



QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR IRON & STEEL INDUSTRY

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

Contact Us:

Indian Iron and Steel
Sector Skill Council
Royal Exchange, 6 N.S.
Road, Kolkata- 700 001
Tel: 09831052652
parimalbiswas.iisscc@ii
windia.com



Contents

1. Introduction and Contacts.....P.1
2. Qualifications Pack.....P.2
3. Glossary of Key TermsP.3
4. OS Units.....P.6
5. Assessment Criteria.....P.40

Introduction

Qualifications Pack- Fitter: Heating Insulation

SECTOR: Iron & Steel

SUB-SECTOR: Mechanical Maintenance

OCCUPATION: Fitter

REFERENCE ID: ISC/Q0819

ALIGNED TO: NCO-2004/NIL

Brief Job Description: The job is all about insulation of pipe line, gas line, steam line, vessels, scrubbers, valves, blower etc. This involves inspection and maintenance of pipe line, gas line, steam line, vessels, scrubbers, valves, blower etc. by isolating the unit through valves, water seals, leaker seals, etc. to rectify leakage, thermal heat loss and corrosion. The job also involves cleaning the parts, dismantling the pipeline (if required), rectifying the root causes, reinsulating the pipe line as required

Personal Attributes: This job requires the individual to work independently as well as in teams. He should be physically fit, not having colour blindness, having analytical skills, problem solving attitude, high concentration levels and willingness to work in a factory environment.



Job Details	Qualifications Pack Code	ISC/Q0819		
	Job Role	Fitter: Heating Insulation		
	Credits(NSQF)	TBD	Version number	1.0
	Industry	Iron & Steel	Drafted on	08/09/2014
	Sub-sector	Mechanical Maintenance	Last reviewed on	25/03/2015
	Occupation	Fitter	Next review date	25/03/2016
	NSQC Clearance On			

Job Role	Fitter: Heating Insulation
Role Description	The job is all about insulation of pipe line, gas line, steam line, vessels, scrubbers, valves, blower etc. This also involves inspection and maintenance of pipe line, gas line, steam line, vessels, scrubbers, valves, blower etc. by isolating the unit through valves, water seals, leaker seals, etc. to rectify leakage, thermal heat loss and corrosion. The job also involves cleaning the parts, dismantling the pipeline (if required), rectifying the root causes, reinsulating the pipe line as required, checking insulation for fitness and ensuring to charge the line.
NSQF level	3
Minimum Educational Qualifications	10 th Pass, preferably
Maximum Educational Qualifications	ITI Pass
Training (Suggested but not mandatory)	<ul style="list-style-type: none"> • Reading and interpreting pipe line circuit drawings • Welding, gas cutting and pipe line assembling • Working knowledge of tools & tackles • Various insulation material and their usage • 5S and safety practices • Working at heights, confined spaces & high temperatures • 2 weeks hands on job training (mandatory)



Minimum Job Entry Age	18 years
Experience	<ul style="list-style-type: none">• 0-1 year experience in similar function• In lieu of minimum qualification the incumbent should have minimum 4 to 5 years' experience as as helper to insulation fitter
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none">1. ISC/N0817: Understand the assigned job of fitter insulation2. ISC/N0818: Prepare for operation of insulation job3. ISC/N0819: Carry out the assigned operation for insulation4. ISC/N0008: Use basic health and safety practices at workplace5. ISC/N0009: Work effectively with others <p>Optional: 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.

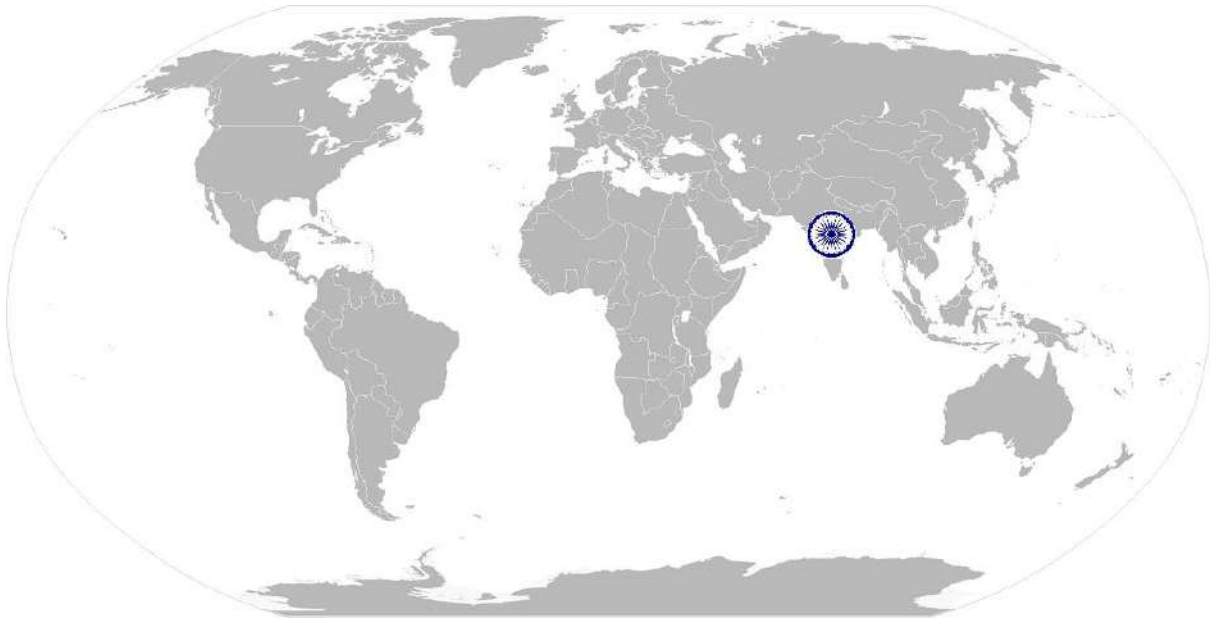


Sub-Sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed 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



National Occupational Standards



Overview

This unit is about understanding the job requirements of fitter insulation in accordance with the checklist and seek any clarifications on the same.



ISC/N0817

Understand the assigned job of fitter insulation

National Occupational Standard

Unit Code	ISC/N0817
Unit Title (Task)	Understand the assigned job of fitter insulation
Description	This unit is about understanding the requirements of the job of fitter insulation after receiving the checklist from the supervisor, seek any clarifications on the requirements of the job and identify the tools, tackles and insulation materials that would be needed to carry out the insulation job.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Understand the assigned insulation job in accordance with the instructions / checklist • Understand the pipe line circuit/equipment drawings • Seek clarifications with respect to the pipeline components, pipeline circuit drawings and types of insulation materials • Identify the tools, tackles, insulation materials that are required to carry out the assigned insulation job
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Understand the assigned insulation job in accordance with the instructions / checklist	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Interpret the checklist and understand the insulation job requirements</p> <p>PC2. Plan, as appropriate to carry out the insulation job</p> <p>PC3. Identify the area of damage in the pipe line to be re-insulated</p> <p>PC4. Identify type of insulations to be performed in the pipeline/equipment</p> <p>PC5. Identify the pipe line damage due to corrosion in absence of proper insulation</p>
Understand the pipe line circuit/equipment drawings	<p>PC6. Understand the pipe line circuit/equipment drawings</p> <p>PC7. Understand the quality of insulated material required in the pipe line circuit/equipment</p> <p>PC8. Understand other specifications of insulated material and identify the sequence of activities required for insulating the pipe line circuit/equipment</p> <p>PC9. Read and interpret pipe line circuit/equipment drawings to ensure correct layouts and quality of the insulated material</p>
Seek clarifications with respect to the pipeline components, pipeline circuit drawings and types of insulation materials	<p>PC10. Identify any clarifications that he wants to seek with respect to the given pipe line circuit drawing/equipment</p> <p>PC11. Recognize whom to contact for clarifications on the pipe line circuit drawing for insulation</p> <p>PC12. Escalate the concern to the supervisor or shift-in-charge, if needed</p>
Identify the tools, tackles, insulation materials that are required to carry out the assigned insulation job	<p>PC13. Identify tools, tackles & equipment required to perform the pipe line/equipment insulation job</p> <p>PC14. Ask helper to carry tools, tackles and insulated materials required to the desired work site</p> <p>PC15. Report to stores / supervisor in case of non-availability of tools, tackles, insulation materials, pipes and pipe line fittings etc. or stock-out</p>



ISC/N0817

Understand the assigned job of fitter insulation

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. Quality and damage checks to be done and importance of the same KA2. Risk and impact of not following defined procedures/work instructions KA3. Escalation matrix for reporting identified issues KA4. Safety procedures as applicable at the work sites
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Pipe line circuit/equipment drawing KB2. Various tools, tackles and insulation materials to be used for the pipe line insulation job e.g. different types of pipe wrench, pipe vice, glass wool, rock wool, mineral wool, polyethylene, foam insulation (phenolic foam insulation board, spray foam insulation, rubber foam insulation, polyurethane spray foam insulation) etc. KB3. Different hard wares e.g. steam jointing, red lead powder, teflon tapes/grease etc. KB4. Gas cutting and welding KB5. Pipe bending as per required profile KB6. Different types of pipe fittings e.g. socket, union, reducer, plug, elbow, T fittings, 4 way fitting, rotary fitting etc. KB7. Pipe line threading as required KB8. Insulation materials e.g. phenolic foam insulation board, spray foam insulation, rubber foam insulation, polyurethane spray foam insulation KB9. Leakages and their repairing KB10. Insulation of different types of equipments e.g. tank, scrubber, reactor, blower, fuming chamber etc. KB11. Implications of not adhering to sequence of activities and operations for pipe line insulation as per standard practice
Skills (S) [Optional]	
Element	Skills
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA3. Read and interpret Pipe line Circuit/Equipment Drawing for carrying out insulation SA4. Understand the sequence of activities for pipe line/equipment insulation SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc.
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:



ISC/N0817

Understand the assigned job of fitter insulation

	<p>SA6. Express statements, opinions or information clearly so that others can hear and understand</p> <p>SA7. Respond appropriately to queries</p> <p>SA8. Communicate with team members and supervisor</p>
B. Professional Skills	Decision Making
	N.A
	Plan and Organize
	N.A
	Customer Centricity
	N.A
	Problem Solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Test and diagnose common problems in the pipe line / equipment insulation based on visual inspection, temperature, corrosion level etc.</p> <p>SB2. Isolate the damaged insulated pipe line circuit/equipment for re-insulation as required</p> <p>SB3. Handle different tools, tackles and equipments for pipe line/equipment insulation job wearing appropriate Personal Protective Equipments (PPE)</p>
	Analytical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. Suggest improvements(if any) in maintenance processes based on experience</p>
Critical Thinking	
N.A	

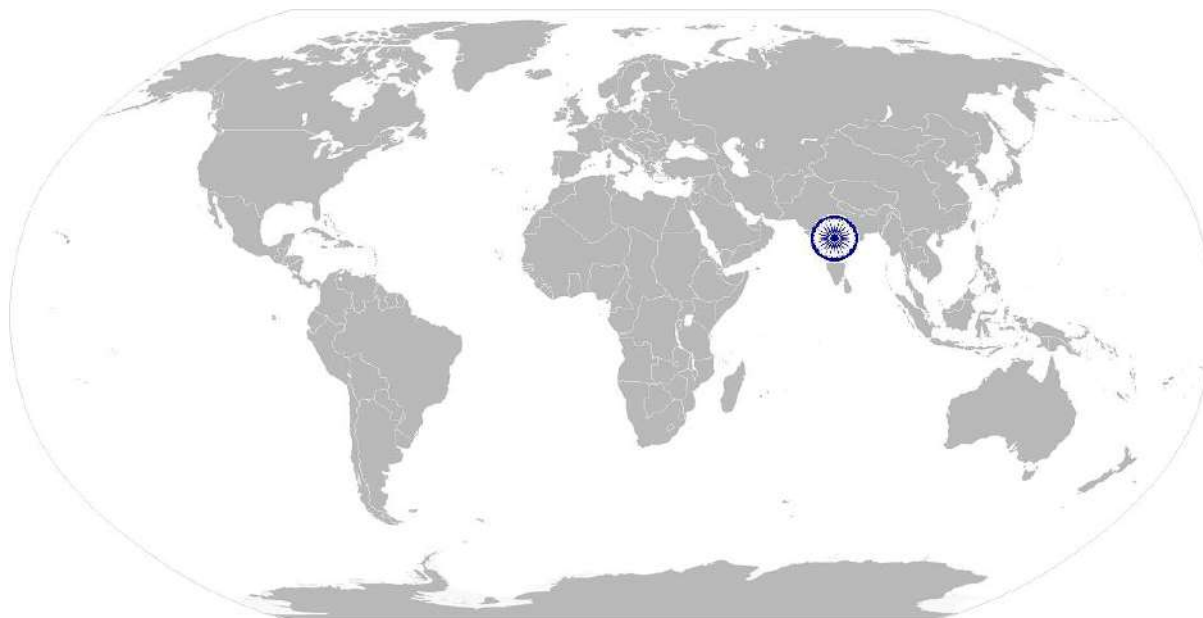


ISC/N0817

Understand the assigned job of fitter insulation

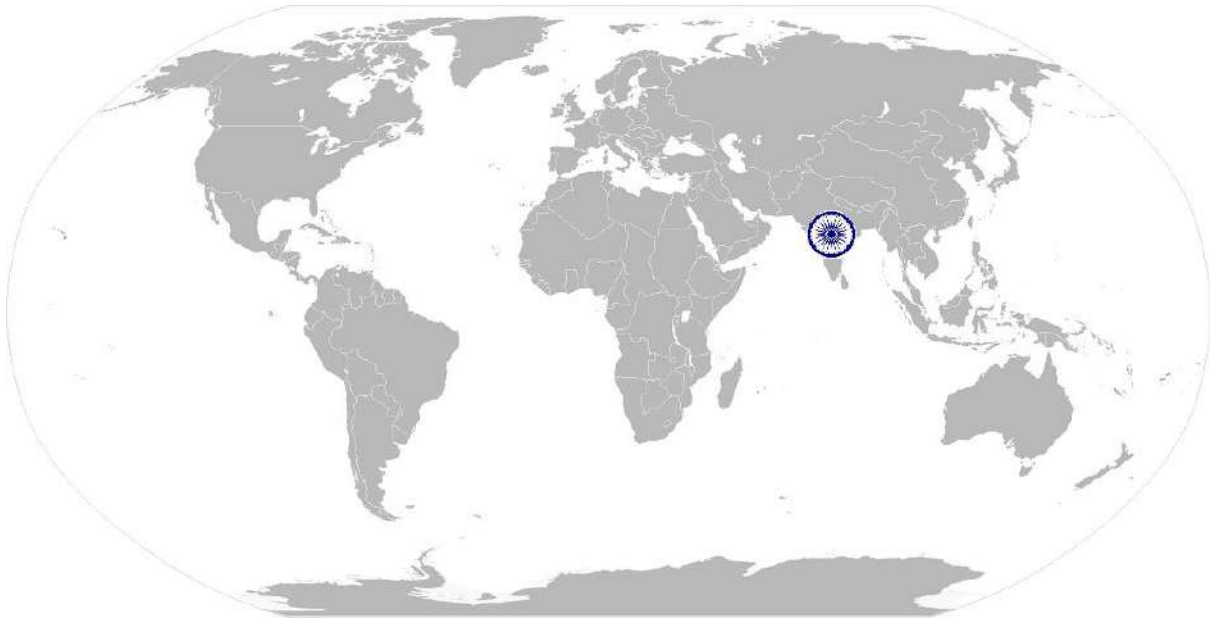
NOS Version Control

NOS Code	ISC/N0817		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and Steel	Drafted on	21/11/2014
Industry Sub-sector	Mechanical Maintenance	Last reviewed on	25/03/2015
Occupation	Fitter	Next review date	25/03/2016





National Occupational Standards



Overview

This unit is about inspecting the pipe line circuit/equipment related to insulation for scheduled maintenance or defects and preparing the tools, tackles, insulation materials for carrying out the insulation job.



ISC/N0818

Prepare for operation of insulation job

National Occupational Standard

Unit Code	ISC/N0818
Unit Title (Task)	Prepares for operation of insulation job
Description	This unit is about inspecting the pipe line circuit/equipment related to insulation for scheduled maintenance or defects and preparing the tools, tackles, insulation materials for carrying out the insulation job.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Reach the site and inspect the pipe line circuit/equipment drawing, condition of insulation for scheduled maintenance or defects and identify cause of problem Prepare tools, tackles, hard wares, pipes, pipe line fittings, insulation materials and equipments required for assigned pipe line/equipment insulation job
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Reach the site and inspect the pipe line circuit/equipment drawing, condition of insulation for scheduled maintenance or defects and identify cause of problem	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Reach the site with desired tools, tackles, hard wares, pipes, pipe line fittings, insulation material and equipments</p> <p>PC2. Identify the root cause of the problem, if any</p> <p>PC3. Identify the cause of insulation damage in the pipe line circuit/equipment</p> <p>PC4. Identify part of the pipe line damaged due to proper insulation</p> <p>PC5. Identify the proper insulation required for the damaged pipe line circuit/equipment due to corrosion</p> <p>PC6. Identify the temperate loss of the steam pipe line/equipment due to insulation damage</p>
Prepare tools, tackles, hard wares, pipes, pipe line fittings, insulation materials and equipments required for assigned pipe line/equipment insulation job	<p>PC7. Prepare the list of tools, tackles, hard wares, pipes, pipe line fittings, insulated material and equipments required for completion of the assigned pipe line/equipment insulation job and ensure availability at the work site</p> <p>PC8. Ensure that tools, tackles, hard wares, pipes, pipe line fittings and insulated materials match the desired specifications of the given job</p> <p>PC9. Ensure tools, tackles, hard wares, pipes, pipe line fittings, insulated materials and equipment required for insulation are free from physical damage and ready for operation</p> <p>PC10. Report damaged / defective pipes, pipe fittings, insulated materials and equipment as per the escalation matrix</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. Quality and damage checks to be done and importance of the same</p> <p>KA2. Risk and impact of not following defined procedures/work instructions</p> <p>KA3. Escalation matrix for reporting identified issues</p> <p>KA4. Safety procedures as applicable at the work sites</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Pipe line circuit/equipment drawing</p> <p>KB2. Various tools, tackles and insulation materials o be used for the pipe line</p>



ISC/N0818

Prepare for operation of insulation job

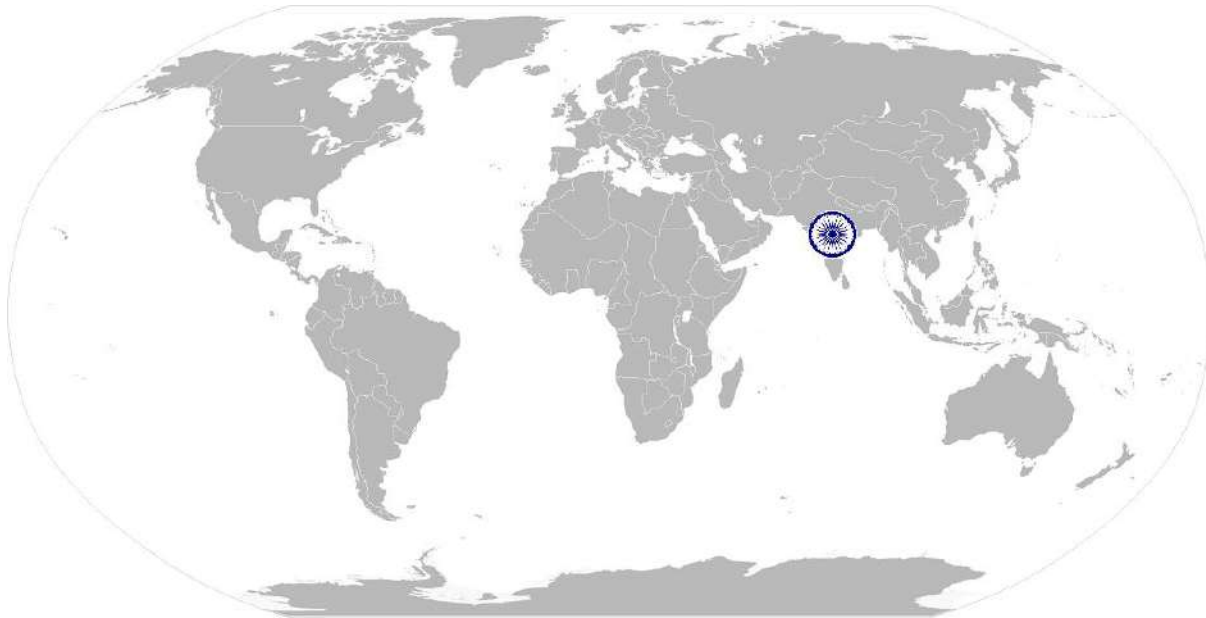
	<p>insulation job e.g. different types of pipe wrench, pipe vice, glass wool, rock wool, mineral wool, polyethylene, foam insulation (phenolic foam insulation board, spray foam insulation, rubber foam insulation, polyurethane spray foam insulation) etc. KB3. Different hard wares e.g. steam jointing, red lead powder, teflon tapes/grease etc. KB4. Gas cutting and welding KB5. Pipe bending as per required profile KB6. Different types of pipe fittings e.g. socket, union, reducer, plug, elbow, T fittings, 4 way fitting, rotary fitting etc. KB7. Pipe line threading as required KB8. Insulation materials e.g. phenolic foam insulation board, spray foam insulation, rubber foam insulation, polyurethane spray foam insulation KB9. Leakages and their repairing KB10. Insulation of different types of equipments e.g. tank, scrubber, reactor, blower, fuming chamber etc. KB11. Implications of not adhering to sequence of activities and operations for pipe line insulation as per standard practice</p>
Skills (S) [Optional]	
Element	Skills
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA3. Read and interpret Pipe line Circuit/Equipment Drawing for carrying out insulation SA4. Understand the sequence of activities for pipe line/equipment insulation SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc.
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA6. Express statements, opinions or information clearly so that others can hear and understand SA7. Respond appropriately to queries SA8. Communicate with team members and supervisor
B. Professional Skills	Decision Making
	N.A
	Plan and Organize
	N.A
	Customer Centricity
	N.A



ISC/N0818

Prepare for operation of insulation job

	Problem Solving
	The user/individual on the job needs to know and understand how to: SB1. Test and diagnose common problems in the pipe line / equipment insulation based on visual inspection, temperature, corrosion level etc. SB2. Isolate the damaged insulated pipe line circuit/equipment for re-insulation as required SB3. Handle different tools, tackles and equipments for pipe line/equipment insulation job wearing appropriate Personal Protective Equipments (PPE)
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB4. Suggest improvements(if any) in maintenance processes based on experience
	Critical Thinking
	N.A



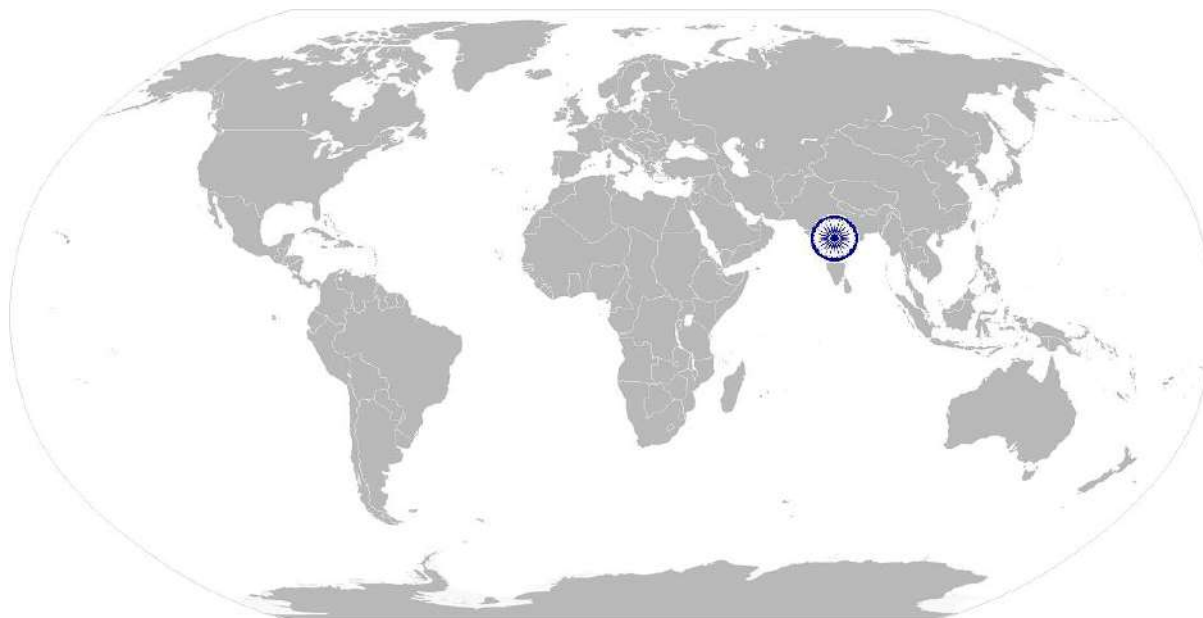


ISC/N0818

Prepare for operation of insulation job

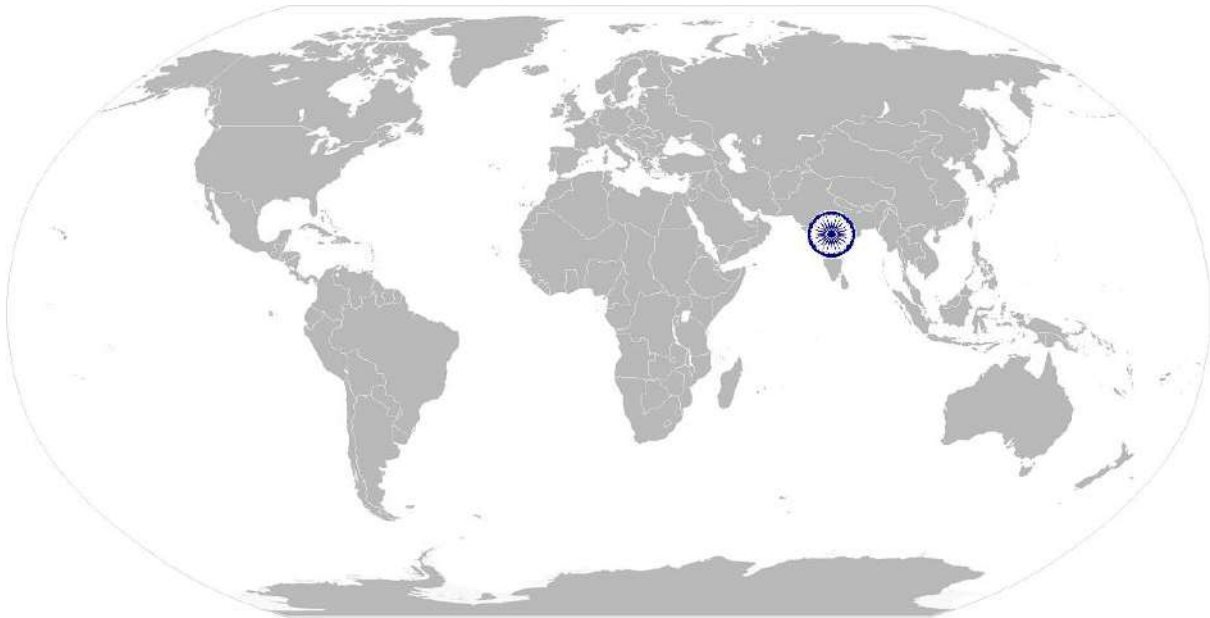
NOS Version Control

NOS Code	ISC/N0818		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and Steel	Drafted on	08/09/2014
Industry Sub-sector	Mechanical Maintenance	Last reviewed on	25/03/2015
Occupation	Fitter	Next review date	25/03/2016





National Occupational Standards



Overview

This unit is about carrying out the insulation job in terms of rectifying the identified problem or carrying out scheduled maintenance.



ISC/N0819

Carry out the assigned operation for insulation

National Occupational Standard

Unit Code	ISC/N0819
Unit Title (Task)	Carry out the assigned operation for insulation
Description	This unit is about carrying out the insulation job in terms of rectifying the identified problem or carrying out scheduled maintenance.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Conduct routine maintenance or rectify the problem, as appropriate for pipe line circuit/equipment insulation • Conduct pressure tests to ensure fitness of pipe line circuit / equipment before insulation • Conduct inspection post re-insulation of pipe line circuit / equipment • Communicate to supervisor about completion of insulation job
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Conduct routine maintenance or rectify the problem, as appropriate for pipe line circuit/equipment insulation	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Ensure proper shut down of the pipe line circuit/equipment, if required</p> <p>PC2. Dismantle the damaged / choked pipe line circuit/equipment to be insulated, as needed</p> <p>PC3. Correct the defect in the pipe line circuit/equipment part or replace the defective part before insulation</p> <p>PC4. Assemble the pipe line parts/fittings/equipments according to the pipe line circuit/equipment drawings for re-insulation, as required</p> <p>PC5. Replace damaged / choked / corroded pipes, pipe fittings, equipments and clamps etc. before re-insulation</p> <p>PC6. Adjust the steam line valves for proper steam flow in the pipe line circuit</p> <p>PC7. Check the steam temperature at the discharge end to ensure proper insulation</p>
Conduct pressure tests to ensure fitness of pipe line circuit / equipment before insulation	<p>PC8. Check proper flow of steam with adequate pressure and temperature in the pipe line circuit for ensuring proper insulation</p> <p>PC9. Check the opening of valves to ensure flow, pressure, temperature etc.</p> <p>PC10. Check the clamping of the pipe line circuit to ensure rigidity and safety</p> <p>PC11. Test the pipe line circuit/equipment to ensure proper insulation, it is leak proof and fit to use before handover</p> <p>PC12. Record the test results in the prescribed format of the organization</p>
Conduct inspection post re-insulation of pipe line circuit / equipment	PC13. Conduct inspection of pipeline circuit / equipment post re-insulation to ensure it is leak proof, rigid and safe to use
Communicate to supervisor about completion of insulation job	<p>PC14. Ensure all activities are complete according to checklist</p> <p>PC15. Communicate to supervisor on completion of given job in case of any deviations from checklist</p>
Element	Knowledge and Understanding
A. Organisational	The user/individual on the job needs to know and understand:



ISC/N0819

Carry out the assigned operation for insulation

<p>Context (Knowledge of the Company/ Organisation and its processes)</p>	<p>KA1. Quality and damage checks to be done and importance of the same KA2. Risk and impact of not following defined procedures/work instructions KA3. Escalation matrix for reporting identified issues KA4. Safety procedures as applicable at the work sites</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand: KB1. Pipe line circuit/equipment drawing KB2. Various tools, tackles and insulation materials to be used for the pipe line insulation job e.g. different types of pipe wrench, pipe vice, glass wool, rock wool, mineral wool, polyethylene, foam insulation (phenolic foam insulation board, spray foam insulation, rubber foam insulation, polyurethane spray foam insulation) etc. KB3. Different hard wares e.g. steam jointing, red lead powder, teflon tapes/grease etc. KB4. Gas cutting and welding KB5. Pipe bending as per required profile KB6. Different types of pipe fittings e.g. socket, union, reducer, plug, elbow, T fittings, 4 way fitting, rotary fitting etc. KB7. Pipe line threading as required KB8. Insulation materials e.g. phenolic foam insulation board, spray foam insulation, rubber foam insulation, polyurethane spray foam insulation KB9. Leakages and their repairing KB10. Insulation of different types of equipments e.g. tank, scrubber, reactor, blower, fuming chamber etc. KB11. Implications of not adhering to sequence of activities and operations for pipe line insulation as per standard practice</p>
<p>Skills (S) [Optional]</p>	
<p>Element</p>	<p>Skills</p>
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills The user/ individual on the job needs to know and understand how to: SA1. Construct simple sentences and express ideas clearly through written communication SA2. Fill up appropriate technical forms, process charts, activity logs in required format of the company</p> <p>Reading Skills The user/individual on the job needs to know and understand how to: SA3. Read and interpret Pipe line Circuit/Equipment Drawing for carrying out insulation SA4. Understand the sequence of activities for pipe line/equipment insulation SA5. Read and understand manuals, health and safety instructions, memos, reports, job cards etc.</p> <p>Oral Communication (Listening and Speaking skills) The user/individual on the job needs to know and understand how to: SA6. Express statements, opinions or information clearly so that others can hear and understand SA7. Respond appropriately to queries</p>



ISC/N0819

Carry out the assigned operation for insulation

	SA8. Communicate with team members and supervisor
B. Professional Skills	Decision Making
	N.A
	Plan and Organize
	N.A
	Customer Centricity
	N.A
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB1. Test and diagnose common problems in the pipe line / equipment insulation based on visual inspection, temperature, corrosion level etc. SB2. Isolate the damaged insulated pipe line circuit/equipment for re-insulation as required SB3. Handle different tools, tackles and equipments for pipe line/equipment insulation job wearing appropriate Personal Protective Equipments (PPE)
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB4. Suggest improvements(if any) in maintenance processes based on experience
Critical Thinking	
N.A	



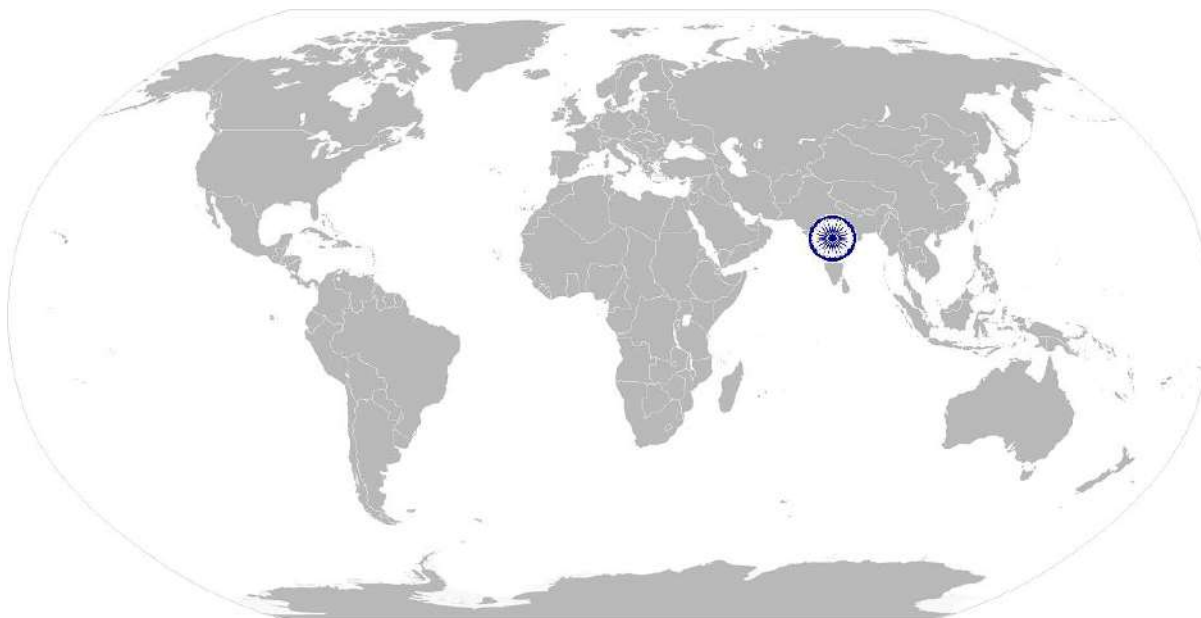


ISC/N0819

Carry out the assigned operation for insulation

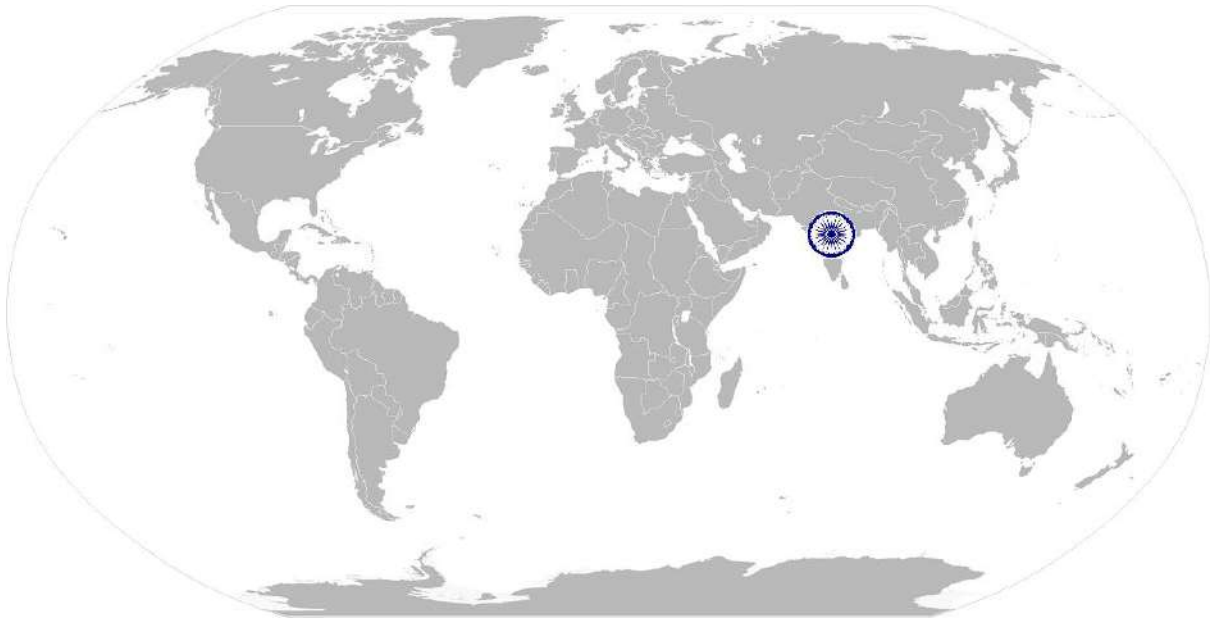
NOS Version Control

NOS Code	ISC/N0819		
Credits(NSQF)	TBD	Version number	1.0
Industry	Iron and Steel	Drafted on	08/09/2014
Industry Sub-sector	Mechanical Maintenance	Last reviewed on	25/03/2015
Occupation	Fitter	Next review date	25/03/2016





National Occupational Standards



Overview

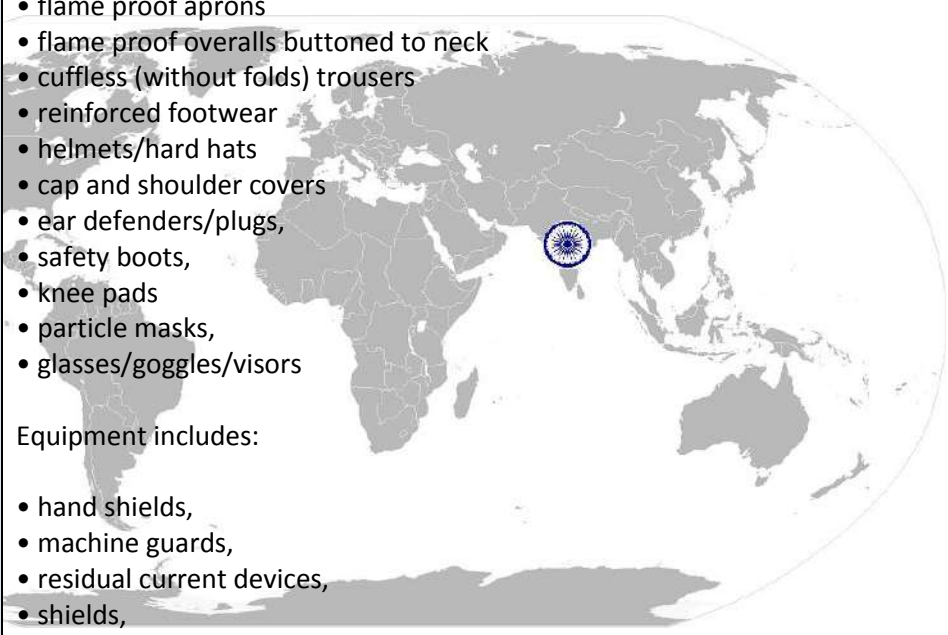
This unit covers health, safety and security at the workplace. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment.



ISC/N0008

Use basic health and safety practices at the workplace

National Occupational Standard

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> <p>It covers knowledge of fire safety, common first aid applications, safe practices and emergency procedures.</p>
Scope	<p>This unit/task covers the following:</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 • cuffless (without folds) trousers • reinforced footwear • helmets/hard hats • cap and shoulder covers • ear defenders/plugs, • safety boots, • knee pads • particle masks, • glasses/goggles/visors <p>Equipment includes:</p> <ul style="list-style-type: none"> • hand shields, • machine guards, • residual current devices, • shields, • dust sheets, • respirator <p>Hazards include:</p> <ul style="list-style-type: none"> • working with electrical and thermal tools and equipment • sharp edged and heavy tools, • heated metals • oxyfuel and other 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, tolls and machines, intense light, load noise, obstructions in corridors, by doors, blind turns, noise, over stacked shelves and 

ISC/N0008

Use basic health and safety practices at the workplace

	<p>packages, etc.</p> <ul style="list-style-type: none">• Electrical: power supply and points, loose and naked cables and wires, electrical machines and appliances, etc. <p>Safe working practices include:</p> <ul style="list-style-type: none">• 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.• proper waste disposal• Display of National Safety Councils Hoarding. <p>Methods are:</p> <ul style="list-style-type: none">• 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 <p>Ladders: Faults :</p> <ul style="list-style-type: none">• corrosion of metal components• deterioration• splits and cracks timber components (for wooden ladders)• 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>Good housekeeping practices:</p> <ul style="list-style-type: none">• clean/tidy work areas• removal/disposal of waste products
--	--

ISC/N0008

Use basic health and safety practices at the workplace

	<ul style="list-style-type: none">• protect surfaces <p>Emergency procedures:</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>Various areas:</p> <ul style="list-style-type: none">• on chemical containers• equipment• packages• inside buildings• open areas and public spaces, etc. <p>General health and safety equipment:</p> <ul style="list-style-type: none">• fire extinguishers,• first aid equipment,• safety instruments and clothing,• safety installations, eg. fire exits, exhaust fans <p>Incident Report:</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• Issue of memo <p>Job titles:</p> <ul style="list-style-type: none">• health and safety officer• first aid officer• fire officer <p>Documents:</p> <ul style="list-style-type: none">• fire notices
--	---





ISC/N0008

Use basic health and safety practices at the workplace

	<ul style="list-style-type: none"> • accident reports • safety instructions for equipment and procedures • company notices and documents • legal documents (eg. government notices) <p>Activities and causes:</p> <ul style="list-style-type: none"> • physical actions, • reading, • listening to and giving instructions, • inattention, • sickness and incapacity (eg. drunkenness), • health hazards (eg. untreated injuries and contagious illness) <p>Adherence to Environmental regulations</p> <p>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>Fires:</p> <ul style="list-style-type: none"> • Class A: ordinary solid combustibles, eg. wood, paper, cloth, plastic, charcoal, etc. • Class B: flammable liquids and gases, eg. gasoline, propane, diesel fuel, tar, cooking oil, and similar substances • Class C: electrical equipment eg. 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 (eg. smoking, welding, etc.), • chemical fires, etc. <p>Fire extinguishers:</p> <ul style="list-style-type: none"> • sand, • water • foam • CO₂
--	--



ISC/N0008

Use basic health and safety practices at the workplace

	<ul style="list-style-type: none"> • dry powder
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Health and safety	<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>PC2. state the name and location of people responsible for health and safety in the workplace.</p> <p>PC3. state the names and location of documents that refer to health and safety in the workplace.</p> <p>PC4. identify job-site hazardous work and state possible causes of risk or accident in the workplace.</p> <p>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</p> <p>PC6. state location of general health and safety equipment in the workplace</p> <p>PC7. inspect for faults, set up and safely use steps and ladders in general use</p> <p>PC8. work safely in and around trenches, elevated places and confined areas</p> <p>PC9. lift heavy objects safely using correct procedures</p> <p>PC10. apply good housekeeping practices at all times</p> <p>PC11. identify common hazard signs displayed in various areas</p> <p>PC12. retrieve and/or point out documents that refer to health and safety in the workplace depending on work activities</p>
Fire safety	<p>PC13. use the various appropriate fire extinguishers on different types of fires correctly</p> <p>PC14. demonstrate rescue techniques applied during fire hazard</p> <p>PC15. demonstrate good housekeeping in order to prevent fire hazards</p> <p>PC16. demonstrate the correct use of a fire extinguisher.</p>
Emergencies, rescue and first-aid procedures	<p>PC17. demonstrate how to free a person from electrocution</p> <p>PC18. administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.</p> <p>PC19. demonstrate basic techniques of bandaging</p> <p>PC20. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments</p> <p>PC21. perform and organize loss minimization or rescue activity during an accident in real or simulated environments</p> <p>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</p> <p>PC23. demonstrate the artificial respiration and the CPR Process</p> <p>PC24. participate in emergency procedures.</p> <p>PC25. complete a written accident/incident report or dictate a report to another person, and send report to person responsible</p> <p>PC26. demonstrate correct method to move injured people and others during an emergency</p>
Element	Knowledge and Understanding



ISC/N0008

Use basic health and safety practices at the workplace

<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: 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. KA2. State the names and location of documents that refer to health and safety in the workplace. KA3. Display and use of first aid box</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand: KB4. meaning of “hazards” and “risks” KB5. health and safety hazards commonly present in the work environment and related precautions KB6. possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible. KB7. activities and causes of risk and accident KB8. methods of accident prevention KB9. safe working practices when working with tools and machines KB10. safe working practices while working at various hazardous sites KB11. where to find all the general health and safety equipment in the workplace KB12. various dangers associated with the use of electrical equipment KB13. preventative and remedial actions to be taken in the case of exposure to toxic materials. KB14. importance of using protective clothing/equipment while working KB15. precautionary activities to prevent the fire accident KB16. various causes of fire KB17. techniques of using the different fire extinguishers KB18. different methods of extinguishing fire KB19. rescue techniques applied during a fire hazard KB20. various types of safety signs and what they mean KB21. appropriate basic first aid treatment relevant to the condition eg. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries KB22. content of written accident report. KB23. potential injuries and ill health associated with incorrect manual handling KB24. safe lifting and carrying practices KB25. personal safety, health and dignity issues relating to the movement of a person by others. KB26. potential impact to a person who is moved incorrectly & attracts accident</p>
<p>Skills (S) [Optional]</p>	
<p>Element</p>	<p>Skills</p>
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills The user/individual on the job needs to know and understand how to: SA1. Read and comprehend basic content to read labels, charts, signages 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) 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</p>



ISC/N0008

Use basic health and safety practices at the workplace

	<p>issues</p> <p>SA5. Give clear instructions to co-workers, subordinates others</p>
B. Professional Skills	<p>Decision Making</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. 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>
	<p>Plan and Organize</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity</p>
	<p>Customer Centricity</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. Remain congenial while discussing and debating issues with co-workers</p> <p>SB4. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice</p> <p>SB5. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives</p> <p>SB6. Thank co-workers for any assistance received</p> <p>SB7. Offer appropriate respect based on mutuality and respect for fellow workmanship and authority</p>
	<p>Problem Solving</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB8. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s)</p> <p>SB9. Identify immediate or temporary solutions to resolve delays</p> <p>SB10. Identify sources of support that can be availed of for problem solving for various kind of problems</p> <p>SB11. Seek appropriate assistance from other sources to resolve problems</p> <p>SB12. Report problems that you cannot resolve to appropriate authority</p>
	<p>Analytical Thinking</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB13. Identify cause and effect relations in their area of work</p> <p>SB14. Use cause and effect relations to anticipate potential problems and their solution</p>
	<p>Critical Thinking</p>
	<p>N.A</p>

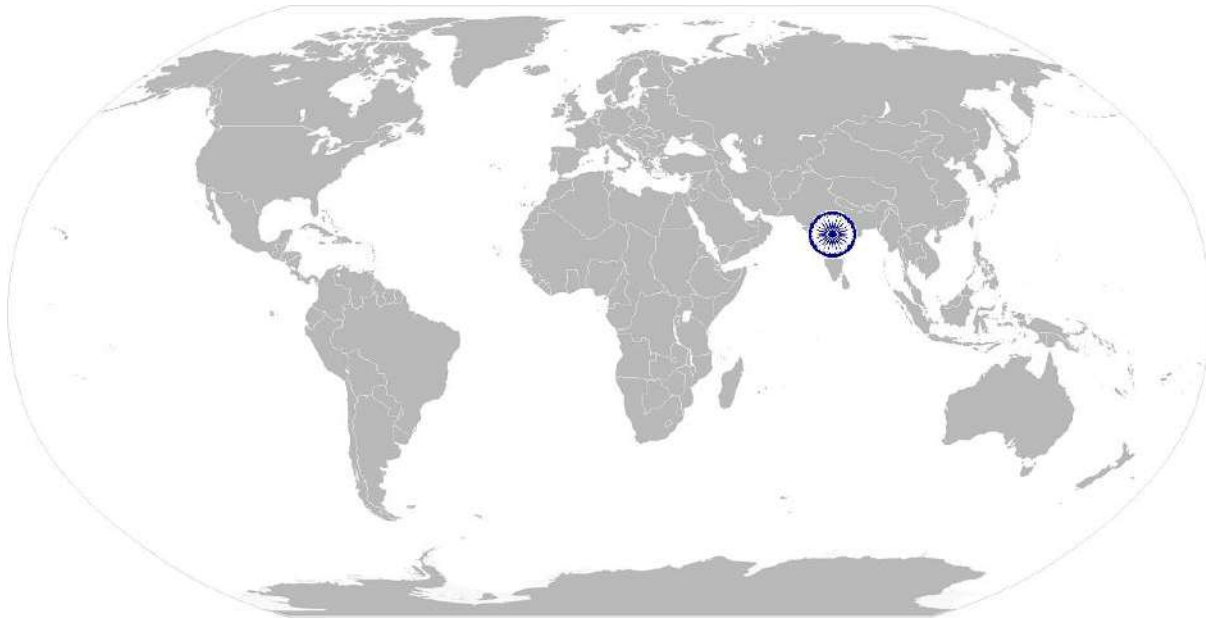


ISC/N0008

Use basic health and safety practices at the workplace

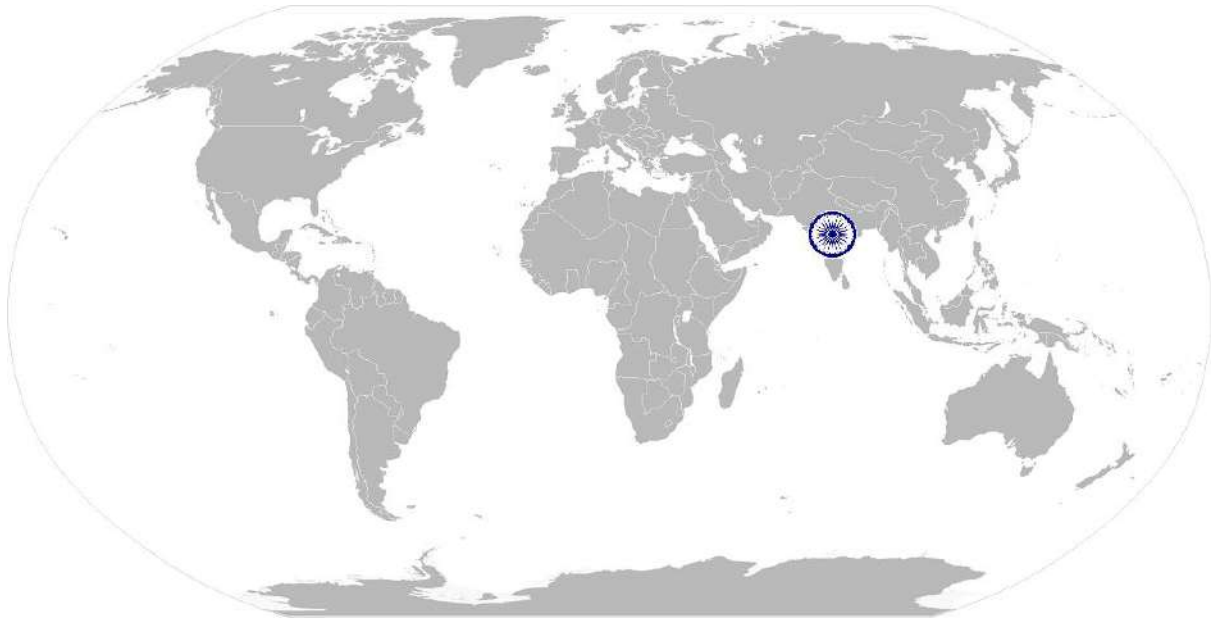
NOS Version Control

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	Fitter	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.



ISC/N0009

Work effectively with others

National Occupational Standard

Unit Code	ISC/N0009
Unit Title (Task)	Works effectively with others
Description	<p>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.</p> <p>These cover areas such as communication etiquette, discipline, listening, handling conflict and grievances.</p>
Scope	<p>This unit/task covers the following:</p> <p>Etiquette includes:</p> <ul style="list-style-type: none"> • do not use abusive language • use appropriate titles and terms of respect • do not eat or chew while talking (vice versa)etc. <p>Behaviours include:</p> <ul style="list-style-type: none"> • punctuality • completing tasks as per given time and standards • not gossiping and idling time • eliminating waste • honesty, etc.
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
	<p>The user/individual on the job should be able to:</p> <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. give information to others clearly, at a pace and in a manner that helps them to understand</p> <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/	<p>The user/individual on the job needs to know and understand:</p> <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</p>



ISC/N0009

Work effectively with others

<p>Organisation and its processes)</p>	<p>work area KA3. relevant people and their responsibilities within the work area 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: 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 behavior 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) [Optional]</p>	
<p>Element</p>	<p>Skills</p>
<p>A. Core Skills/ Generic Skills</p>	<p>Writing skills The user/individual on the job needs to know and understand how to: SA1. Write notes in log books etc.</p> <p>Reading skills The user/individual on the job needs to know and understand how to: SA2. Read and comprehend basic content to read instructions, labels, charts, signage's</p> <p>Oral Communication (Listening and Speaking skills) The user/individual on the job needs to know and understand how to: SA3. Interact with co-workers in order to clarify instructions and other work related issues SA4. Communicate with co-workers to share and receive information, instruction SA5. Share & receive information from Supervisors</p>
<p>B. Professional Skills</p>	<p>Decision Making The user/individual on the job needs to know and understand how to: SB1. 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>



ISC/N0009

Work effectively with others

	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB2. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB3. Remain congenial while discussing and debating issues with co-workers SB4. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice SB5. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives SB6. Thank co-workers for any assistance received SB7. 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: SB8. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB9. Identify immediate or temporary solutions to resolve delays SB10. Identify sources of support that can be availed of for problem solving for various kind of problems SB11. Seek appropriate assistance from other sources to resolve problems SB12. Report problems that you cannot resolve to appropriate authority
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB13. Identify cause and effect relations in their area of work SB14. Use cause and effect relations to anticipate potential problems and their solution
	Critical Thinking
	N.A

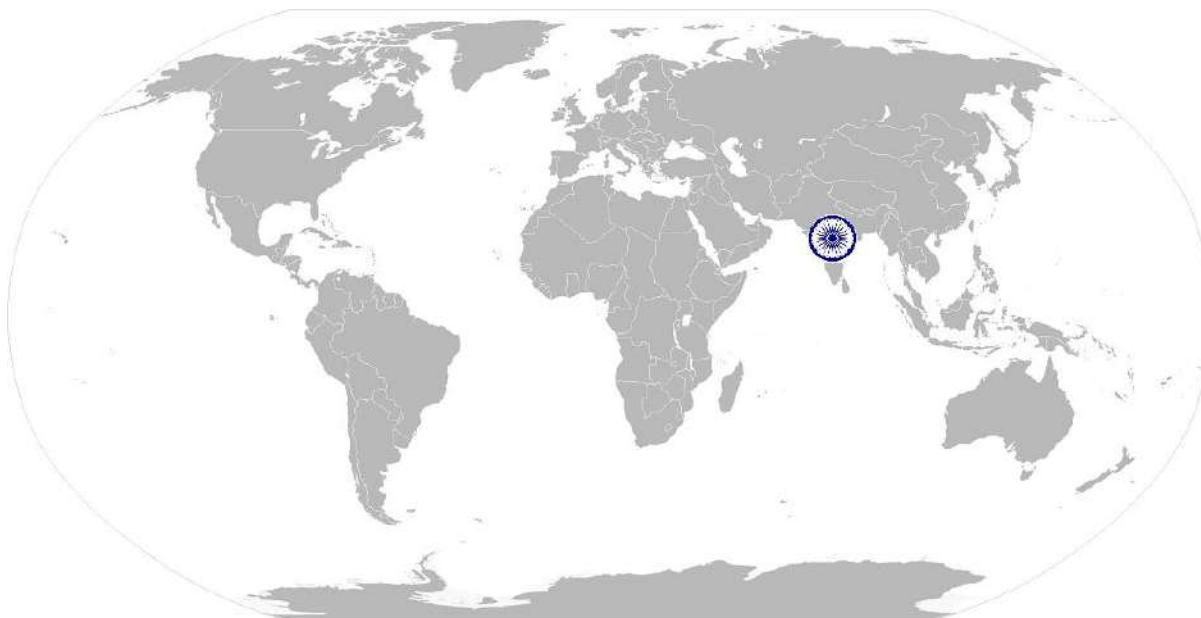


ISC/N0009

Work effectively with others

NOS Version Control

NOS Code	ISC/N0009		
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	Fitter	Next review date	30/12/2015





CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Fitter: Insulation

Qualification Pack: ISC/Q0819

Sector Skill Council: Indian Iron & Steel Sector Skill Council

Guidelines for Assessment:

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the 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 this criteria.
5. To pass the Qualification Pack , every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Assessment outcomes	Assessment Criteria for outcomes	Marks Allocation			
		Total Marks (1000)	Out Of	Theory	Skills Practical
ISC/N0817: Understand the assigned job of fitter insulation	PC1. Interpret the checklist and understand the insulation job requirements	275	15	5	10
	PC2. Plan, as appropriate to carry out the insulation job		25	10	15
	PC3. Identify the area of damage in the pipe line to be re-insulated		20	5	15
	PC4. Identify type of insulations to be performed in the pipeline/equipment		20	5	15
	PC5. Identify the pipe line damage due to corrosion in absence of proper insulation		20	5	15
	PC6. Understand the pipe line circuit/equipment drawings		20	5	15
	PC7. Understand the quality of insulated material required in the pipe line circuit/equipment		20	5	15



	PC8. Understand other specifications of insulated material and identify the sequence of activities required for insulating the pipe line circuit/equipment		20	10	10
	PC9. Read and interpret pipe line circuit/equipment drawings to ensure correct layouts and quality of the insulated material		20	10	10
	PC10. Identify any clarifications that he wants to seek with respect to the given pipe line circuit drawing/equipment		15	5	10
	PC11. Recognize whom to contact for clarifications on the pipe line circuit drawing for insulation		15	5	10
	PC12. Escalate the concern to the supervisor or shift-in-charge, if needed		15	5	10
	PC13. Identify tools, tackles & equipment required to perform the pipe line/equipment insulation job		20	10	10
	PC14. Ask helper to carry tools, tackles and insulated materials required to the desired work site		15	5	10
	PC15. Report to stores / supervisor in case of non-availability of tools, tackles, insulation materials, pipes and pipe line fittings etc. or stock-out		15	5	10
		Total	275	95	180
ISC/N0818: Prepare for operation of insulation job	PC1. Reach the site with desired tools, tackles, hard wares, pipes, pipe line fittings, insulation material and equipments	200	20	5	15
	PC2. Identify the root cause of the problem, if any		20	5	15
	PC3. Identify the cause of insulation damage in the pipe line circuit/equipment		20	5	15
	PC4. Identify part of the pipe line damaged due to proper insulation		20	5	15
	PC5. Identify the proper insulation required for the damaged pipe line circuit/equipment due to corrosion		20	5	15
	PC6. Identify the temperate loss of the steam pipe line/equipment due to insulation damage		20	5	15



	PC7. Prepare the list of tools, tackles, hard wares, pipes, pipe line fittings, insulated material and equipments required for completion of the assigned pipe line/equipment insulation job and ensure availability at the work site		20	5	15
	PC8. Ensure that tools, tackles, hard wares, pipes, pipe line fittings and insulated materials match the desired specifications of the given job		20	5	15
	PC9. Ensure tools, tackles, hard wares, pipes, pipe line fittings, insulated materials and equipment required for insulation are free from physical damage and ready for operation		20	5	15
	PC10. Report damaged / defective pipes, pipe fittings, insulated materials and equipment as per the escalation matrix		20	5	15
		Total	200	50	150
ISC/N0819: Carry out the assigned operation for insulation	PC1. Ensure proper shut down of the pipe line circuit/equipment, if required		20	5	15
	PC2. Dismantle the damaged / choked pipe line circuit/equipment to be insulated, as needed		20	5	15
	PC3. Correct the defect in the pipe line circuit/equipment part or replace the defective part before insulation		20	5	15
	PC4. Assemble the pipe line parts/fittings/equipments according to the pipe line circuit/equipment drawings for re-insulation, as required		20	5	15
	PC5. Replace damaged / choked / corroded pipes, pipe fittings, equipments and clamps etc. before re-insulation	275	15	5	10
	PC6. Adjust the steam line valves for proper steam flow in the pipe line circuit		15	5	10
	PC7. Check the steam temperature at the discharge end to ensure proper insulation		15	5	10
	PC8. Check proper flow of steam with adequate pressure and temperature in the pipe line circuit for ensuring proper insulation		20	5	15
	PC9. Check the opening of valves to ensure flow, pressure, temperature etc.		20	5	15



	PC10. Check the clamping of the pipe line circuit to ensure rigidity and safety		20	5	15
	PC11. Test the pipe line circuit/equipment to ensure proper insulation, it is leak proof and fit to use before handover		20	5	15
	PC12. Record the test results in the prescribed format of the organization		20	5	15
	PC13. Conduct inspection of pipeline circuit / equipment post re-insulation to ensure it is leak proof, rigid and safe to use		20	5	15
	PC14. Ensure all activities are complete according to checklist		15	5	10
	PC15. Communicate to supervisor on completion of given job in case of any deviations from checklist		15	5	10
		Total	275	75	200
ISC/N0008: Use basic health and safety practices at the workplace	PC1. Use protective clothing/equipment for specific tasks and work conditions	150	10	5	5
	PC2. State the name and location of people responsible for health and safety in the workplace		4	0	4
	PC3. State the names and location of documents that refer to health and safety in the workplace		1	0	1
	PC4. Identify job-site hazardous work and state possible causes of risk or accident in the workplace		10	5	5
	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		10	5	5
	PC6. State location of general health and safety equipment in the workplace		5	0	5
	PC7. Inspect for faults, set up and safely use steps and ladders in general use		5	0	5
	PC8. Work safely in and around trenches, elevated places and confined areas		5	0	5
	PC9. Lift heavy objects safely using correct procedures		4	0	4



PC10. Apply good housekeeping practices at all times	1	0	1
PC11. Identify common hazard signs displayed in various areas	6	5	1
PC12. Retrieve and/or point out documents that refer to health and safety in the workplace	4	0	4
PC13. Use the various appropriate fire extinguishers on different types of fires correctly	10	5	5
PC14. Demonstrate rescue techniques applied during fire hazard	10	5	5
PC15. Demonstrate good housekeeping in order to prevent fire hazards	1	0	1
PC16. Demonstrate the correct use of a fire extinguisher	4	0	4
PC17. Demonstrate how to free a person from electrocution	5	0	5
PC18. Administer appropriate first aid to victims as required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.	10	5	5
PC19. Demonstrate basic techniques of bandaging	5	0	5
PC20. Respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments	10	5	5
PC21. Perform and organize loss minimization or rescue activity during an accident in real or simulated environments	5	0	5
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	5	0	5
PC23. Demonstrate the artificial respiration and the CPR Process	5	0	5
PC24. Participate in emergency procedures	4	0	4



	PC25. Complete a written accident/incident report or dictate a report to another person, and send report to person responsible		10	5	5
	PC26. Demonstrate correct method to move injured people and others during an emergency		1	0	1
		Total	150	45	105
ISC/N0009: Work effectively with others	PC1. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	100	10	5	5
	PC2. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt		10	5	5
	PC3. Provide information to others clearly, at a pace and in a manner that helps them to understand		10	0	10
	PC4. Display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible		10	5	5
	PC5. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks		10	5	5
	PC6. Display appropriate communication etiquette while working		10	0	10
	PC7. Display active listening skills while interacting with others at work		10	0	10
	PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism		10	5	5
	PC9. Demonstrate responsible and disciplined behaviours at the workplace		15	5	10
	PC10. Escalate grievances and problems to supervisor		5	0	5
		Total	100	30	70