructions KA4. Escalation matrix for reporting identified problems KA5. Cost of equipment and loss for the company that results from damage of equipment KA6. Direct/indirect cost of accidents to the company KA7. Implications of delays in process to the company
Skills (S) w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Writing skills and reading Skills The user/ individual on the job needs to know and understand how to: SA1. Create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps SA2. Create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process SA3. Use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc. SA4. Read equipment manuals and process documents given by the equipment



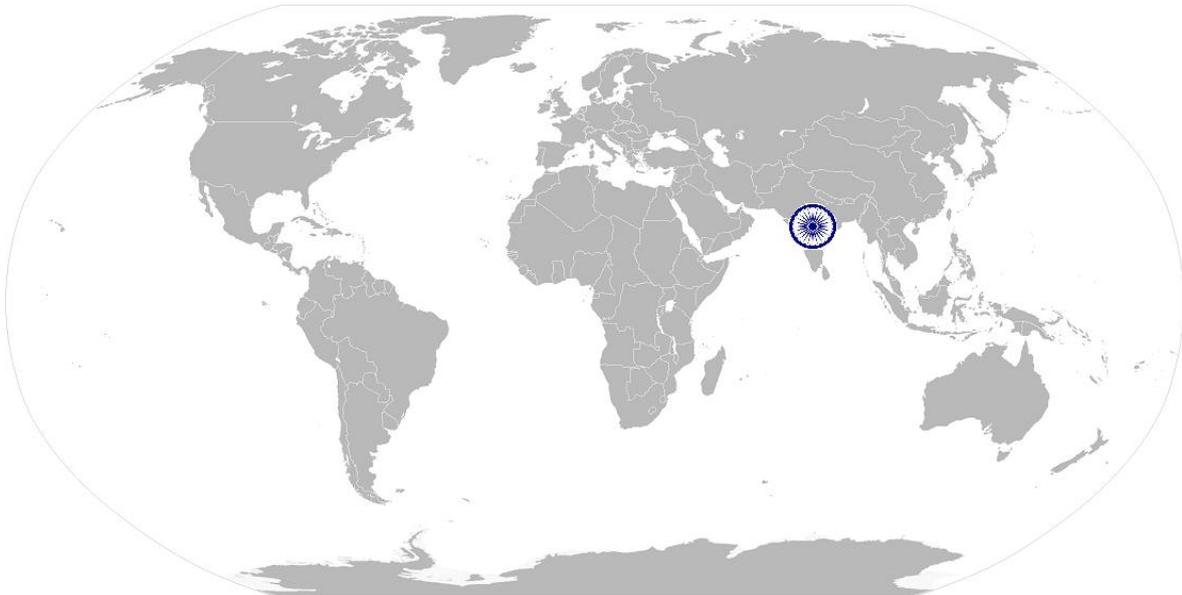
	supplier to understand the equipment and processes better
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. Effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements</p> <p>SA6. Answer the queries raised by the operative team as well as intercompany departments</p> <p>SA7. Effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc.</p> <p>SA8. Discuss task lists, schedules, and work-loads with the operative team members</p> <p>SA9. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker</p>





NOS Version Control

NOS Code	ISC/N0036		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and steel	Drafted on	21/07/2014
Industry Sub-sector	All departments	Last reviewed on	30/12/2014
Occupation	Driving	Next review date	30/12/2015





ISC/N0031: Health and Safety



Overview

This unit is about health and safety measures critical for hazardous activities in the steel plant



Unit Code	ISC/N0031
Unit Title (Task)	Health and safety
Description	This unit is about health and safety measures across operations in the plant
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> Health and safety measures critical for workers in a steel plant
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Safety, Security and Administrative	To be competent, the user/individual on the job must be able to: <p>PC1. Perform storage and transport of hazardous materials compliant with safety guidelines</p> <p>PC2. Deal with misfires as per statutory requirement</p> <p>PC3. Comply with safety regulations and procedures in case of fire hazard and re-fuelling</p> <p>PC4. Operate various grades of fire extinguishers</p> <p>PC5. Work responsibly and as safe and careful as possible so as not to put the health and safety of self or others at risk, including members of the public</p> <p>PC6. Emergency organisation of the specific work site</p> <p>PC7. Identify characteristics of liquid metal, liquid slag, fumes, gas pipelines, etc. and take necessary precautions</p> <p>PC8. Wears safety gear such as hard hat, respiratory protection, eye protection, ear protection</p>
Element	Knowledge and Understanding
A. Organisational Context (Knowledge of the Company/ Organisation and its processes)	The user/individual on the job needs to know and understand: <p>KA1. Various documents that need to be maintained</p> <p>KA2. Company recommended schedule for filling up the documents</p> <p>KA3. The importance of complete and accurate documentation</p> <p>KA4. Procedures for reporting to the appropriate authority</p> <p>KA5. Procedures for recording damage, breakages etc.</p> <p>KA6. Guidelines for reporting incidents where standard operating procedures were not followed in specific instances</p>
Skills (S) w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Writing skills and reading Skills <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps</p>



	SA2. Create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process
	SA3. Use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.
	SA4. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better
Oral Communication (Listening and Speaking skills)	
The user/individual on the job needs to know and understand how to:	
SA5. Effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements	
SA6. Answer the queries raised by the operative team as well as intercompany departments	
SA7. Effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc.	
SA8. Discuss task lists, schedules, and work-loads with the operative team members	
SA9. Attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker	





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