



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 – Fluid Management Operator: Rolling Mills

SECTOR: Iron & Steel

SUB-SECTOR: Cold Rolling Mill

REFERENCE ID: ISC/Q0603

ALIGNED TO: NCO-2004/NIL

Title of Job: The job is all about preparation, supply, collection, evaluation and operation of all fluids connected with rolling operation in steel plant. It involves ensuring the right quality & quantity of the fluid, its operation, inventory management, waste fluid disposal and the basic maintenance activities associated with maintaining the system.

Personal Attributes: This job requires the candidate to work independently as well as in teams. Some of the key attributes includes physical fitness, not having colour blindness , having analytical skills, problem solving attitude, high concentration levels, sharp reflex and willingness to work in a factory environment.



Job Details

Qualifications Pack Code	ISC/ Q0603		
Job Role	Fluid Management Operator: Rolling Mills		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron & Steel	Drafted on	18/09/2014
Sub-sector	Cold Rolling Mill	Last reviewed on	30/12/2014
Occupation	Operation	Next review date	30/12/2015

Job Role	Fluid Management Operator: Rolling Mills
Role Description	The job is all about preparation, supply, collection, evaluation and operation of all fluids connected with rolling operation in steel plant. It involves ensuring the right quality & quantity of the fluid, its operation, inventory management, waste fluid disposal and the basic maintenance activities associated with maintaining the system.
NSQF level	4
Minimum Educational Qualifications	Class XII (Science) Pass
Maximum Educational Qualifications	ITI Pass
Training (Suggested but not mandatory)	<ul style="list-style-type: none"> • Training in Analytical Chemistry techniques for the laboratory job of testing samples (mandatory) • Minimum 3 months on job training (mandatory) • General Safety practices and procedures (mandatory) • Hazards associated with handling various chemicals (mandatory)
Experience	<ul style="list-style-type: none"> • No past experience may be needed • In lieu of minimum qualification the candidate should have 2 years of relevant work experience under an experienced supervisor
Occupational Standards (OS)	Compulsory: ISC/N0608: Carry out laboratory activities ISC/N0609: Carry out fluid system maintenance & management ISC/N0610: Carry out fluid inventory management including disposal



	<p>of waste fluids from process ISC/N0008: Use basic health and safety practices at the workplace ISC/N0009: Work effectively with others</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



Overview

This unit is about collection of samples of process & product and their analysis.



Unit Code	ISC/N0608
Unit Title (Task)	Carry out laboratory activities
Description	This unit is about collection of samples of both process fluids & product in order to assess mill performance & stability of the process along with in process product quality.
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> Collect liquid samples from respective sampling points as per SOP and submit to laboratory Collect interim product samples for assessing mill performance Test the samples (fluid/solid) for assessment of quality as per standard SPI
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Collect liquid samples from respective sampling points as per SOP and submit to laboratory.	To be competent, the user/individual on the job must be able to: PC1. Collect fluid samples from designated points following all safety requirement and adhering to time schedules PC2. Submit the samples to the laboratory for actual testing
Collect interim product samples for assessing mill performance.	To be competent, the user/individual on the job must be able to: PC3. Collect in-process steel samples following SOP and adhering to time schedules
Test the samples (fluid/solid) for assessment of quality as per standard SPI.	To be competent, the user/individual on the job must be able to: PC4. Prepare samples for the relevant tests (like pH, Conductivity, Emulsion stability, Iron content, Oil concentration etc.) PC5. Conduct the appropriate tests and upload and/or record the results in system
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: <ul style="list-style-type: none"> KA1. Job specific documents e.g. daily maintenance checklist and importance of the same KA2. Safety policy of the company, especially related to the fluids being handled and the associated hardware KA3. Emergency plan of the specific work site KA4. Risk and impact of not following defined procedures/work instructions KA5. Escalation matrix for reporting identified problems

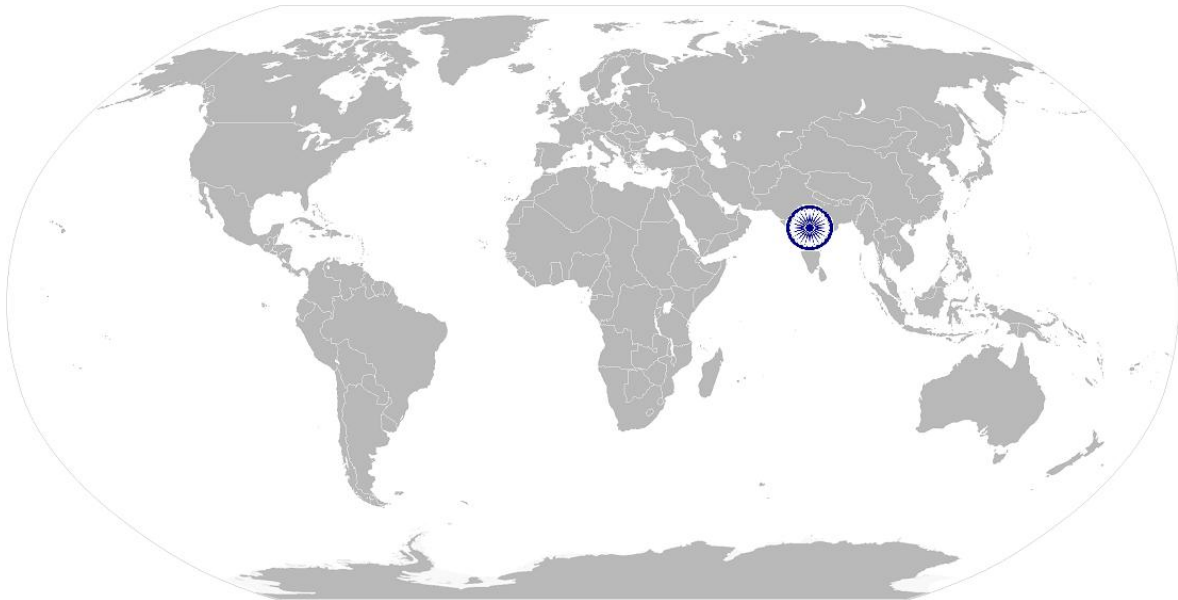


B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. The characteristics of the fluids and their physical & chemical properties KB2. Testing techniques for sample analysis (like pH, Conductivity, Emulsion stability, Iron content, Oil concentration, Soot deposition etc.) KB3 Flow diagram of fluid system for the individual processes</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. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better SA2. Make notes on any deviation from desirable specifications of emulsions or tanks and inform supervisor, as required</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>SA3. Answer the queries raised by the operative team as well as intra-company departments SA4. Discuss task lists, schedules, and work-loads with team members in English, Hindi and Local Language (E/H/LL)</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>Reliability</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Avoid absenteeism and maintain quality of work SB3. Work in a disciplined environment and adhere to working norms of the organisation SB4. Be punctual and adhere to timelines</p>



NOS Version Control

NOS Code	ISC/N0608		
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Industry	Iron and steel	Drafted on	18/09/2014
Industry Sub-sector	Cold Rolling Mill	Last reviewed on	30/12/2014
Occupation	Operation	Next review date	30/12/2015





ISC/N0609: Carry out fluid system maintenance & management



National Occupational Standards

Overview

This unit is about functioning of the total fluid system in rolling mills including fluid maintenance, monitoring of parameters and recirculation of fluids.



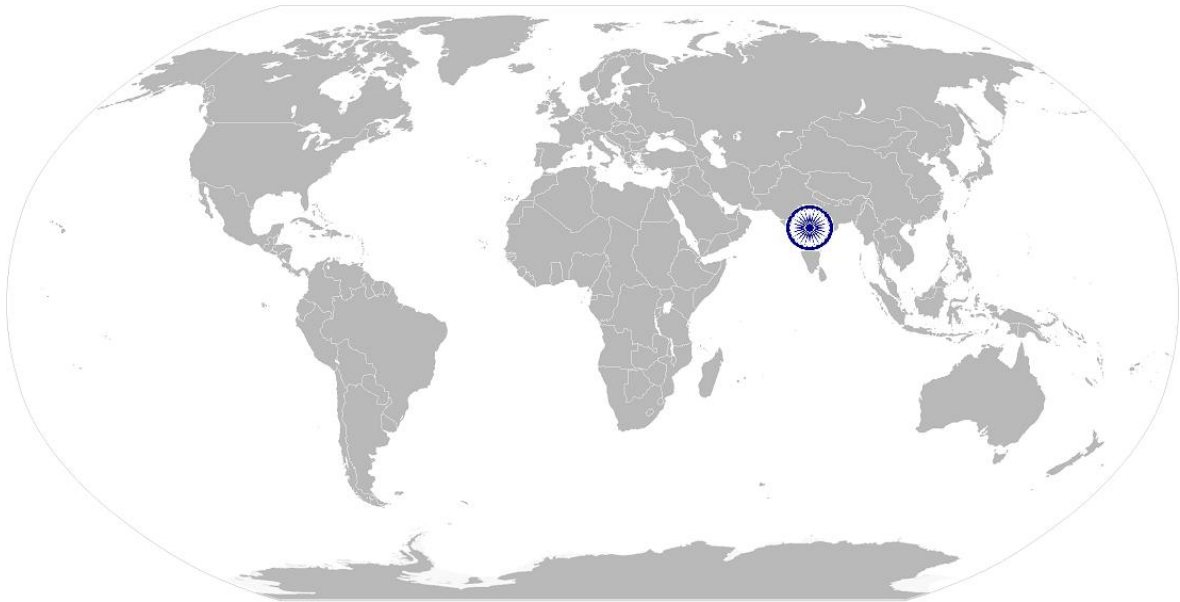
Unit Code	ISC/N0609
Unit Title (Task)	Carry out fluid system maintenance & management
Description	This unit is about managing the entire fluid system in rolling mills, including its maintenance, monitoring of relevant parameters and recirculation of fluids.
Scope	<p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> • Monitor physical parameters like pressure, temperature, flow, tank volume • Prepare the right fluid for the purpose and top up where necessary • Optimally use online systems (e.g. Magnetic separators, Catch pans, Valves, Filter beds etc.) for maintaining fluid quality through filtration • Periodically clean the system elements to ensure flow passage is clean and free from contamination
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Monitor physical parameters like pressure, flow temperature, tank volume etc.	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Periodically measure all relevant parameters like temperature, level, flow & tank volume of fluid</p> <p>PC2. Take corrective actions to restore the system health</p> <p>PC3. Report issues precisely to supervisor in case the problem is beyond his scope</p>
Prepare the right fluid for the purpose and top up where necessary	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC4. Transfer from stock the right quality and quantity of fluid and add water of right quality & quantity as per SOP</p> <p>PC5. Based on Tank Volume, top up/transfer to the working tanks</p>
Optimally use online systems (e.g. Magnetic separators, Catch pans, Valves, Filter beds etc.) for maintaining fluid quality through filtration	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC6. Understand and operate the Magnetic Separators</p> <p>PC7. Operate the filtration units</p> <p>PC8. Operate all other equipment in the fluid system like Steam Valve, Catch pans, heat exchanger etc.</p>
Periodically clean the system elements to ensure flow passage is clean and free from contamination	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC9. In off-line operation, clean tanks, headers, nozzles, mixers during scheduled shut down, Mill stoppage etc. following SOPs</p>
Element	
A. Organisational Context (Knowledge of the Company/ Organisation and its	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Job specific documents e.g. specification documents of parameters and importance of the same</p>



processes)	KA2. Risk and impact of not following defined procedures/work instructions KA3. Escalation matrix for reporting identified problems KA4. Implications of delays in process to the company
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Safe Operating Procedure as well as SPI (Standard Practice Instructions) relating to the fluids In use for lubrication, rust prevention, tempering etc. KB2. The specifications of the different fluids in terms of quality, composition, temperature, pressure, flow-rate etc. KB3. Read gauges, handle all relevant machines, valves and equipment according to the process chart &/or Control Plan KB4. Aware of hazards associated with the fluids [like Rust Preventive Oil, Tempering Agent, Rolling Oil, Grinding fluid], equipment and the chemicals associated with the processes
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. Construct simple sentence & write technical observations, memos & requisitions in English SA2. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better SA3. Read, understand, follow/apply memo, reports, instruction manuals, quality control charts and safety documents
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Communicate with supervisors/juniors/colleagues/casual workers in English/Hindi/Local language SA5. Respond objectively & orally to questions asked of him in English, Hindi and Local Language (E/H/LL) SA6. Discuss task lists, schedules, and work-loads with the team members
B. Professional Skills	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
	Reliability
	The user/individual on the job needs to know and understand how to: SB2. Avoid absenteeism and maintain quality of work SB3. Work in a disciplined environment and adhere to working norms of the



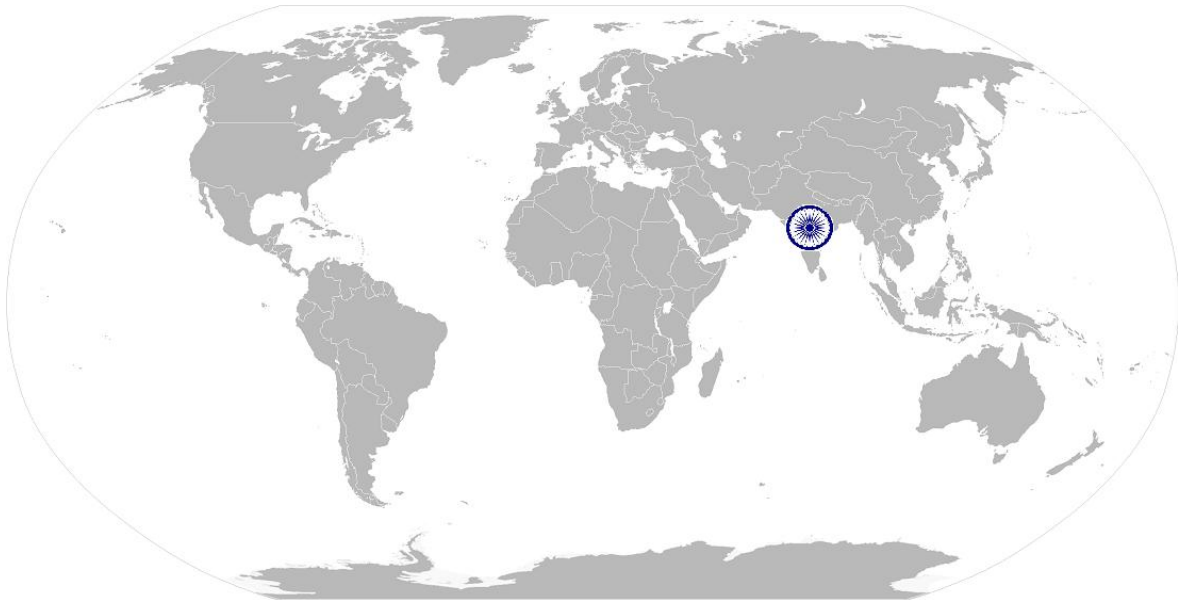
	organisation SB4. Be punctual and adhere to timelines
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NOS Version Control

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Industry	Iron and steel	Drafted on	18/09/2014
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ISC/N0610: Carry out Fluid Inventory Management including disposal of waste fluids from process



National Occupational Standards

Overview

This unit is about Fluid Inventory Management and Waste Disposal System



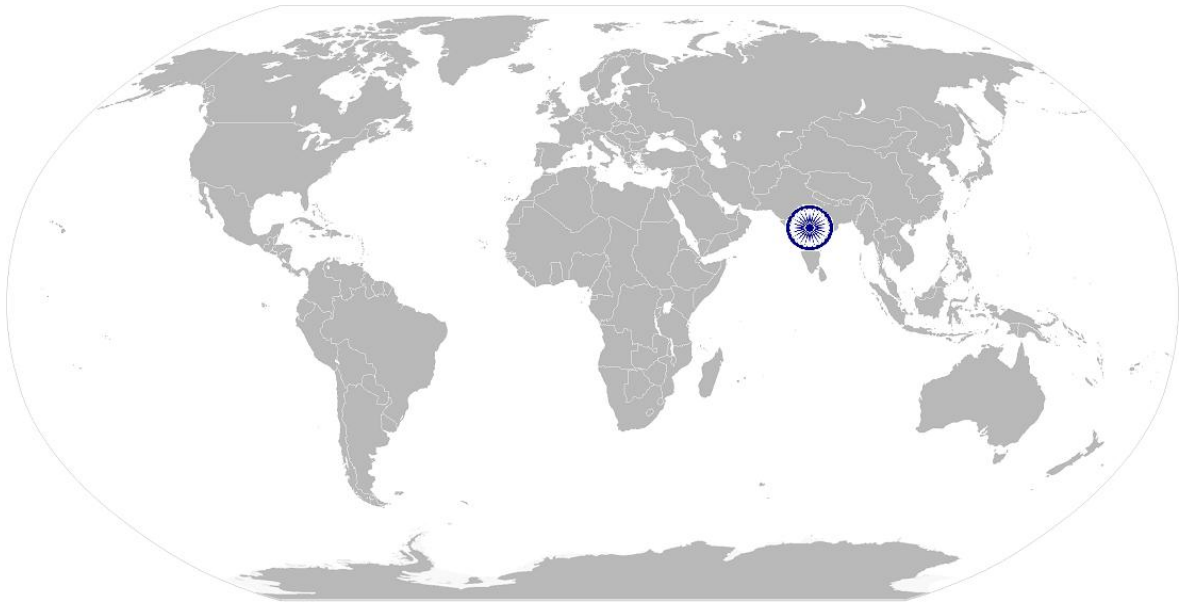
Unit Code	ISC/N0610
Unit Title (Task)	Carry out Fluid Inventory Management including disposal of waste fluids from process
Description	This unit is about managing the incoming supply of fluid & disposal of waste process fluid for treatment.
Scope	This OS unit/task covers the following: <ul style="list-style-type: none"> • Ensure correctness of accompanying documents & receiving procedures complied • Draw samples and send to laboratory for testing according to Specs • Managing the stock, receipt and consumption and flag alert for ordering • Collection of used fluid from different points and /or arrange to transfer to treatment facility, flagging alert for timely removal of collected waste fluid
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Ensure correctness of accompanying documents & receiving procedures complied	To be competent, the user/individual on the job must be able to: PC1. Understand and interpret the details in the incoming documents (weighbridge records, permission from appropriate authority for unloading, compliance to delivery schedule etc.)
Draw samples and send to laboratory for testing according to Specs.	To be competent, the user/individual on the job must be able to: PC2. Follow the SOP for proper collection, labelling of samples and sending to laboratory for compliance checking
Managing the stock, receipt and consumption and flag alert for ordering	To be competent, the user/individual on the job must be able to: PC3. Record levels in storage tank, match it with daily receipts & consumption PC4. Flag alert for replacement in time
Collection of used fluid from different points and /or arrange to transfer to treatment facility	To be competent, the user/individual on the job must be able to: PC5. Use steam heating system for liquefying the solidified waste during winter for proper pumping PC6. Collect used fluid from points such as discharge from mag-separators, waste filter papers & transfer to the designated storage area PC7. Transfer waste fluid in sump pits to Treatment facility using slurry pump PC8. Flag alert for timely removal of the waste fluid collected to respective agency
Element	
A. Organisational Context (Knowledge of the Company/ Organisation and	The user/individual on the job needs to know and understand: KA1. Job specific documents e.g. specification documents of parameters and importance of the same KA2. Risk and impact of not following defined procedures/work instructions



its processes)	KA3. Escalation matrix for reporting identified problems KA4. Implications of delays in process to the company KA5. How to flag alert in cases of depletion of stock, non-compliance with specs etc.
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Safe Operating Procedure as well as SPI (Standard Practice Instructions) relating to the roll coolant /emulsion handling system KB2. The specifications of the roll coolant system in terms of quality, temperature, pressure etc. KB3. Read gauges, handle all relevant machines, valves and equipment according to the process chart &/or Control Plan KB4. Aware of hazards associated with the fluids [like Rust Preventive Oil, Tempering Agent, Rolling Oil, Chromating solution], equipment and the materials handled like coils, sheets, molten zinc, & all chemicals associated with the processes
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: SA7. Construct simple sentence & write technical observations, memos & requisitions in English SA8. Read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better SA9. Read, understand, follow/apply memo, reports, instruction manuals, quality control charts and safety documents
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA10. Communicate with supervisors/juniors/colleagues/casual workers in English/Hindi/Local language SA11. Respond objectively & orally to questions asked of him in English, Hindi and Local Language (E/H/LL) SA12. Discuss task lists, schedules, and work-loads with the team members
B. Professional Skills	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
	Reliability
	The user/individual on the job needs to know and understand how to: SB2. Avoid absenteeism and maintain quality of work SB3. Work in a disciplined environment and adhere to working norms of the



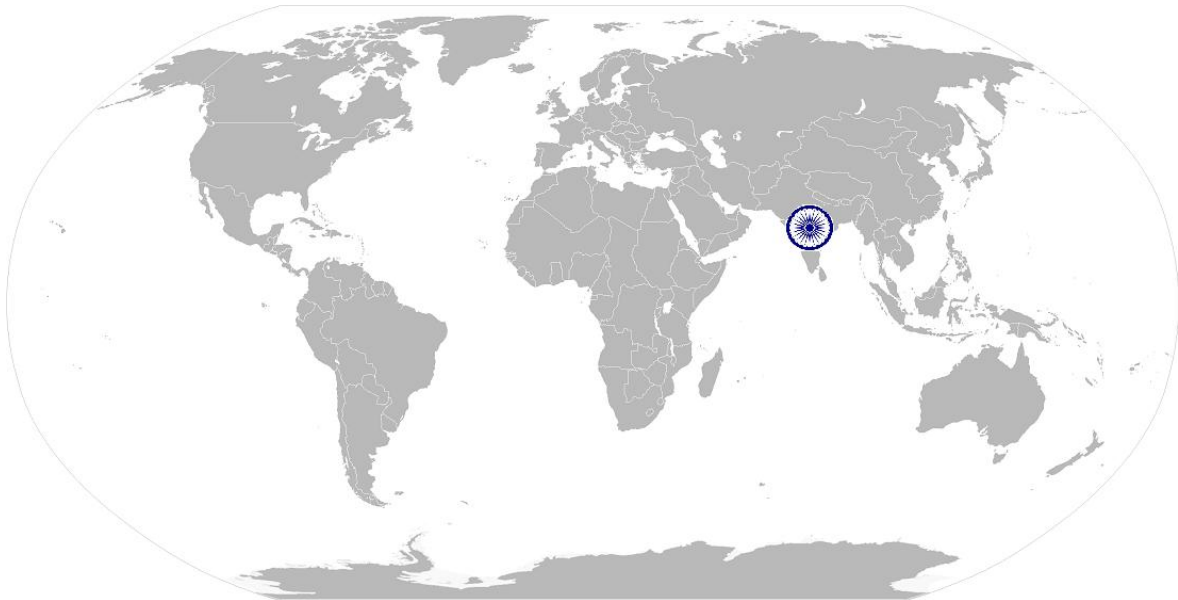
	organisation SB4. Be punctual and adhere to timelines
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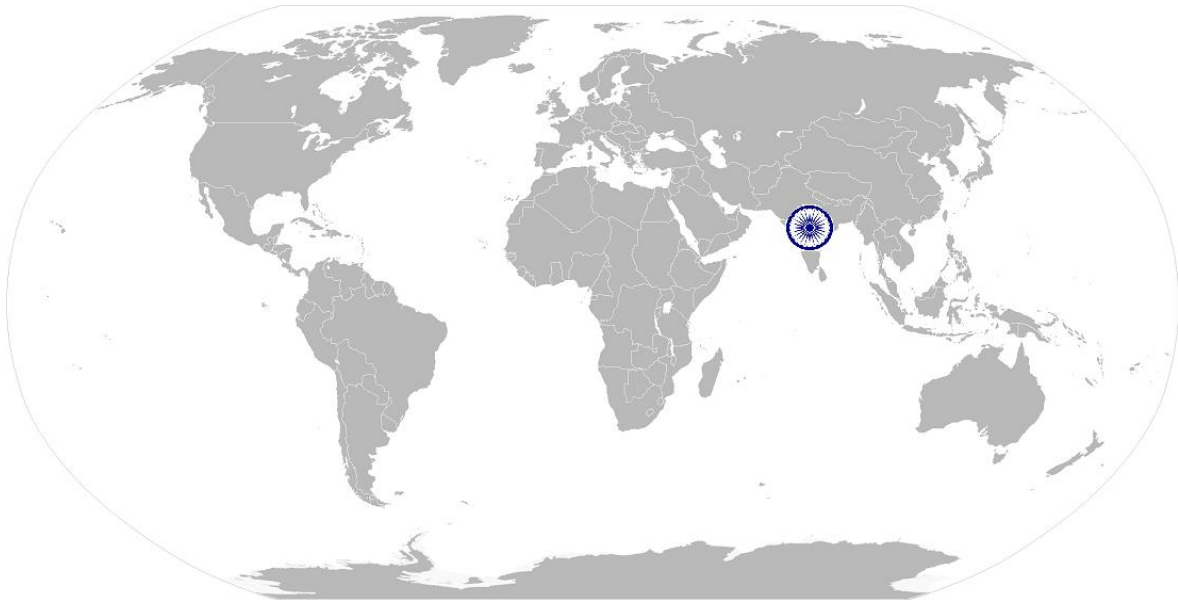
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Industry Sub-sector	Cold Rolling Mill	Last reviewed on	30/12/2014
Occupation	Operation	Next review date	30/12/2015





National Occupational Standards



Overview

This unit covers health, safety and security at the workplace. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment.



Unit Code	ISC/N0008
Unit Title (Task)	Use basic health and safety practices at the work place
Description	<p>This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace. It covers responsibilities towards self, others, assets and the environment.</p> <p>It includes understanding of risks and hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies, etc.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Health and safety procedures • Fire safety procedures • Emergencies, rescue and first aid procedures
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Health and safety procedures	<p>The user/individual on the job should be able to:</p> <p>PC1. Use protective clothing/equipment for specific tasks and work conditions</p> <p>Protective clothing includes:</p> <ul style="list-style-type: none"> • Leather or asbestos gloves • Flame proof aprons • Flame proof overalls buttoned to neck • Cuff less (without folds) trousers • Reinforced footwear • Helmets/hard hats • Cap and shoulder covers • Ear defenders/plugs • Safety boots • Knee pads • Particle masks • Glasses/gloves/visors <p>Equipment includes:</p> <ul style="list-style-type: none"> • Hand shields • Machine guards • Residual current devices • Shields • Dust sheets • Respirator <p>PC2. State the name and location of people responsible for health and safety in the workplace</p> <p>Various areas are listed below:</p>



- On chemical containers
- Equipment
- Packages
- Inside buildings
- Open areas, public places etc.

PC3. State the names and location of documents that refer to health and safety in the workplace

PC4. Identify job-site hazardous work and state possible causes of risk or accident in the workplace

Hazards include:

- Working with electrical and thermal tools and equipment
- Sharp edged and heavy tools
- Heated metals
- Oxyfuel and gas cylinders
- Welding radiation
- Surfaces: sharp, slippery, uneven, chipped, broken, etc.
- Substances: chemicals, gas, oxy-fuel, fumes, dust, etc.
- Physical: working at heights, large and heavy objects and machines, sharp and piercing objects, tools and machines, intense light, load noise, obstructions in corridors, by doors, blind turns, noise, over stacked shelves and packages, etc.
- Electrical: power supply and points, loose and naked cables and wires, electrical machines and appliances, etc.

PC5. Carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role

Safe working practices include:

- Using protective clothing and equipment
- Putting up and reading safety signs
- Handle tools in the correct manner and store and maintain them properly
- Keep work area clear of clutter, spillage and unsafe object lying casually
- While working with electricity take all electrical precautions like insulated clothing, adequate equipment insulation, use of control equipment, dry work area, switch off the power supply when not required, etc.
- Safe lifting and carrying practices
- Use equipment that is working properly and is well maintained
- Take due measures for safety while working in confined places, trenches or at heights, etc. Including safety harness, fall arrestors etc.

Methods are:

- Training in health and safety procedures
- Using health and safety procedures
- Use of equipment and working practices (such as safe carrying procedures)
- Safety notices, advice
- Instruction from colleagues and supervisors

PC6. State location of general health and safety equipment in the workplace

PC7. Inspect for faults, set up and safely use steps and ladders in general use

Faults :



	<ul style="list-style-type: none"> • Corrosion of metal components • Deterioration • Splits and cracks timber components • Imbalance • Loose rungs • Nuts or bolts, etc. <p>Set up:</p> <ul style="list-style-type: none"> • Firm/level base • Clip/lash down • Leaning at the correct angle, etc. <p>PC8. Work safely in and around trenches, elevated places and confined areas PC9. Lift heavy objects safely using correct procedures PC10. Apply good housekeeping practices at all times. Good housekeeping practices:</p> <ul style="list-style-type: none"> • Clean/tidy work areas • Removal/disposal of waste products • Protect surfaces <p>PC11. Identify common hazard signs displayed in various areas PC12. Retrieve and/or point out documents that refer to health and safety in the workplace</p>
<p>Fire safety procedures</p>	<p>The user/individual on the job should be able to:</p> <p>PC13. Use the various appropriate fire extinguishers on different types of fires correctly.</p> <p>Fire extinguishers:</p> <ul style="list-style-type: none"> • Sand • Water • Foam • Co2 • Dry powder <p>Fires:</p> <ul style="list-style-type: none"> • Class A: Ordinary solid combustibles, e.g. wood, paper, cloth, plastic, charcoal etc. • Class B: Flammable liquids and gases, e.g. gasoline, propane, diesel fuel, tar, cooking oil and similar substances • Class C: Electrical equipment e.g. appliances, wiring, breaker panels etc. (these categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity) • Class D: Combustible metals such as magnesium, titanium, and sodium (these fires burn at extremely high temperatures and require special suppression agents) <p>Causes of fires:</p> <ul style="list-style-type: none"> • Heating of metal • Spontaneous ignition • Sparking, • Electrical heating • Loose fires (e.g. Smoking, welding, etc.) • Chemical fires, etc.



	<p>PC14. Demonstrate rescue techniques applied during fire hazard PC15. Demonstrate good housekeeping in order to prevent fire hazards PC16. Demonstrate the correct use of a fire extinguisher</p>
<p>Emergencies, rescue and first-aid procedures</p>	<p>The user/individual on the job should be able to:</p> <p>PC17. Demonstrate how to free a person from electrocution PC18. Administer appropriate first aid to victims as required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc. PC19. Demonstrate basic techniques of bandaging PC20. Respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments. Few general health and safety equipment are mentioned below :</p> <ul style="list-style-type: none"> • Fire extinguishers • First aid equipment • Safety instruments and clothing • Safety installations, e.g. Fire exits, exhaust fans etc. <p>PC21. Perform and organize loss minimization or rescue activity during an accident in real or simulated environments PC22. Administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases PC23. Demonstrate the artificial respiration and the CPR Process PC24. Participate in emergency procedures. Emergency procedures are:</p> <ul style="list-style-type: none"> • Raising alarm • Safe/efficient evacuation • Correct means of escape • Correct assembly point • Roll call • Correct return to work <p>PC25. Complete a written accident/incident report or dictate a report to another person, and send report to person responsible Incident Report should capture:</p> <ul style="list-style-type: none"> • Name • Date/time of incident • Date/time of report, • Location • Environment conditions • Persons involved • Sequence of events • Injuries sustained • Damage sustained • Actions taken • Witnesses • Supervisor/manager notified <p>Documents:</p> <ul style="list-style-type: none"> • Fire notices • Accident reports • Safety instructions for equipment and procedures • Company notices and documents



	<ul style="list-style-type: none"> • Legal documents (e.g. Government notices) <p>Job titles:</p> <ul style="list-style-type: none"> • Health and safety officer • First aid officer • Fire officer <p>PC26. Demonstrate correct method to move injured people and others during an emergency</p>
Element	Knowledge and Understanding
<p>A. Organisational Context (Knowledge of the Company/ Organisation and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. State the names (and job titles if applicable), and describe where to find, all the people responsible for health and safety in a workplace</p> <p>KA2. State the names and location of documents that refer to health and safety in the workplace</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB3. Meaning of “hazards” and “risks”</p> <p>KB4. Health and safety hazards commonly present in the work environment and related precautions</p> <p>KB5. Possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible</p> <p>KB6. Activities and causes of risk and accident</p> <p>KB7. Methods of accident prevention</p> <p>KB8. Safe working practices when working with tools and machines</p> <p>KB9. Safe working practices while working at various hazardous sites</p> <p>KB10. Where to find all the general health and safety equipment in the workplace</p> <p>KB11. Various dangers associated with the use of electrical equipment</p> <p>KB12. Preventative and remedial actions to be taken in the case of exposure to toxic materials</p> <ul style="list-style-type: none"> • Exposure: ingested, contact with skin, inhaled • Preventative action: ventilation, masks, protective clothing/equipment • Remedial action: immediate first aid, report to supervisor • Materials: solvents, flux, lead <p>KB13. Importance of using protective clothing/equipment while working</p> <p>KB14. Precautionary activities to prevent the fire accident</p> <p>Activities and causes:</p> <ul style="list-style-type: none"> • Physical actions • Reading • Listening to and giving instructions • Inattention • Sickness and incapacity (e.g. Drunkenness) • Health hazards (e.g. Untreated injuries and contagious illness) <p>KB15. Various causes of fire</p> <p>KB16. Techniques of using the different fire extinguishers</p> <p>KB17. Different methods of extinguishing fire</p> <p>KB18. Rescue techniques applied during a fire hazard</p>



	<p>KB19. Various types of safety signs and what they mean</p> <p>KB20. Appropriate basic first aid treatment relevant to the condition e.g. Shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries</p> <p>KB21. Content of written accident report</p> <p>KB22. Potential injuries and ill health associated with incorrect manual handling</p> <p>KB23. Safe lifting and carrying practices</p> <p>KB24. Personal safety, health and dignity issues relating to the movement of a person by others</p> <p>KB25. Potential impact to a person who is moved incorrectly</p>
Skills (S) w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Reading and Writing Skills
	The user/individual on the job needs to know and understand how to:
	SA1. Read and comprehend basic content to read labels, charts, signage's SA2. Read and comprehend basic English to read manuals of operations SA3. Read and write an accident/incident report in local language or English
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA4. Question co-workers appropriately in order to clarify instructions and other issues SA5. Give clear instructions to co-workers, subordinates others
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to:
	SA6. Make appropriate decisions pertaining to the concerned area of work with respect to intended work objective, span of authority, responsibility, laid down procedure and guidelines
	Plan and Organize
	The user/individual on the job needs to know and understand:
	SB1. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
B. Professional Skills	Working with others
	The user/individual on the job needs to know and understand how to:
	SB2. Remain congenial while discussing and debating issues with co-workers SB3. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice SB4. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives



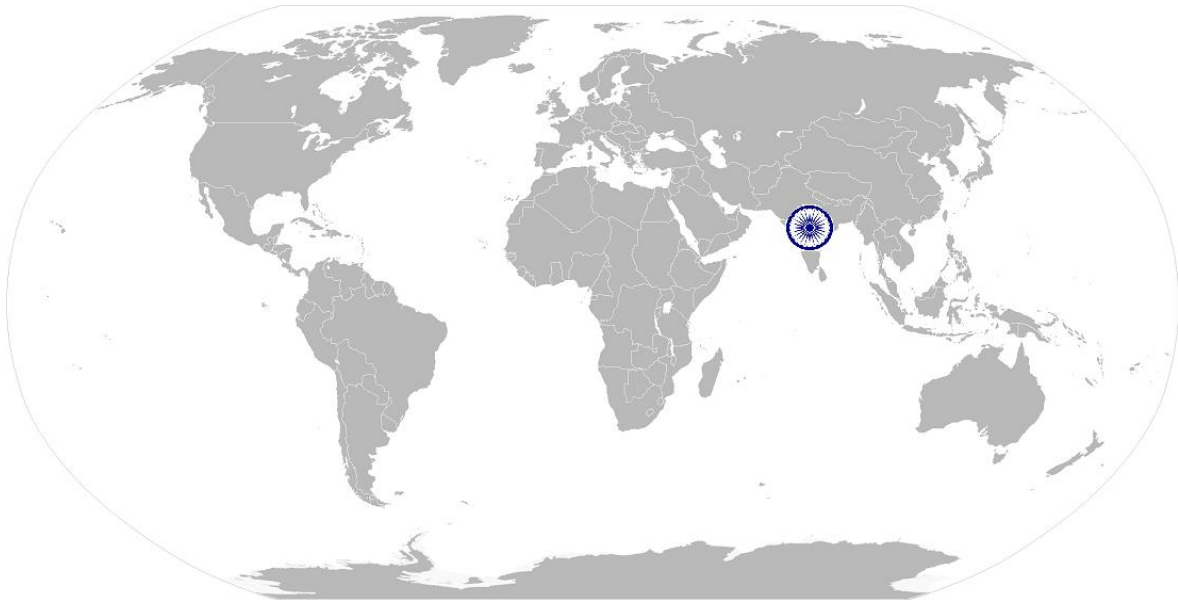
	SB5. Thank co-workers for any assistance received SB6. Offer appropriate respect based on mutuality and respect for fellow workmanship and authority
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB7. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB8. Identify immediate or temporary solutions to resolve delays SB9. Identify sources of support that can be availed of for problem solving for various kind of problems SB10. Seek appropriate assistance from other sources to resolve problems SB11. Report problems that you cannot resolve to appropriate authority
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB12. Identify cause and effect relations in their area of work SB13. Use cause and effect relations to anticipate potential problems and their solution





NOS Version Control

NOS Code	ISC/N0008		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and steel	Drafted on	23/07/2014
Industry Sub-sector	All departments	Last reviewed on	30/12/2014
Occupation	Operation	Next review date	30/12/2015





National Occupational Standards



Overview

This unit covers basic practices that improve effectiveness of working with others in an organisational set-up.



Unit Code	ISC/N0009
Unit Title (Task)	Work effectively with others
Description	This unit covers basic etiquette and competencies that a candidate is required to possess and demonstrate in their behaviour and interactions with others at the workplace.
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Ensure appropriate communication with superiors, peers and others as applicable at work place • Demonstrate appropriate behaviour and etiquette at work place
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Ensure appropriate communication with superiors, peers and others as applicable at work place	The user/individual on the job should be able to: <p>PC1. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required</p> <p>PC2. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt</p> <p>PC3. Provide information to others clearly, at a pace and in a manner that helps them to understand</p>
Demonstrate appropriate behaviour and etiquette at work place	The user/individual on the job should be able to: <p>PC4. Display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible</p> <p>PC5. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks</p> <p>PC6. Display appropriate communication etiquette while working</p> <p>PC7. Display active listening skills while interacting with others at work</p> <p>PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism</p> <p>PC9. Demonstrate responsible and disciplined behaviours at the workplace</p> <p>PC10. Escalate grievances and problems to</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. Legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. Reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA3. Relevant people and their responsibilities within the work area</p> <p>KA4. Escalation matrix and procedures for reporting work and employment related issues</p>



<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Various categories of people that one is required to communicate and co-ordinate with in the organization KB2. Importance of effective communication in the workplace KB3. Importance of teamwork in organizational and individual success KB4. Various components of effective communication KB5. Key elements of active listening KB6. Value and importance of active listening and assertive communication KB7. Barriers to effective communication KB8. Importance of tone and pitch in effective communication KB9. Importance of avoiding casual expletives and unpleasant terms while communicating professional circles KB10. How poor communication practices can disturb people, environment and cause problems for the employee, the employer and the customer KB11. Importance of ethics for professional success KB12. Importance of discipline for professional success KB13. What constitutes disciplined behaviour for a working professional KB14. Common reasons for interpersonal conflict KB15. Importance of developing effective working relationships for professional success KB16. Expressing and addressing grievances appropriately and effectively KB17. Importance and ways of managing interpersonal conflict effectively</p>
<p>Skills (S) w.r.t. the scope</p>	
<p>Element</p>	<p>Skills</p>
<p>A. Core Skills/ Generic Skills</p>	<p>Reading and Writing Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. Read and comprehend basic content to read labels, charts, signage's SA2. Read and comprehend basic English to read manuals of operations SA3. Read and write an accident/incident report in local language or English</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>SA4. Question co-workers appropriately in order to clarify instructions and other issues SA5. Provide clear instructions to co-workers, subordinates others</p> <p>Decision Making</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Make appropriate decisions pertaining to the concerned area of work with respect to intended work objective, span of authority, responsibility, laid down procedure and guidelines</p>



B. Professional Skills	Plan and Organize
	The user/individual on the job needs to know and understand:
	SB1. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
	Working with others
	The user/individual on the job needs to know and understand how to:
	SB2. Remain congenial while discussing and debating issues with co-workers SB3. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice SB4. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives SB5. Thank co-workers for any assistance received SB6. Offer appropriate respect based on mutuality and respect for fellow workmanship and authority
	Problem Solving
The user/individual on the job needs to know and understand how to:	
SB7. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB8. Identify immediate or temporary solutions to resolve delays SB9. Identify sources of support that can be availed of for problem solving for various kind of problems SB10. Seek appropriate assistance from other sources to resolve problems SB11. Report problems that you cannot resolve to appropriate authority	
Analytical Thinking	
The user/individual on the job needs to know and understand how to:	
SB12. Identify cause and effect relations in their area of work SB13. Use cause and effect relations to anticipate potential problems and their solution	



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