

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR LOGISTICS SECTOR



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:

Logistics Skill Council
(LSC)
'Temple Towers',
Ground Floor, No 476
Anna Salai, Nandanam,
Chennai 600 035
Email: dhanab@lsc-
india.com



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Introduction

Qualifications Pack: Vessel Operator Grade 1 (Electives – Deck Operations/ Engine Operations) (Options – Passenger Vessel Operations)

SECTOR: LOGISTICS

SUB-SECTOR: Inland Waterways

OCCUPATION: - Deck Operations, Vessel Operations, Engine Operations

REFERENCE ID: LSC/Q4101

ALIGNED TO: NCO-2015 – 8162.90/8350/5120.04

Brief Job Description: The individual performs basic deck and engine operations in the vessel like watch out duties, cleaning, basic rope work, painting, greasing and basic fitting activities etc.

Qualifications Pack for Vessel Operator Grade 1

Electives

Elective 1: Deck Operations

The unit is about performing basic activities like cleaning, navigation support, maintenance, etc on the deck.

Elective 2: Engine Operations

The unit is about performing basic activities like oiling, fitting, basic repairs, basic engine operations, maintenance of electrical and mechanical equipment in engine.

Options

Option 1: Passenger Vessel Operations

The unit is about providing catering and housekeeping services to passengers in a passenger vessel

Personal Attributes: The individual should have normal or corrected eyesight and be physically fit. S/he should have English and Vernacular language proficiency, demonstrable in spoken, written and oral communication along with basic numerical skills. The individual should be organized, proactive, and diligent while working on repetitive tasks.

Qualifications Pack for Vessel Operator Grade 1

Job Details	Qualifications Pack Code	LSC/Q4101		
	Job Role	Vessel Operator Grade 1		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Logistics	Drafted on	30/06/2018
	Sub-sector	Inland waterways	Last reviewed on	04/05/2019
	Occupation	Deck Operations, Vessel Operations, Engine Operations	Next review date	04/05/2022
	NSQC Clearance on	DD/MM/YYYY		
	Effective from date	DD/MM/YYYY		

Job Role	Vessel Operator Grade 1
Role Description	The individual performs basic deck and engine operations in the vessel like watch out duties, cleaning, basic rope work, painting, greasing and basic fitting activities etc.
NSQF	3
Minimum Educational Qualifications	Diploma/ Class XII pass; candidate should have completed the age prescribed for apprenticeship as per the corresponding State/UT act
Maximum Educational Qualifications	-
Prerequisite License or Training	Not Applicable for License.
Minimum Job Entry Age	As prescribed by the apprenticeship act of the corresponding State/ Union Territory
Experience	Nil
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> LSC/N4101 Perform basic navigation LSC/N4001 Perform basic preventive maintenance LSC/N4009 Perform mooring and rope work LSC/N4002 Perform basic welding and fitting LSC/N9904 Maintain integrity and ethics in operations LSC/N4102 Follow health, safety and security procedures on vessel <p>Electives (Mandatory to select atleast one):</p> <p>Elective 1: Deck Operations</p> <ol style="list-style-type: none"> LSC/N4103 Perform look out duties in navigation LSC/N4003 Perform cargo handling LSC/N4004 Perform deck assistance <p>Elective 2: Engine Operations</p> <ol style="list-style-type: none"> LSC/N4201 Perform basic engine room operations

Qualifications Pack for Vessel Operator Grade 1

	<p>2.2 LSC/N4202 Perform oiler and fitter duties</p> <p>Options (Not mandatory):</p> <p>Option 1: Passenger vessel operations</p> <p>1.1 LSC/N3901 Perform duties in a passenger vessel</p>
Performance Criteria	As described in the relevant OS units

Qualifications Pack for Vessel Operator Grade 1

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.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
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

Qualifications Pack for Vessel Operator Grade 1

	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.

Qualifications Pack for Vessel Operator Grade 1

Acronyms

Keywords /Terms	Description
CSS	Cargo Stowage and Securing
GPS	Global Positioning System
IMDG	International Maritime Dangerous Goods
NCO	National Classification of Occupations
NOS	National Occupational Standards
NSQC	National Skills Qualifications Committee
NSQF	National Skills Qualifications Framework
OH&S	Occupational Health and Safety
OS	Occupational Standards
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
QP	Qualifications Pack
SOP	Standard Operating Procedures
SWL	Safe Working Load
VHF	Very High Frequency

National Occupational Standard



Overview

This unit is about performing basic navigation activities

LSC/N4101

Perform basic navigation

National Occupational Standard

Unit Code	LSC/N4101
Unit Title (Task)	Perform basic navigation activities
Description	This unit is about performing basic navigation activities
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Carry out watch keeping activity <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models, various simulations for deck and engine operations, cargo operations, vessel navigation, different equipment for deck and engine, model cargo, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Carry out watch keeping activity	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. takeover bridge activity from incumbent after checking the activities to be undertaken</p> <p>PC2. act upon orders stated using various nautical terms</p> <p>PC3. maintain lookout and general surveillance of the vessel</p> <p>PC4. watch for changes in environment weather conditions, obstacles in course and possible collisions</p> <p>PC5. identify other vessels in operation based on the call signs and flags</p> <p>PC6. record bridge activity, observations and communicate</p> <p>PC7. handover the required details to the reliever</p> <p>PC8. locate the position using latitude and longitude on the map and globe</p> <p>PC9. identify different geographies and location, major navigation river routes on the map</p>
Knowledge and understanding (K)	
A. Organizational context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
B. Technical knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p>

LSC/N4101

Perform basic navigation


	<p>KB4. different type of vessels and their functions and cargo carried and cargo handling requirements</p> <p>KB5. various flag signals, sound signals, modes of communication and related norms</p> <p>KB6. navigational charts and pressure and temperature measuring devices – barometer, thermometer</p> <p>KB7. various types of PPEs and their usage</p>
Skills (S)	
A. Core skills/ generic skills	Reading skills
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. instructions over internal communication network</p> <p>SA3. maps and routes</p>
	Writing skills
	<p>The user/individual on the job needs to know how to write:</p> <p>SA4. information and communication notes based on observation</p> <p>SA5. damage reports and daily work reports</p> <p>SA6. instructions and information over internal communication network</p>
	Oral communication (listening and speaking skills)
	<p>The user/individual on the job needs to know how to:</p> <p>SA7. communicate with supervisors and co-workers</p> <p>SA8. collect and convey information to navigation and deck staff</p>
B. Professional Skills	Decision making
	<p>The user/individual on the job needs to know how to:</p> <p>SB1. identify faulty parts of observation equipment in routine checks</p> <p>SB2. decide based on observation if an obstacle can be avoided or a course correction is required</p> <p>SB3. identify activities or orders that need to be prioritised as per instructions</p>
	Plan and organize
	<p>The user/individual on the job needs to know how to:</p> <p>SB4. plan and estimate the time for each assigned activity</p> <p>SB5. maintain punctuality</p> <p>SB6. respond in a timely manner</p> <p>SB7. prioritize and execute tasks based on instructions</p> <p>SB8. be a team player and achieve joint goals</p>
	Customer centricity
<p>The user/individual on the job needs to know and understand:</p> <p>SB9. importance of timely circulation of information</p> <p>SB10. urgency of priority requests as per the instructions</p>	

LSC/N4101

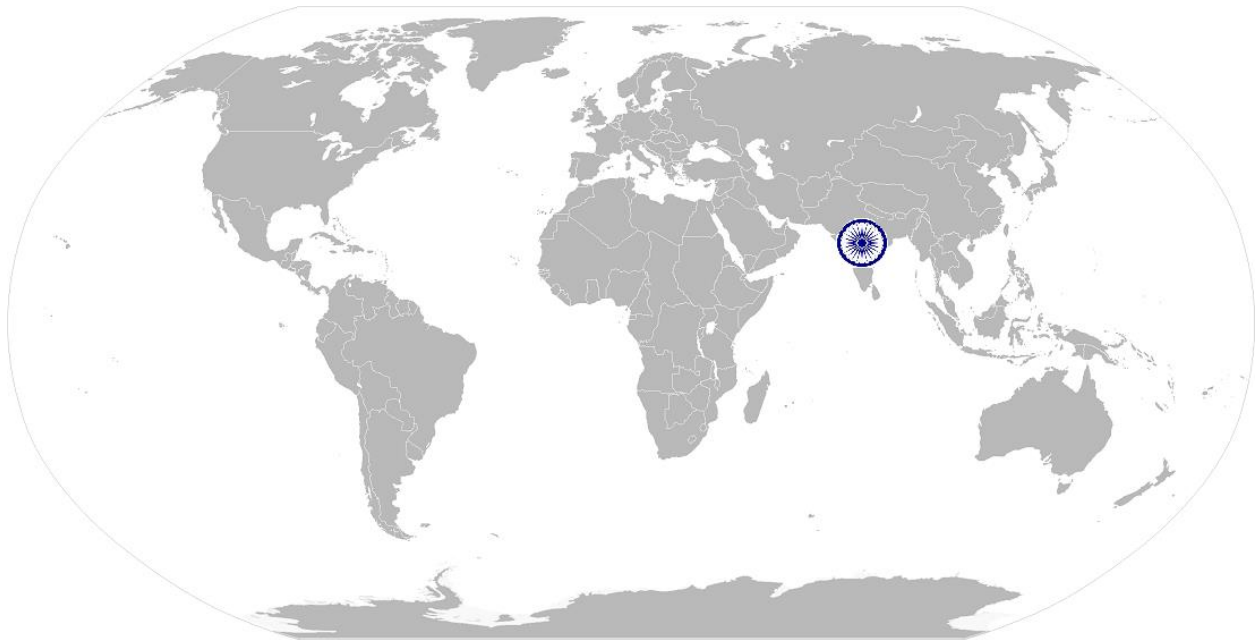
Perform basic navigation

	Problem solving
	The user/individual on the job needs to know how to: SB11. inform the ranking in-charge regarding course correction, adverse observations, etc. SB12. suggest route correction to avoid collision
	Analytical thinking
	The user/individual on the job needs to know how to: SB13. analyse the position of a vessel and waves for safe routing
	Critical thinking
	The user/individual on the job needs to know how to: SB14. observe and communicate adverse weathers SB15. observe and communicate obstacles and dangerous operations by other vessels SB16. focus on task at hand and complete it without errors and delays

NOS Version Control

NOS Code	LSC/N4101 		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Vessel Operations (Navigation, vessel planning, route planning)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about performing basic preventive maintenance

LSC/N4001

Perform basic preventive maintenance

National Occupational Standard

Unit Code	LSC/N4001
Unit Title (Task)	Perform basic preventive maintenance
Description	This unit is about performing basic preventive maintenance
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Comply to work safety requirements • Check for maintenance requirements • Undertake surface painting and maintenance of power tools • Carry out greasing and lubrication • Carry out basic carpentry work • Carry out basic electrical maintenance <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, maintenance tools, vessel models, various simulations for deck and engine operations, cargo operations, vessel navigation, different equipment for deck and engine, model cargo, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Comply to work safety requirements	<p>To be competent, the user/individual must be able to:</p> <p>PC1. adhere to procedures and guidelines for PPE and other relevant safety regulations while performing basic maintenance activities</p> <p>PC2. ensure that tools and equipment used are in a safe and serviceable condition</p> <p>PC3. ensure work area is clean and safe from hazards</p>
Check for maintenance requirements	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC4. perform visual inspection of vessel deck for corrosions, missing paints, damages, fractures, need for oiling and greasing, etc. and inform the master</p> <p>PC5. obtain orders for preventive maintenance</p> <p>PC6. collect the appropriate material and equipment such as hand-tools, power tools and PPEs from stores</p>
Undertake surface painting and maintenance of power tools	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC7. clean off the rust, oil paint, grease, salt and dirt from the surface of the vessel and its equipment as per the stated procedure</p> <p>PC8. perform surface painting as per SOP</p> <p>PC9. dispose of paint residues, solvents, etc. in an environmental friendly manner</p> <p>PC10. perform basic preventive maintenance of power tools as per manufacturer's specification</p>
Carry out greasing and lubrication	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC11. perform lubrication of various deck equipment and wires as per the lubrication plan</p> <p>PC12. Perform greasing with use of grease guns and oiling equipment</p>

LSC/N4001

Perform basic preventive maintenance

<p>Carry out basic carpentry work</p>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC13. perform visual inspection and identify problem areas that require basic carpentry work</p> <p>PC14. execute planning, sawing and make joints and other carpentry operations</p> <p>PC15. check and review the quality parameters for carpentry work</p>
<p>Carry out basic electrical maintenance</p>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC16. receive and understand instructions and checklist for planned electrical maintenance</p> <p>PC17. check for adequate precautions with respect to handling electrical equipment and wear PPEs before starting the task</p> <p>PC18. adhere to isolation and emergency procedures</p> <p>PC19. change plugs, replace bulbs and tubes, rig up cluster lights and portable lamps, as required</p> <p>PC20. connect severed wires, test for current using testing equipment</p> <p>PC21. check and review the quality parameters for electrical maintenance work</p>
<p>Knowledge and understanding (K)</p>	
<p>A. Organizational Context</p>	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<p>B. Technical knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo</p> <p>KB5. different type of cargo and their handling requirement</p> <p>KB6. various types of PPEs and their usage</p> <p>KB7. electrical shock and precautions to be observed to prevent shock</p> <p>KB8. types of power tools and equipment like chipping hammers, scrapers, wire brushes, sanding discs, chipping machines, etc.</p> <p>KB9. type of paints and their usage</p> <p>KB10. corrosion and lubrication</p> <p>KB11. different tools for application of paints, lubricants, greases, etc.</p> <p>KB12. ship's lubrication plan</p> <p>KB13. precaution and procedure of using spray painting machine</p> <p>KB14. preventive hazards of using the electrical connections, isolation procedures</p>

LSC/N4001

Perform basic preventive maintenance

	hand and power tools	
Skills (S)		
C. Core Skills/ Generic Skills	Reading skills	
	The user/individual on the job needs to know how to read: SA1. written instructions SA2. instructions over internal communication network SA3. maps and routes SA4. operating and maintenance procedures and manuals	
	Writing skills	
	The user/individual on the job needs to know how to write: SA5. information and communication notes based on observation SA6. damage reports and daily work reports SA7. instructions and information over internal communication network	
	Oral communication (listening and speaking skills)	
	The user/individual on the job needs to know how to: SA8. communicate with supervisors and co-workers SA9. collect and convey information to navigation, deck and engine staff	
	D. Professional Skills	Decision making
		The user/individual on the job needs to know how to: SB1. decide if a problem can be resolved quickly internally or needs to be escalated SB2. decide on the maintenance or service required based on observation
		Plan and organize
The user/individual on the job needs to know how to: SB3. plan and estimate the time for each assigned activity SB4. maintain punctuality SB5. respond in a timely manner SB6. prioritize and execute tasks based on instructions SB7. be a team player and achieve joint goals		
Customer centricity		
The user/individual on the job needs to know and understand: SB8. importance of timelines SB9. urgency of certain tasks as per the instructions		
Problem solving		
The user/individual on the job needs to know how to: SB10. check and resolve abnormalities using basic maintenance SB11. prepare basic boxes, connect electrical wiring to resolve an immediate problem		
Analytical thinking		
The user/individual on the job needs to know how to: SB12. recognize and report electrical hazards and unsafe equipment		

LSC/N4001

Perform basic preventive maintenance

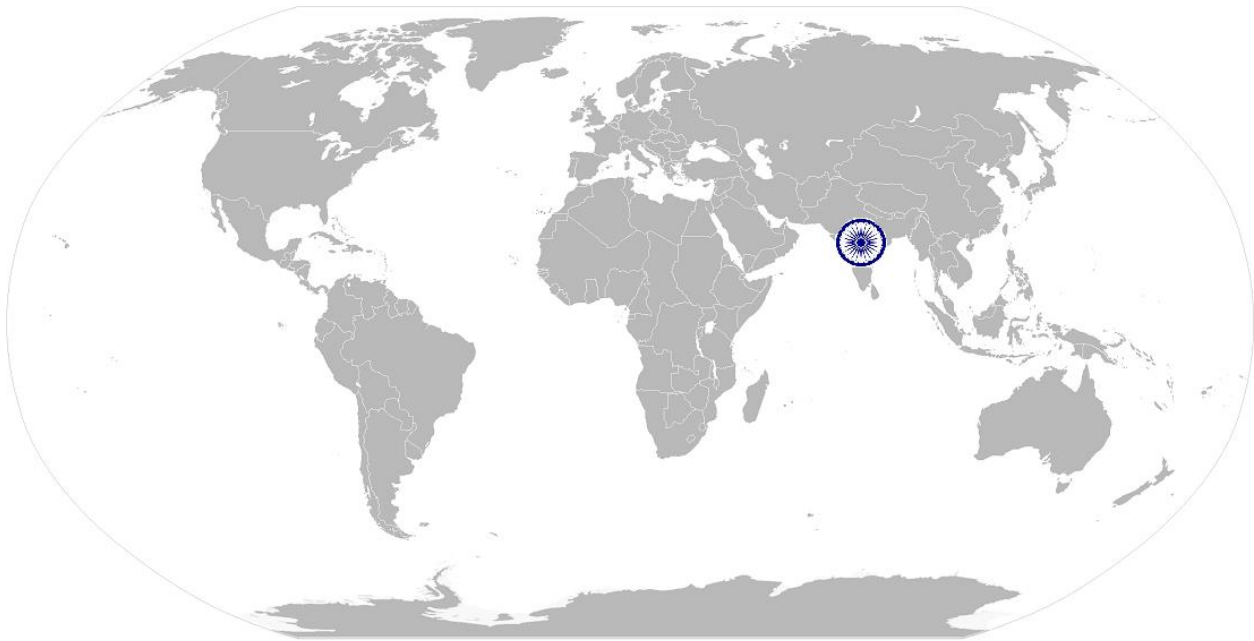
	Critical thinking
	<p>The user/individual on the job needs to know how to:</p> <p>SB13. identify hazardous situations</p> <p>SB14. take precautions regarding risks associated with high-voltage equipment , power tools</p>

NOS Version Control

NOS Code	LSC/N4001		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Deck Operations (maintenance)	Next review date	28/03/2022



National Occupational Standard



Overview

This unit is about performing mooring and basic rope work

LSC/N4009

Perform mooring and rope work

National Occupational Standard

Unit Code	LSC/N4009
Unit Title (Task)	Perform mooring and rope work
Description	This unit is about performing mooring and basic rope work in the vessel
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Perform mooring • Perform rigging <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models, various simulations for deck and engine operations, cargo operations, different types of ropes used in vessel, different equipment for deck and engine, model cargo, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Perform mooring	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. obtain mooring plan from the master</p> <p>PC2. check condition of messenger, heaving line, stopper, mooring ropes, safe working load (SWL) of winches, fairleads, chocks and bollards etc</p> <p>PC3. clean, maintain non-slip mooring deck and keep snap-back zone clear</p> <p>PC4. signal to linesman when sending heaving line ashore</p> <p>PC5. lay out mooring rope, prepare heaving line and stopper</p> <p>PC6. arrange one standby spare heaving line and monitor stress of mooring rope</p> <p>PC7. control mooring rope speed when paying out/heaving up</p> <p>PC8. monitoring vessel movement/clearance</p>
Perform rigging	<p>PC9. make various knots, bends, hitches and whipping on ends of rope, and various splices of ropes as required</p> <p>PC10. make various kinds of 'Whipping' on the ends of ropes</p> <p>PC11. make and fit building grips like the 'U' of the grip</p> <p>PC12. use knotting, spicing and stoppers for rigging</p> <p>PC13. securely rig and unrig safety nets, rat guards, bosun's chair, pilot ladders, etc</p> <p>PC14. place blocks and tackles on the vessel to secure cargo and equipment during handling operations</p>
Knowledge and understanding (K)	
A. Organizational Context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>

LSC/N4009

Perform mooring and rope work

<p>B. Technical knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo</p> <p>KB5. different type of cargo and their handling requirement</p> <p>KB6. working knowledge of mooring system, anchors, rope work - making knots, whippings, spicing and making U, shorts splice, long-splice and eye splice</p> <p>KB7. how to handle winch and ropes</p> <p>KB8. communication norms including hand signs and messenger</p> <p>KB9. kind of ropes used onboard the ship</p> <p>KB10. use, maintenance and stowage of natural and synthetic fiber ropes</p> <p>KB11. how to rig and unrig ladders, hoist, rat-guards and gangways</p> <p>KB12. various types of PPEs and their usage</p> <p>KB13. concepts of mooring to buoys and to terminal</p>
<p>Skills (S)</p>	
<p>C. Core Skills/ Generic Skills</p>	<p>Reading skills</p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. instructions over internal communication network</p> <p>SA3. maps and routes</p> <p>SA4. operating and maintenance procedures and manuals</p> <p>Writing skills</p> <p>The user/individual on the job needs to know how to write:</p> <p>SA5. information and communication notes based on observation</p> <p>SA6. damage reports and daily work reports</p> <p>SA7. instructions and information over internal communication network</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/individual on the job needs to know how to:</p> <p>SA8. communicate with supervisors and co-workers</p> <p>SA9. communicate with port signal man and mooring executive</p>
<p>D. Professional Skills</p>	<p>Decision making</p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. decide regarding sequence of activities to perform a task</p> <p>SB2. decide on allocation of work within a team to complete a task</p> <p>SB3. identify obstructions and inform the deck</p> <p>Plan and organize</p> <p>The user/individual on the job needs to know how to:</p> <p>SB4. plan and coordinate to perform the task at hand.</p>

LSC/N4009

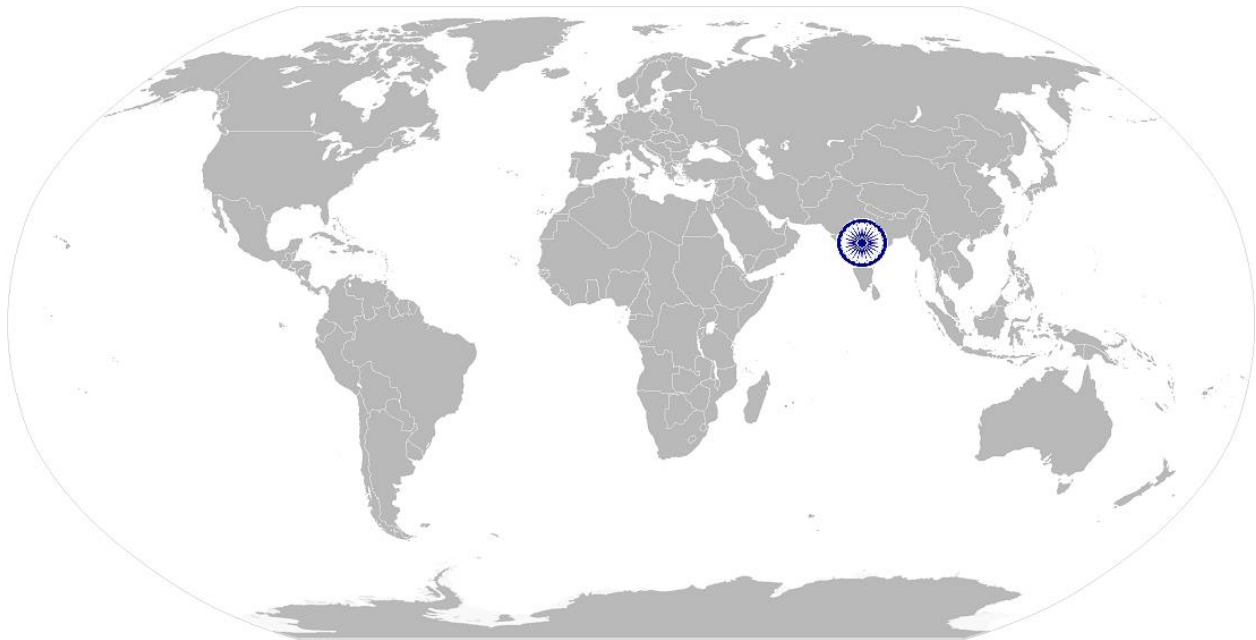
Perform mooring and rope work

	SB5. maintain punctuality
	SB6. respond to the requests and communications in a timely manner
	SB7. make checks on completion of activities
	SB8. be a team player and achieve joint goals
	Customer centricity
	The user/individual on the job needs to know how to:
	SB9. adhere to the assigned timelines
	SB10. address the urgency regarding navigation and course correction
	Problem solving
	The user/individual on the job needs to know how to:
SB11. identify trends/common causes or errors in navigation, mooring and docking and take precautions	
SB12. estimate the effort and distance required to send ashore the mooring lines	
Analytical thinking	
The user/individual on the job needs to know how to:	
SB13. assess the route for safe movement of the vessel	
SB14. assess the position and rope requirement for a vessel to dock	
Critical thinking	
The user/individual on the job needs to know and understand how to:	
SB15. identify the vessel route for safe maneuvering and safe docking	
SB16. Identify the mooring requirement for safe docking	
SB17. check that the lines are rigged and secured	

NOS Version Control

NOS Code	LSC/N4009		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Deck operations (Cargo handling)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about performing basic fitting and welding

LSC/N4002

Perform basic fitting and welding

National Occupational Standard

Unit Code	LSC/N4002
Unit Title (Task)	Perform basic fitting and welding
Description	This unit is about performing basic fitting and welding
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Perform basic fitting and welding <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models, cutting, chiselling, driving, gripping and twisting tools, scales, welding equipment, different equipment for deck and engine, model cargo, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Perform basic fitting and welding	To be competent, the user/individual on the job must be able to:
	PC1. obtain details of daily task from the master
	PC2. collect the right tool for the task based on job and size requirement from the store
	PC3. check that the operation area is free from hazards and wear appropriate PPEs
	PC4. perform fitting operations including measuring, sawing, drilling, threading etc.
	PC5. prepare welding surface by cleaning, de-rusting, chipping, brushing and other techniques
	PC6. segregate empty and filled gas cylinders and check for upright position and presence of flashback arrester and safety disk on the acetylene
	PC7. check hose pipes for damages, remove dirt and dust, connect hose pipes and use as per defined color codes
	PC8. maintain acetylene regulator away from water, oil, etc.
	PC9. place the torch at safe distance while igniting ensuring that the opening key is in the cylinder
	PC10. check for leakage near nozzle, gas pressure and overheating at nozzle while operating as precaution
	PC11. execute the welding joints as per requirement
	PC12. shut the acetylene valve and then the oxygen supply to shut down the welding
	PC13. do not place the used or worn out electrodes or hot tools on the floor separately and dispose them safely
	PC14. store welding equipment and gas cylinders, segregating empty and filled in gas cylinders
	PC15. maintain record of stores and equipment allocation
PC16. inform work area supervisor on completion of work	
Knowledge and understanding (K)	
A. Organizational	The individual on the job needs to know:

LSC/N4002

Perform basic fitting and welding

<p>Context</p>	<p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<p>B. Technical knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo</p> <p>KB5. different type of cargo and their handling requirement</p> <p>KB6. different hand tools, power tools, their components and uses</p> <p>KB7. different lifting equipment like Slings, pulleys, eye bolts, shackles, pulleys, chain blocks, engine room crane, etc., their use and SOP</p> <p>KB8. different welding equipment and their SOP</p> <p>KB9. various types of PPEs and their usage</p> <p>KB10. use of firefighting equipment in the machinery space</p> <p>KB11. handling precautions for welding and power tools, emergency responses and escape routes</p>
<p>Skills (S)</p>	
<p>C. Core Skills/ Generic Skills</p>	<p>Reading skills</p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. names indicating instruments and tools</p> <p>SA2. written instructions</p> <p>SA3. internal communication system</p> <p>Writing skills</p> <p>The user/individual on the job needs to know how to write:</p> <p>SA4. damage reports</p> <p>SA5. daily reports</p> <p>SA6. maintenance and inventory reports</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/individual on the job needs to know how to:</p> <p>SA7. communicate with supervisors and co-workers</p> <p>SA8. collect information from supervisors</p>
<p>D. Professional Skills</p>	<p>Decision making</p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. identify if the equipment is damaged or not</p>

LSC/N4002

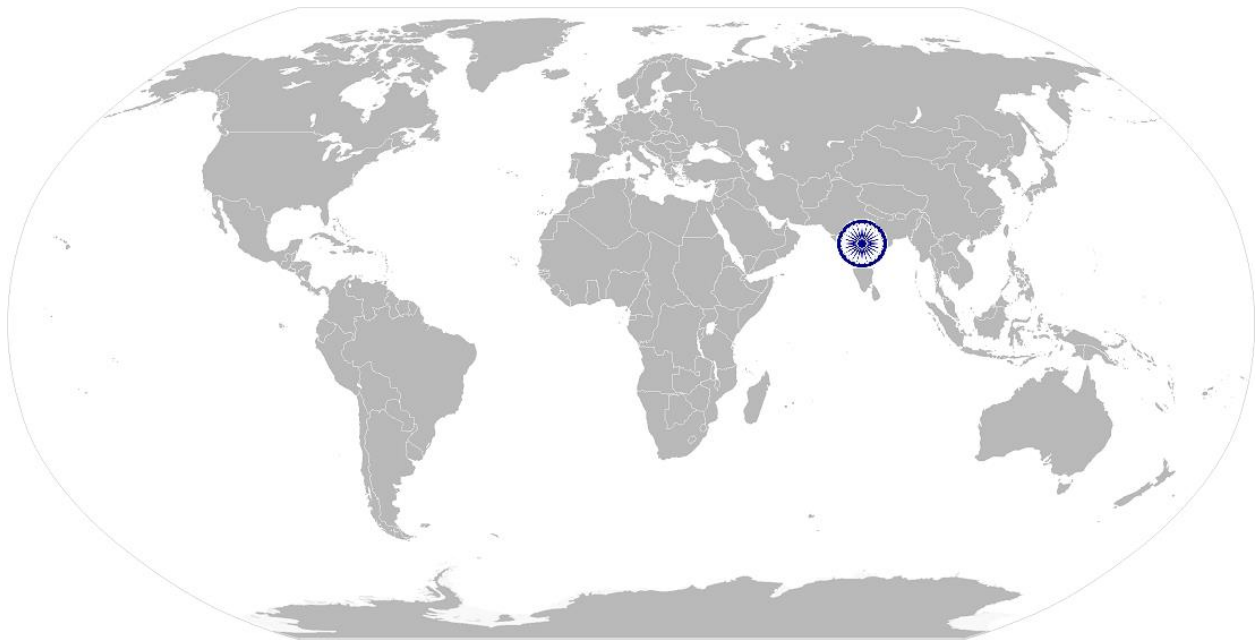
Perform basic fitting and welding

	SB2. decide the type of fitting arrangement required
	SB3. prioritize activities as per urgency and instructions
	Plan and organize
	The user/individual on the job needs to know how to:
	SB4. plan and estimate the time for each activity
	SB5. maintain punctuality
	SB6. respond in a timely manner
	SB7. prioritize and execute tasks based on instructions
	SB8. be a team player and achieve joint goals
	Customer centricity
	The user/individual on the job needs to know and understand:
	SB9. importance of timelines and synchronised actions
SB10. urgency of matter as per the instructions	
Problem solving	
The user/individual on the job needs to know how to:	
SB11. identify if there is overheating in welding nozzles	
SB12. coordinate and ensure timeliness in receipt and delivery of completed items	
Analytical thinking	
The user/individual on the job needs to know how to:	
SB13. verify the fitness of different equipment, instrument	
Critical thinking	
The user/individual on the job needs to know how to:	
SB14. check compliance of equipment/ instrument as per stated norms for validity, use, life, etc.	
SB15. identify hazardous situations while performing fitting or welding	
SB16. focus on task at hand and complete it without errors and delays	

NOS Version Control

NOS Code	LSC/N4002		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Deck Operations (Maintenance)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about maintaining integrity, ensuring data security, and professional and ethical practices.

LSC/N9904

Maintain integrity and ethics in operation

National Occupational Standard

Unit Code	LSC/N9904
Unit Title (Task)	Maintain integrity and ethics in operation
Description	This unit is about maintaining integrity, ensuring data security, and professional and ethical practices
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Maintain integrity and ensure data security • Professional and ethical practices • Ensure regulatory compliance <p>Range: Standard Operating Procedures (SOP), work sheets, stationery, computer, projector etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Maintain integrity ensuring data security	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. refrain from indulging in corrupt practices</p> <p>PC2. avoid using company's funds, property or resources for undertaking personal activities</p> <p>PC3. protect customer's information and ensure it is not misused</p> <p>PC4. protect data and information related to business or commercial decisions</p>
Professional and ethical practices	<p>To be competent, the user/ individual must be able to:</p> <p>PC5. avoid acceptance of cash or kind from vendors for support or contract negotiations</p> <p>PC6. demonstrate and practice ethics in day-to-day processes and dealings with customers and colleagues</p> <p>PC7. avoid nepotism</p> <p>PC8. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical</p> <p>PC9. report promptly all violations of code of ethics</p> <p>PC10. dress up and conduct in a professional manner</p> <p>PC11. communicate with clients and stakeholders in a soft and polite manner</p> <p>PC12. follow etiquettes in accordance to the place</p>
Ensure regulatory compliance	<p>To be competent, the user/ individual must be able to:</p> <p>PC13. check for regulatory documentation and compliances for the shop floor as per information from the supervisor</p> <p>PC14. perform activities considering the regulatory requirements</p> <p>PC15. use PPEs in accordance to regulatory requirements</p> <p>PC16. identify the different types of dangerous goods and handling methodologies</p> <p>PC17. follow the SOP for handling of different types of dangerous goods</p> <p>PC18. consult supervisor or senior management when in situations that may require</p>

LSC/N9904

Maintain integrity and ethics in operation

	<p>differentiating between ethical and unethical</p> <p>PC19. promptly report all regulatory violations</p>
Knowledge and understanding (K)	
A. Organizational context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on use of language</p> <p>KA2. company's Human Resources policies</p> <p>KA3. company's code of ethics</p> <p>KA4. company's whistle blower policy</p> <p>KA5. company's rules related to sexual harassment</p> <p>KA6. company's reporting structure</p> <p>KA7. company's documentation policy</p>
B. Technical knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. principles of code of ethics and business ethics</p> <p>KB2. various regulatory requirements</p> <p>KB3. documentary compliance for various regulations</p> <p>KB4. different dangerous shipment</p> <p>KB5. regulations w.r.t dangerous shipment</p>
Skills (S)	
A. Core skills/ generic skills	Reading Skills
	The individual on the job needs to know how to read:
	SA1. company policy documents and work-related documents
	SA2. emails and written instructions
	Writing Skills
The individual on the job needs to know how to fill:	
SA3. documentation pertaining to ethics and regulatory requirement	
Oral Communication (Listening and Speaking skills)	
The individual on the job needs to know how to communicate with:	
SA4. team members to work efficiently	
SA5. peers and subordinates about information security and building trust	
B. Professional skills	Decision making
	The individual on the job needs to know how to:
	SB1. identify a shipment as dangerous goods
	SB2. assess if the situation needs to be reported regarding regulations
	Plan and Organize
The individual on the job needs to know how to:	
SB3. plan and organise actions as per company's guidelines	
Customer centricity	
The individual on the job needs to know how to:	

LSC/N9904

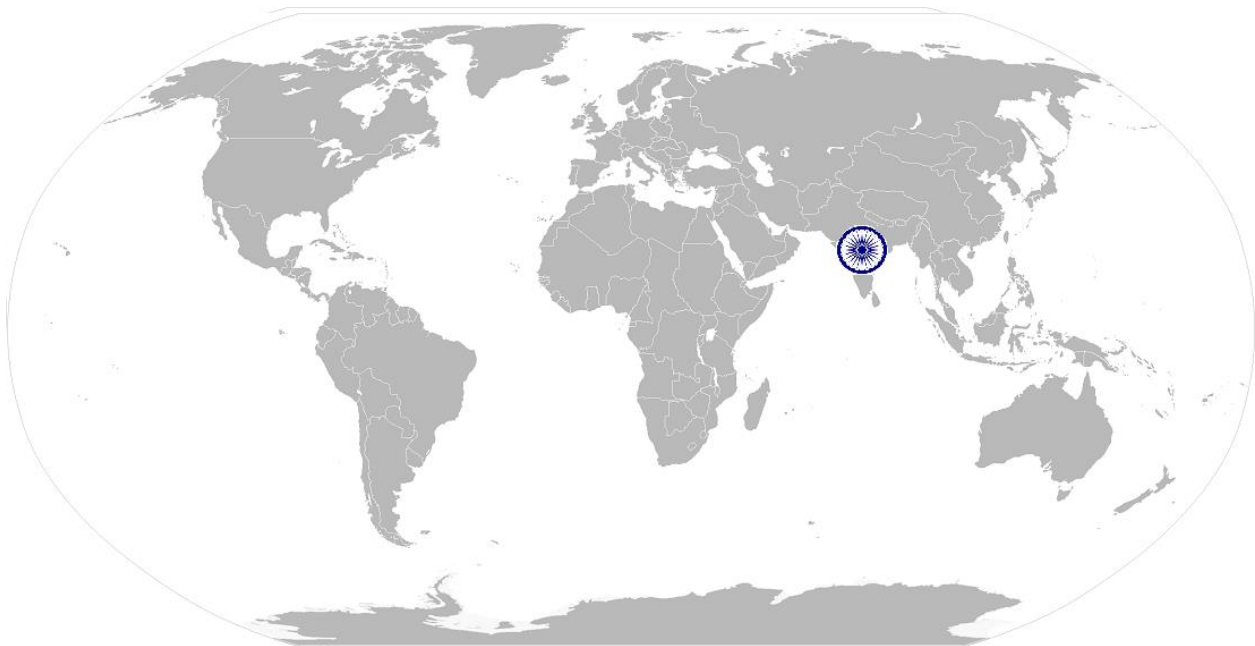
Maintain integrity and ethics in operation

	SB4. prevent company and customer information leakage
	Problem solving
	The individual on the job needs to know how to: SB5. advise colleagues regarding sensitive issues pertaining to conduct and regulations
	Analytical Thinking
	The individual on the job needs to know how to: SB6. provide professional services diligently and with integrity
	Critical Thinking
	The individual on the job needs to know how to: SB7. avoid defaming company's name by indulging into pilferage or fiddling with quality or quantity of shipment SB8. be fair and reasonable in profession and disclose conflict of interests

NOS Version Control

NOS Code	LSC/N9904		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Sub-Sector	Generic	Last reviewed on	28/03/2019
Occupation	Generic	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about ensuring compliance with health, safety and security procedures at the workplace

LSC/N4102 Follow and monitor health, safety and security procedures on vessel

National Occupational Standard

Unit Code	LSC/N4102
Unit Title (Task)	Follow and monitor health, safety and security procedures on vessel
Description	This unit is about ensuring compliance with health, safety and security procedures at the workplace.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Survival Techniques • First aid • Fire prevention and fire fighting • Personal safety and social responsibility • Security procedures <p>Range: First aid kit, firefighting equipment, life jacket, safety jacket, raft etc.</p>
Performance Criteria(PC) w.r.t. the scope	
Element	Performance Criteria
Survival techniques	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. wear a life jacket and immersion suit</p> <p>PC2. safely jump from a height into the water</p> <p>PC3. swim while wearing lifejacket</p> <p>PC4. right an inverted life raft while wearing life jacket</p> <p>PC5. board a life raft or survival vessel from the vessel or the water while wearing life jacket</p> <p>PC6. keep afloat without life jacket</p> <p>PC7. operate survival craft, life raft and its equipment and communication devices</p>
First Aid	<p>To be competent, the user/ individual must be able to:</p> <p>PC8. assess the casualty and immediate medical needs and threat to own safety</p> <p>PC9. position casualty and apply resuscitation techniques</p> <p>PC10. apply measures to control bleeding, cover and secure burn injuries using bandages and emergency medical kit</p> <p>PC11. apply measures for basic shock management</p> <p>PC12. assist in rescue and transport of the casualty</p>
Fire prevention and fire fighting	<p>To be competent, the user/ individual must be able to:</p> <p>PC13. take due precautions like – segregate and store, ensure proximity to firefighting equipment, etc. while storing inflammable materials on-board the vessel</p> <p>PC14. regularly monitor the inflammable material and cargo for fire hazards</p> <p>PC15. organise and maintain the firefighting equipment to make it easily accessible and operable during emergencies</p> <p>PC16. check fire and smoke alarms for functionality</p> <p>PC17. keep the emergency response routes and escape routes clear</p>

LSC/N4102 Follow and monitor health, safety and security procedures on vessel

	<p>PC18. use different protective equipment and high pressure breathing equipment</p> <p>PC19. use different type of firefighting equipment to extinguish a fire, when required</p> <p>PC20. participate in fire and emergency drills</p>
Personal safety and social responsibilities	<p>To be competent, the user/ individual must be able to:</p> <p>PC21. inform and take appropriate action when discovering a potential emergency</p> <p>PC22. recognize the emergency signal and respond as per the emergency plan</p> <p>PC23. follow the designated escape routes</p> <p>PC24. follow safe and environmental friendly working practices</p> <p>PC25. follow precautions while entering closed areas and hazardous areas on-board the vessel</p> <p>PC26. maintain effective communications in person and while using vessel communication devices and systems</p>
Security procedures	<p>To be competent, the user/ individual must be able to:</p> <p>PC27. follow vessel security plan</p> <p>PC28. identify security risks and threats, communicate and initiate action as per vessel security plan</p> <p>PC29. undertake regular vessel inspection with respect to vessel and cargo security</p> <p>PC30. check that all cargo containers, holds and hatches are secured</p> <p>PC31. check security equipment and system for functionality and maintenance</p>
Knowledge and understanding (K)	
A. Organizational context (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
B. Technical knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo</p> <p>KB5. different type of cargo and their handling requirement</p> <p>KB6. basics of Occupational Safety and Health Administration (OSHA)</p> <p>KB7. necessary security procedures and vessel security plan and contingency plan</p> <p>KB8. layout of firefighting and first aid on the vessel</p> <p>KB9. safety and security procedures for different operations and equipment</p> <p>KB10. handling procedure for hazardous / fragile cargo</p> <p>KB11. security procedures for dangerous / hazardous goods – International</p>

LSC/N4102 Follow and monitor health, safety and security procedures on vessel

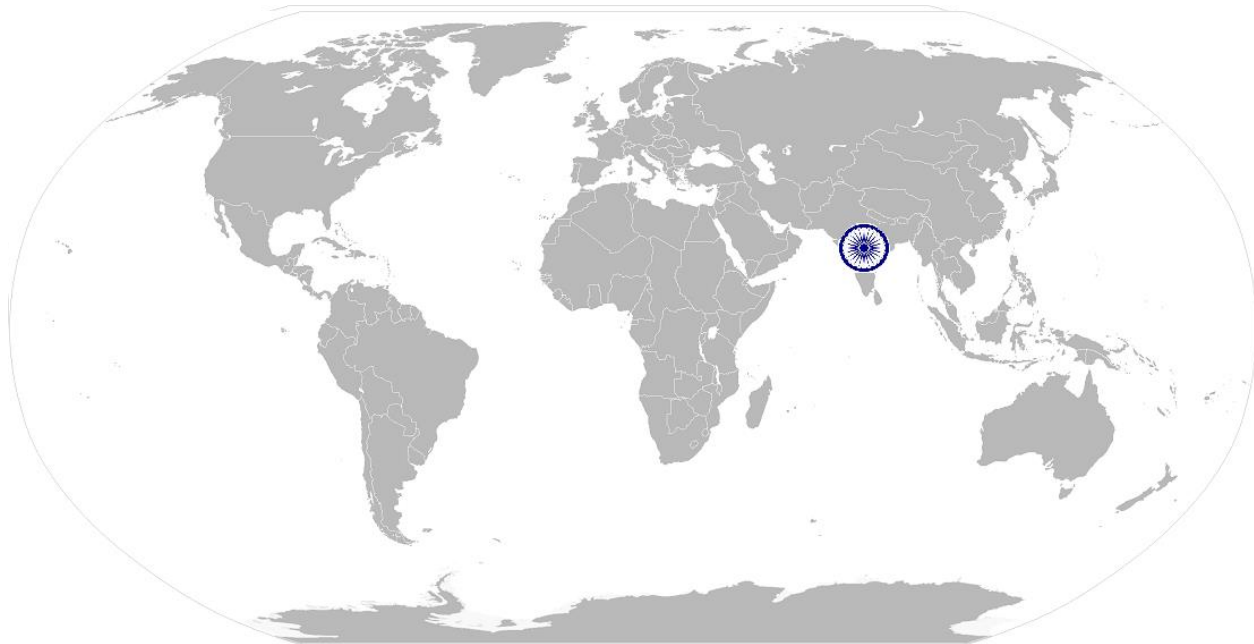
	<p>Maritime Dangerous Goods (IMDG) cargo</p> <p>KB12. different personal protective equipment (PPE), their usage and purpose</p> <p>KB13. various survival techniques</p>
Skills (S)	
A. Core skills/ generic skills	Reading skills
	The user/individual on the job needs to know how to read:
	SA1. procedures and standards related to health, safety and security of vessel and cargo
	SA2. vessel security and emergency plan
	SA3. emergency equipment layout
	SA4. various documents related to security and movement of cargo
	Writing skills
	The user/individual on the job needs to know how to:
SA5. fill forms related to health, safety and security procedures	
Oral communication (listening and speaking skills)	
The user/individual on the job needs to know and understand how to:	
SA6. communicate clearly with colleagues regarding safety procedures	
SA7. share experience and provide guidance to peers	
B. Professional skills	Decision making
	The user/individual on the job needs to know how to:
	SB1. identify threats to security and emergency situations
	SB2. decide the right equipment to be used in case of fire and threat emergency
	SB3. decide the first aid required upon seeing casualty
	Plan and organize
	The user/individual on the job needs to know how to:
	SB4. plan actions in case of security threat or emergency
	SB5. prioritize and execute tasks as per contingency plan
	Customer centricity
	The user/individual on the job needs to know and understand how to:
	SB6. follow instructions as per vessel contingency plan
Problem solving	
The user/individual on the job needs to know and understand how to:	
SB7. identify any threats on personal health, safety, security, etc. and take appropriate actions	
SB8. identify risks aboard the vessel and inform superiors	
Analytical thinking	
The user/individual on the job needs to know and understand how to:	
SB9. analyze situations to assess threats or risks	
Critical thinking	
The user/individual on the job needs to know and understand how to:	

LSC/N4102 Follow and monitor health, safety and security procedures on vessel

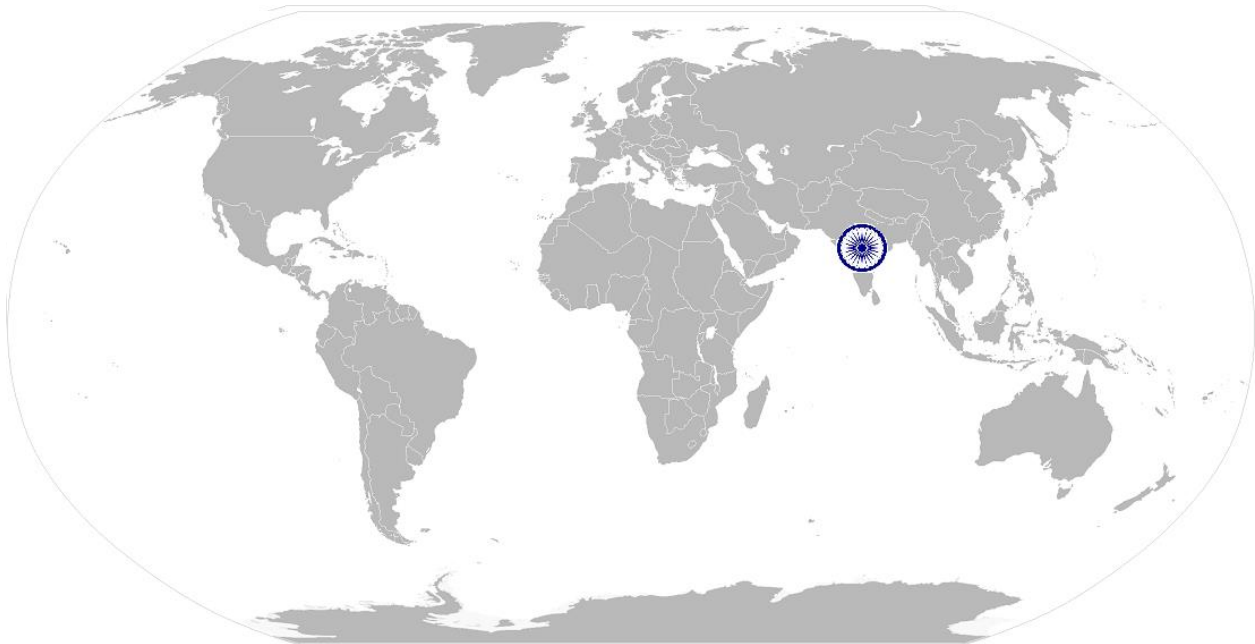
	SB10. ensure right safety measures and security protocols are followed at all times
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NOS Version Control

NOS Code	LSC/N4102		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Vessel Operations	Next review date	28/03/2022



National Occupational Standard



Overview

This unit is about performing look out duties in Navigation

LSC/N4103

Perform look out duties in navigation

National Occupational Standard

Unit Code	LSC/N4103
Unit Title (Task)	Perform look out duties in navigation
Description	This unit is about identifying communications via signals and flags and performing look out duties
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Perform look-out duties <p>Range: Navigation charts, maps buoys, flags, sound and light signals, Global Positioning System (GPS) monitor, thermometer, barometer, hygrometer etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Perform look-out duties	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. stand on the Bridge wings and keep an all-round look out (sight & hearing)</p> <p>PC2. report any sighting and hearing of any sound signals to the on-duty staff</p> <p>PC3. identify and report the location of sighting or sound</p> <p>PC4. identify the sound, light and flag signals pertaining to ships' operations and maneuvers and report</p> <p>PC5. assess the values displayed in GPS and radar and integrate them in the tasks of his watch duty</p> <p>PC6. observe the direction of the ship's head on a gyro-compass (gyro course) and magnetic compass periodically</p> <p>PC7. observe the waves and swell and estimate the water state as per Beaufort scale</p> <p>PC8. take readings of thermometer, barometer, hygrometer, etc.</p> <p>PC9. identify the location of ship on map by reading the latitude and longitude</p> <p>PC10. identify navigational lighthouses, buoys and shapes</p> <p>PC11. hoist any combination of flag and signs on the halyards as required</p>
Knowledge and understanding (K)	
A. Organizational context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and Standard Operating Procedures (SOPs) for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
B. Technical knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p>

LSC/N4103

Perform look out duties in navigation

	<p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo</p> <p>KB5. different type of cargo and their handling requirement</p> <p>KB6. various types of Personal Protective Equipment (PPEs) and their usage</p> <p>KB7. flag and sound codes used for maritime and inland vessel communications</p> <p>KB8. reading ocean currents and waves</p> <p>KB9. use of barometer, thermometer, gyro and magnetic compass and hygrometer</p>
Skills (S)	
A. Core skills/ generic skills	<p>Reading skills</p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. instructions over internal communication network</p> <p>SA3. various measuring devices</p> <p>SA4. maps and routes</p> <p>Writing skills</p> <p>The user/individual on the job needs to know how to write:</p> <p>SA5. information and communication notes based on observation</p> <p>SA6. damage reports and daily work reports</p> <p>SA7. instructions and information over internal communication network</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/individual on the job needs to know how to:</p> <p>SA8. communicate with supervisors and co-workers</p> <p>SA9. collect and convey information to navigation and deck staff</p>
B. Professional Skills	<p>Decision making</p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. identify faulty parts of observation equipment in routine checks</p> <p>SB2. decide based on observation if an obstacle can be avoided or a course correction is required</p> <p>SB3. identify activities or orders that need to be prioritised as per instructions</p> <p>Plan and organize</p> <p>The user/individual on the job needs to know how to:</p> <p>SB4. plan and estimate the time for each assigned activity</p> <p>SB5. maintain punctuality</p> <p>SB6. respond in a timely manner</p> <p>SB7. prioritize and execute tasks based on instructions</p> <p>SB8. be a team player and achieve joint goals</p> <p>Customer centricity</p> <p>The user/individual on the job needs to know and understand:</p> <p>SB9. importance of timely circulation of information</p> <p>SB10. urgency of priority requests as per the instructions</p>

LSC/N4103

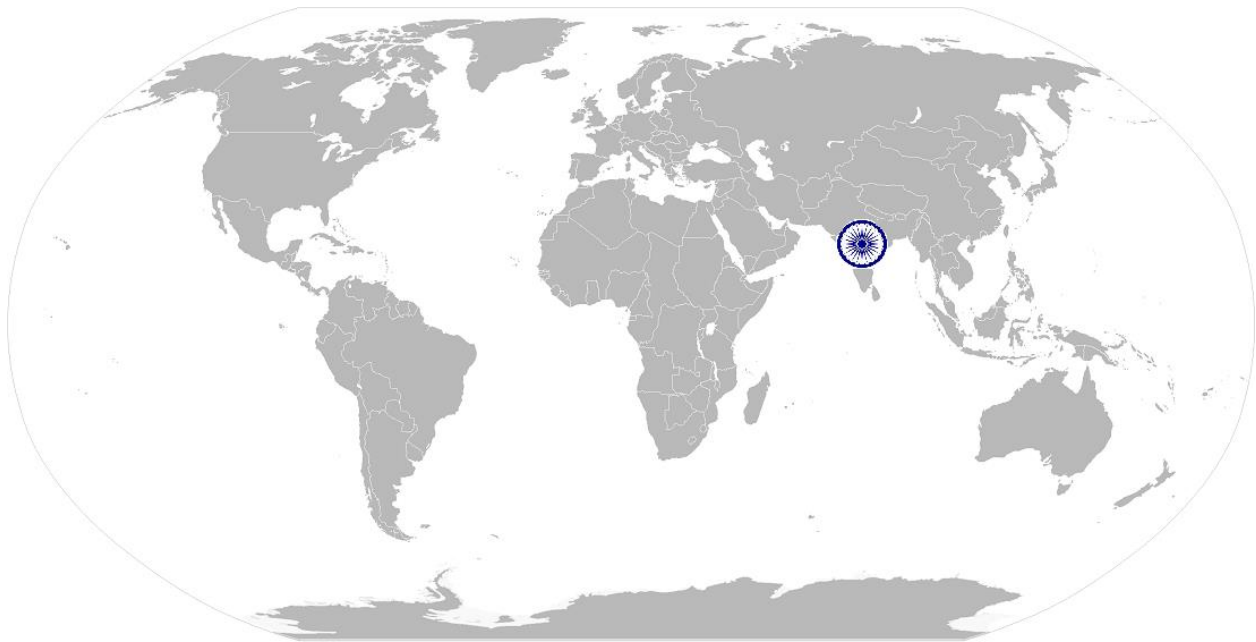
Perform look out duties in navigation

	Problem solving
	The user/individual on the job needs to know how to: SB11. inform the ranking in-charge regarding course correction, adverse observations, etc. SB12. suggest route correction to avoid collision, safe navigation
	Analytical thinking
	The user/individual on the job needs to know how to: SB13. analyse the position of a vessel, waves and ocean currents for safe routing
	Critical thinking
	The user/individual on the job needs to know how to: SB14. observe and communicate adverse weathers and obstacles SB15. observe and communicate obstacles and dangerous operations by other vessels SB16. focus on task at hand and complete it without errors and delays

NOS Version Control

NOS Code	LSC/N4103		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Vessel Operations (Navigation)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about providing assistance during the deck operations

LSC/N4004

Perform deck assistance

National Occupational Standard

Unit Code	LSC/N4004
Unit Title (Task)	Perform deck assistance
Description	This unit is about engaging into basic deck operations and assistance
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Assist during the arrival of vessel Assist during the departure of vessel Assist in deck maintenance <p>Range: Life jacket, Very High Frequency (VHF) radio, cleaning equipment, crowd control equipment, vessel safety lines, maintenance equipment, tools and tackles, Standard Operating Procedures (SOP), Personal Protective Equipment (PPE), etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Assist during the arrival of vessel	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. attend post trip muster meeting and take task schedule</p> <p>PC2. collect and use life jacket and VHF radio communication</p> <p>PC3. assist in securing crowd control line and lining up the cargo</p> <p>PC4. assist in disembarking the cargoes from the boarding hatch/ hold</p> <p>PC5. assist in cleaning duties as directed</p>
Assist during the departure of vessel	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC6. assist master in readying the vessel</p> <p>PC7. assist in securing safety lines for departure</p> <p>PC8. monitor cargo and crowd control line during the deck watch duty</p> <p>PC9. enforce the vessel rules and maintain passenger and crew safety</p>
Assist in deck maintenance	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC10. identify and report on need for repairs and maintenance activity on deck</p> <p>PC11. perform the repair or maintenance as instructed</p> <p>PC12. maintain deck department stores, spares, equipment and tools</p> <p>PC13. maintain general cleanliness of the vessel and deck</p> <p>PC14. assist in maintenance and repair of deck equipment</p> <p>PC15. assist with the operation, maintenance and testing of the ship's firefighting equipment</p>
Knowledge and understanding (K)	
A. Organizational context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound</p>

LSC/N4004

Perform deck assistance


	signals
B. Technical knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo handling capacities</p> <p>KB5. various types of PPEs and their usage</p> <p>KB6. various maintenance requirement for deck equipment and vessel deck</p> <p>KB7. use of hand-tools, power tools and other equipment</p> <p>KB8. basic inventory management and mathematical skills</p>
Skills (S)	
A. Core skills/ generic skills	Reading skills
	The user/individual on the job needs to know how to read:
	SA1. written instructions
	SA2. maps and routes
	SA3. communications over internal messengers
	Writing skills
	The user/individual on the job needs to know how to:
SA4. presentation and instructions based on observation	
SA5. damage reports and daily output reports	
Oral communication (listening and speaking skills)	
The user/individual on the job needs to know how to:	
SA6. communicate with masters and co-workers	
SA7. communicate with port staff	
B. Professional skills	Decision making
	The user/individual on the job needs to know how to:
	SB1. identify faulty parts in routine check
	SB2. decide if a item stock needs to be replaced
	SB3. identify if the cargo and crew lines are safe during vessel docking/ undocking
	Plan and organize
	The user/individual on the job needs to know how to:
SB4. plan and estimate the time for each activity	
SB5. maintain punctuality	
SB6. should respond to the supervisor in a timely manner	
SB7. prioritize and execute tasks based on instructions	
SB8. be a team player and achieve joint goals	
Customer centricity	
The user/individual on the job needs to know and understand:	

LSC/N4004

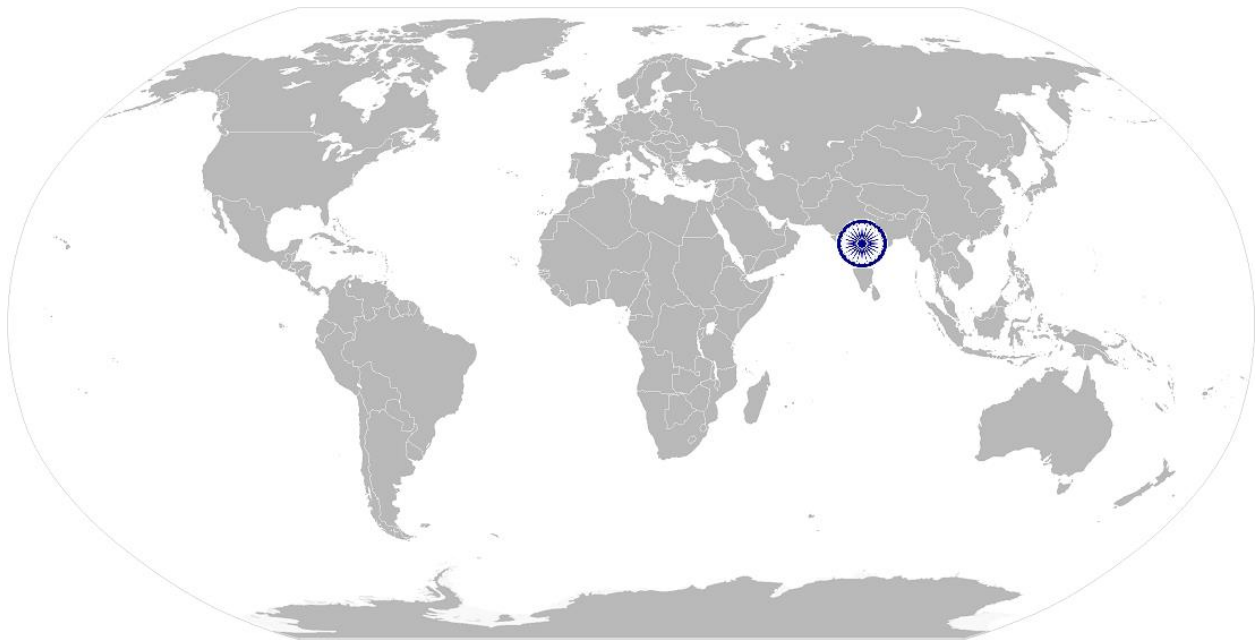
Perform deck assistance

	SB9. importance of timely circulation of information
	SB10. urgency of priority requests as per the instructions
	Problem solving
	The user/individual on the job needs to know how to:
	SB11. inform the ranking in-charge regarding deck maintenance requirement
	SB12. check cargo position and suggest lashing if required
	Analytical thinking
The user/individual on the job needs to know how to:	
SB13. analyse the cargo position and crowd and estimate the precautions to be taken	
Critical thinking	
The user/individual on the job needs to know how to:	
SB14. observe and communicate hazardous situation on the deck	
SB15. focus on task at hand and complete it without errors and delays	

NOS Version Control

NOS Code	LSC/N4004 		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Deck operations (Cargo handling, maintenance)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about undertaking cargo management and facilitating loading and discharge of cargoes

LSC/N4003

Perform cargo handling

National Occupational Standard

Unit Code	LSC/N4003
Unit Title (Task)	Perform cargo handling
Description	This unit is about undertaking cargo handling and facilitating loading and discharge of cargoes
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Faciliate loading and discharge of cargo Monitor security and upkeep of cargo <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models, various simulations for deck and engine operations, cargo operations, different equipment for deck and engine, model cargo, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Facilitate loading and discharge of cargo	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. wear the appropriate PPE for material handling</p> <p>PC2. use vessel's derricks and ropes to load/unload cargo</p> <p>PC3. oversee safe loading and discharge of ro-ro cargo</p> <p>PC4. assist in organizing cargo on board the vessel</p> <p>PC5. assist in opening hatch/hold of vessel hold for loading/discharging bulk cargo</p> <p>PC6. check that the hold coaming is functional, to avoid water from going into the hold</p> <p>PC7. close and secure the hatch post operations and check for weather tight seal</p>
	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC8. check that cargo is securely hatched, lashed and blocked to avoid any movement using different methods of blocking, lashing, shoring, chocking, etc.</p> <p>PC9. secure cargo faces during part discharges</p> <p>PC10. secure heavy loads and heavy lifts</p> <p>PC11. stow and secure vehicles, trailers and containers</p> <p>PC12. lash and rig paper rolls, steel coils, steel billets, crates, plates and timber cargo in a safe and secured way</p> <p>PC13. segregate and secure hazardous cargo separately at designated place</p>
Knowledge and understanding (K)	
A. Organizational context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound</p>

LSC/N4003

Perform cargo handling

	signals
B. Technical knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo handling capacities</p> <p>KB5. various types of PPEs and their usage</p> <p>KB6. detailed information contained in Code of Safe Practice for Cargo Stowage and Securing (CSS Code)</p> <p>KB7. blocking, lashing, shoring, chocking, etc. of cargo</p> <p>KB8. use of different material handling equipment and their uses</p> <p>KB9. method of securing heavy load</p> <p>KB10. method of stowing vehicles and trailers</p> <p>KB11. safe loading/ discharging of ro-ro cargoes</p> <p>KB12. limitation of lifting gear and knowledge of limit switches</p> <p>KB13. capacities of various holds and cargo types for different vessels</p> <p>KB14. loading and discharge procedure for cargo handling in different type of vessels</p>
Skills (S)	
A. Core Skills/ Generic Skills	<p>Reading skills</p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. internal communication network messages</p> <p>SA3. maps and routes</p> <p>Writing skills</p> <p>The user/individual on the job needs to know how to:</p> <p>SA4. presentation and instructions based on observation</p> <p>SA5. damage reports and daily output reports</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/individual on the job needs to know how to:</p> <p>SA6. communicate with supervisors and co-workers</p> <p>SA7. collect information from supervisors</p>
B. Professional Skills	<p>Decision making</p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. identify faulty parts in routine check</p> <p>SB2. decide based on observation if an obstacle can be avoided or a course correction is required</p> <p>SB3. identify activities or orders that need to be prioritised as per instructions</p> <p>Plan and organize</p>

LSC/N4003

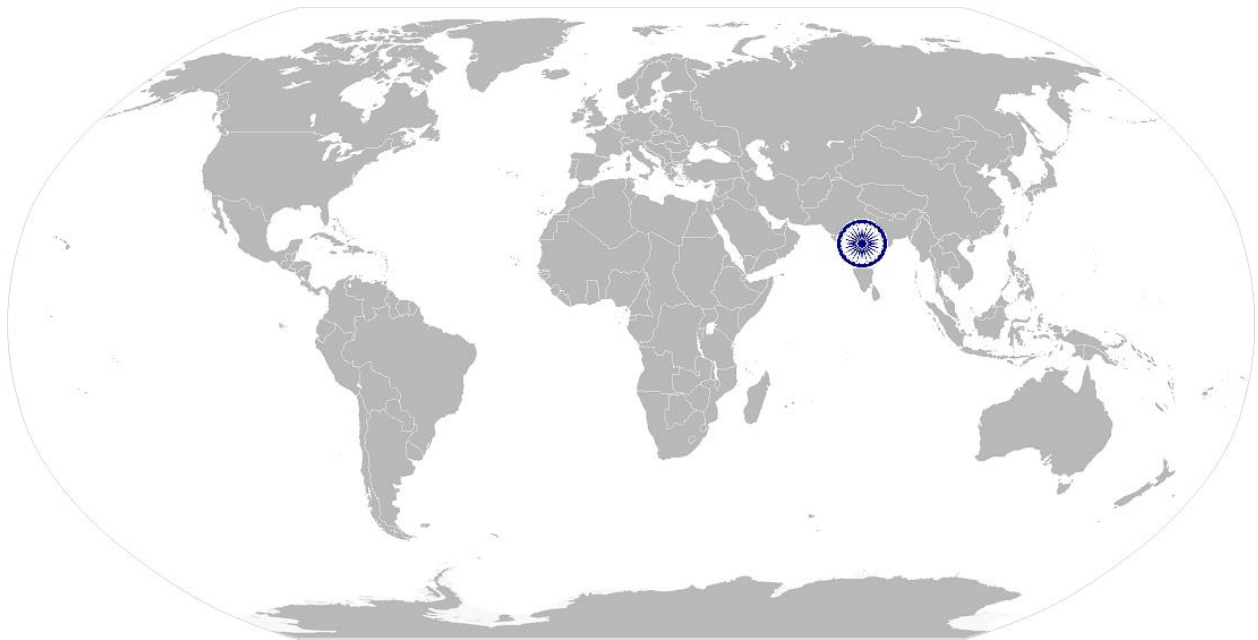
Perform cargo handling

	The user/individual on the job needs to know how to: SB4. plan and estimate the time for each activity SB5. maintain punctuality SB6. should respond to the supervisor in a timely manner SB7. prioritize and execute tasks based on instructions SB8. be a team player and achieve joint goals
	Customer centricity
	The user/individual on the job needs to know and understand: SB9. importance of timely circulation of information SB10. urgency of priority requests as per the instructions
	Problem solving
	The user/individual on the job needs to know how to: SB11. check for appropriate lashing of cargo SB12. check for situations leading to damage to cargo and escalate SB13. Segregate hazardous cargo
	Analytical thinking
	The user/individual on the job needs to know how to: SB14. analyse the storage of cargo on board and suggest changes in storage plan
	Critical thinking
The user/individual on the job needs to know how to: SB15. check damage to cargo during voyage and secure lashing lines SB16. check and ensure that hazardous goods are segregated SB17. check that cargo is safely discharged and loaded	

NOS Version Control

NOS Code	LSC/N4003		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Deck operations (cargo handling)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about assisting in maintenance and watch keeping of engine room

LSC/N4201

Perform basic engine room operations

National Occupational Standard	Unit Code	LSC/N4201
	Unit Title (Task)	Perform basic engine room operations
	Description	This unit is about assisting in maintenance and watch keeping of engine room
	Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Assist in basic engine operations Undertake maintenance of engine room equipment <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models, various simulations for engine operations, different equipment for deck and engine, model cargo, etc.</p>
	Performance Criteria(PC) w.r.t. the Scope	
	Element	Performance Criteria
	Assist in basic engine operations	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. obtain work schedules and orders from engine room in-charge/master</p> <p>PC2. take necessary safety precautions while working with engine with respect to electrical equipment, thermal and chemical exposure, moving parts, etc.</p> <p>PC3. inspect, operate and test all machinery and equipment</p> <p>PC4. assist in safe and efficient operation of the propulsion machinery and auxiliary equipment</p> <p>PC5. monitor the operational parameters and condition of machineries</p> <p>PC6. update engine room log regularly</p> <p>PC7. notify the master in event of any serious occurrence or irregularity in operation</p>
	Undertake maintenance of engine room equipment	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC8. maintain cleanliness of main engine and auxiliary units</p> <p>PC9. check stowage and security of the engine room stores</p> <p>PC10. check tanks for adequacy of fuel, water, slops, ballast, etc.</p> <p>PC11. periodically check operating and standby equipment of repair and maintenance requirement</p> <p>PC12. perform periodic greasing of machines as part of maintenance</p> <p>PC13. perform wiping as and when required</p> <p>PC14. respond to engine room alarms</p> <p>PC15. maintain log book of operational activities of machines and engine</p> <p>PC16. report to in case any fault or irregularities in machinery</p>
	Knowledge and understanding (K)	
	A. Organizational context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p>

LSC/N4201

Perform basic engine room operations

	<p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<p>B. Technical knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo handling capacities</p> <p>KB5. various types of PPEs and their usage</p> <p>KB6. layout of vessel engine room and different auxiliary machines</p> <p>KB7. different parts of an engine and their use and limitations</p> <p>KB8. safety precautions related to engine room</p> <p>KB9. SOP and emergency procedure in engine room</p> <p>KB10. greasing, fitting and cutting operations</p> <p>KB11. various pressure gauges and reading instruments</p> <p>KB12. use of different hand tools and equipment</p>
<p>Skills (S)</p>	
<p>A. Core skills/ generic skills</p>	<p>Reading skills</p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. vessel layout and operating procedures</p> <p>SA3. SOPs and engine operations manual and tool books</p> <p>SA4. pressure gauges and level gauges</p> <p>Writing skills</p> <p>The user/individual on the job needs to know how to write:</p> <p>SA5. daily reports including inventory, damages, repairs, maintenance, accidents, etc.</p> <p>SA6. instructions for crew</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/individual on the job needs to know how to:</p> <p>SA7. communicate with officers, masters and co-workers</p> <p>SA8. collect information from officers and masters</p>
<p>B. Professional skills</p>	<p>Decision making</p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. identify problem in engine part based on abrupt noise or movement</p> <p>SB2. decide if there is an aberration in the readings of various gauges</p> <p>Plan and organize</p> <p>The user/individual on the job needs to know how to</p> <p>SB3. maintain punctuality and respond to the queries in a timely manner</p> <p>SB4. prioritize and execute tasks based on instructions</p> <p>Customer centricity</p>

LSC/N4201

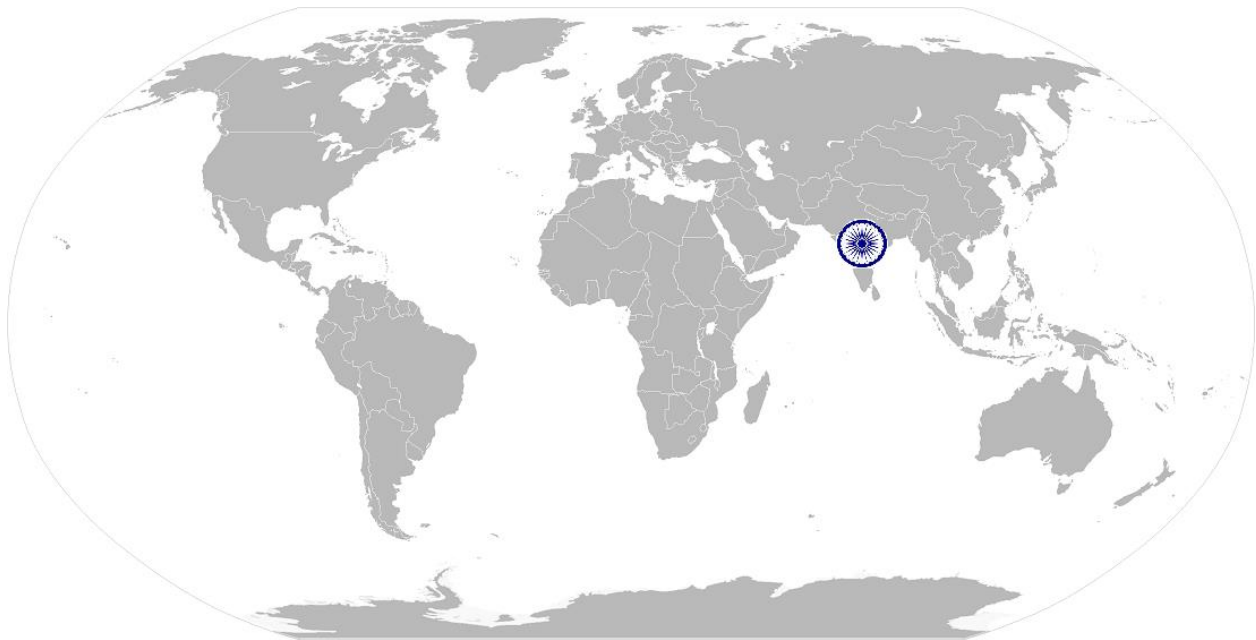
Perform basic engine room operations

	The user/individual on the job needs to know and understand: SB5. importance of timelines SB6. urgency of orders as per the instructions
	Problem solving
	The user/individual on the job needs to know how to: SB7. perform basic maintenance of engine equipment
	Analytical thinking
	The user/individual on the job needs to know how to: SB8. analyse the gauge reading and assess the normal variations in operations
	Critical thinking
The user/individual on the job needs to know how to: SB9. focus on task at hand and complete it without errors and delays SB10. check and identify issues in engine and part functioning	

NOS Version Control

NOS Code	LSC/N4201		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Engine operations (including overhauling)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about performing basic oiler and fitter duties

LSC/N4202

Perform oiler and fitter duties

National Occupational Standard

Unit Code	LSC/N4202
Unit Title (Task)	Perform oiler and fitter duties
Description	This unit is about undertaking basic oiler and fitter duties
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Perform oiling duties • Perform fitting duties <p>Range: Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models, various simulations for deck and engine operations, different equipment for deck and engine, oiling equipment etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Perform oiling duties	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. examine machinery for specified pressure, flow and adequacy of lubricant</p> <p>PC2. fill oil and grease reservoirs according to machinery lubrication SOP</p> <p>PC3. read pressure and temperature gauges and record data in engineering log</p> <p>PC4. clean strainers and filters in various systems</p> <p>PC5. keep working area clean and in orderly condition</p> <p>PC6. maintain engine room by sweeping, mopping, scrubbing and performing routine painting</p>
Perform fitting duties	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC7. test the fitted equipment prior to use</p> <p>PC8. check for basic repairs and fitting requirement for different engine and machine parts</p> <p>PC9. use bench vice and filing, marking and tapping tools and other hand-tools for basic fitting repairs</p> <p>PC10. use power tools and drill machine for grinding and drilling</p> <p>PC11. check for secured joints, leakages, robustness</p> <p>PC12. periodically log routine checks and functions</p> <p>PC13. keep working area clean, neat and in orderly condition</p>
Knowledge and understanding (K)	
A. Organizational context	<p>KA1. The individual on the job needs to know:</p> <p>KA2. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA3. security and safety procedures to be followed</p> <p>KA4. reporting structure of the organization for escalation of issues</p> <p>KA5. risk and impact of not following defined procedures/work instructions</p> <p>KA6. coding system followed to communicate using flags, hand signals and sound signals</p>

LSC/N4202

Perform oiler and fitter duties

<p>B. Technical knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p> <p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo handling capacities</p> <p>KB5. various types of PPEs and their usage</p> <p>KB6. layout of vessel engine room and different auxiliary machines</p> <p>KB7. different parts of an engine and their use and limitations</p> <p>KB8. safety precautions related to engine room</p> <p>KB9. sop and emergency procedure in engine room</p> <p>KB10. greasing, fitting and cutting operations</p> <p>KB11. use of different hand-tools and power tools</p> <p>KB12. various pressure gauges and reading instruments</p>
<p>Skills (S)</p>	
<p>C. Core Skills/ Generic Skills</p>	<p>Reading skills</p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions written on the equipment</p> <p>SA2. read pressure gauges and level gauges</p> <p>SA3. read maps and navigation charts</p> <p>Writing skills</p> <p>The user/individual on the job needs to know how to:</p> <p>SA4. write end of the day reports</p> <p>SA5. maintenance and engine logs</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/individual on the job needs to know how to:</p> <p>SA6. communicate clearly in local language, hindi or english with masters and co-workers</p> <p>SA7. communicate and collect information from masters</p>
<p>D. Professional Skills</p>	<p>Decision making</p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. identify if there is need for oiling of machine part</p> <p>SB2. decide the right equipment to be used for fitting</p> <p>Plan and organize</p> <p>The user/individual on the job needs to know how to</p> <p>SB3. maintain punctuality and avoid absenteeism</p> <p>SB4. should respond to the supervisor in a timely manner</p> <p>SB5. prioritize and execute tasks based on instructions</p> <p>Customer centricity</p> <p>The user/individual on the job needs to know and understand:</p> <p>SB6. importance of timelines</p>

LSC/N4202

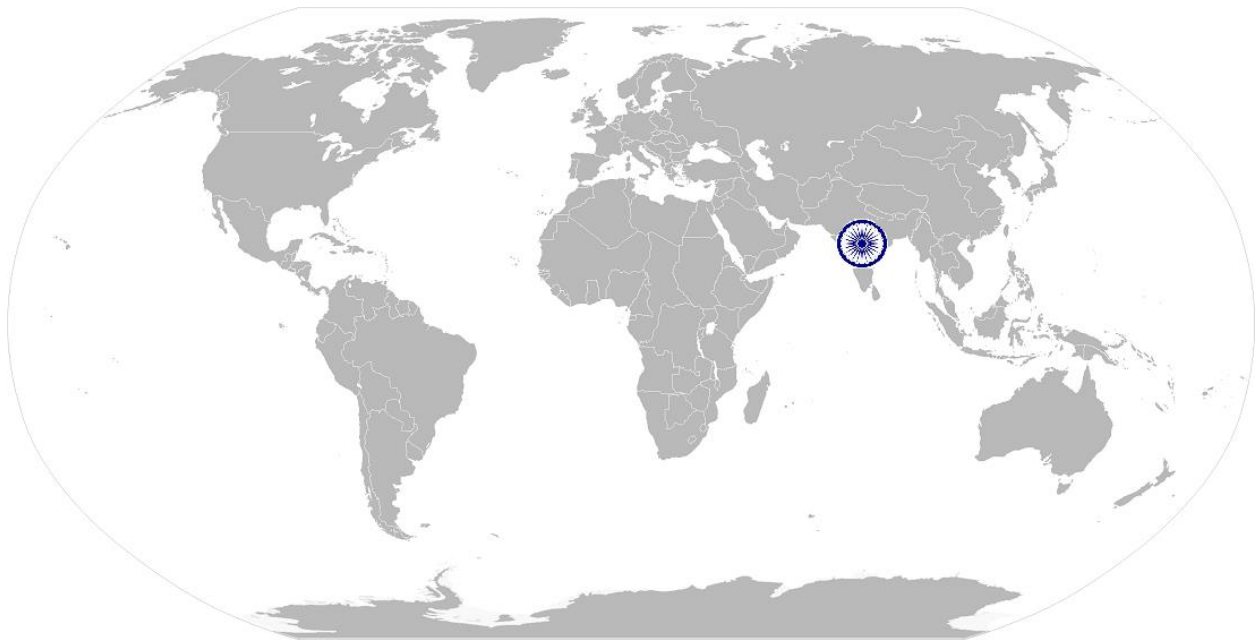
Perform oiler and fitter duties

	SB7. urgency of orders as per the instructions
	Problem solving
	The user/individual on the job needs to know how to: SB8. inform the master regarding issues in machineries and equipment
	Analytical thinking
	The user/individual on the job needs to know how to: SB9. analyse the periodicity for oiling requirement of different parts
	Critical thinking
The user/individual on the job needs to know how to: SB10. focus on task at hand and complete it without errors and delays SB11. check and identify problems in engine functioning	

NOS Version Control

NOS Code	LSC/N4202		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Engine operations (including overhauling)	Next review date	28/03/2022

National Occupational Standard



Overview

This unit is about performing duties in a passenger vessel

LSC/N3901

Perform duties in a passenger vessel

National Occupational Standard

Unit Code	LSC/N3901
Unit Title (Task)	Perform duties in a passenger vessel
Description	This unit is about undertaking duties in a passenger vessel
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Perform catering and housekeeping services • Monitor security and upkeep of facilities <p>Range: Housekeeping equipment, maintenance equipment, Personal Protective Equipment (PPEs), Standard Operating Procedures (SOPs) and manuals, vessel models etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Perform catering and housekeeping services	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. interact with passengers to understand their requirement regarding catering, laundry and housekeeping</p> <p>PC2. convey the order to supervisor or chef</p> <p>PC3. assist in preparing the food item, its garnishing and presentation of cutlery</p> <p>PC4. deliver the services to the passenger</p> <p>PC5. maintain the cutlery and kitchen in clean and hygienic manner</p> <p>PC6. conduct daily housekeeping and cleaning services of passenger quarters</p>
Monitor security and upkeep of facilities	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC7. maintain passenger facilities like gym, swimming pool, entertainment centre, etc</p> <p>PC8. check that all necessary precautions are being taken by passengers before using facilities</p> <p>PC9. check that the facilities are regularly cleaned and document the same</p> <p>PC10. check and prevent passengers from leaning onto vessel railings, going into restricted areas</p>
Knowledge and understanding (K)	
A. Organizational context	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
B. Technical knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc.</p>

LSC/N3901

Perform duties in a passenger vessel

	<p>KB2. various parts and components of the ship</p> <p>KB3. map reading and identification of location in the globe</p> <p>KB4. different type of vessels and their functions and cargo handling capacities</p> <p>KB5. various types of PPEs and their usage</p> <p>KB6. safety regulations for passenger vessels</p> <p>KB7. use of life boats and life jackets and instructing passengers for the use of same</p> <p>KB8. method of securing heavy load, stowing passenger vehicles and trailers</p> <p>KB9. various document check on passengers prior to boarding</p> <p>KB10. loading and discharge procedure for cargo handling and passenger vehicles</p>
Skills (S)	
<p>E. Core Skills/ Generic Skills</p>	<p>Reading skills</p>
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. maps and routes</p>
	<p>Writing skills</p>
	<p>The user/individual on the job needs to know how to:</p> <p>SA3. presentation and instructions based on observation</p> <p>SA4. damage reports and daily output reports</p> <p>SA5. daily reports</p>
	<p>Oral communication (listening and speaking skills)</p>
<p>F. Professional Skills</p>	<p>The user/individual on the job needs to know how to:</p> <p>SA6. communicate with supervisors and co-workers</p> <p>SA7. collect information from supervisors and passengers</p>
	<p>Decision making</p>
	<p>The user/individual on the job needs to know how to:</p> <p>SB1. identify faulty parts in routine check on the catering department</p> <p>SB2. analyse and decide if a specific passenger request can be catered to</p> <p>SB3. identify activities or orders that need to be prioritised as per instructions</p>
	<p>Plan and organize</p>
	<p>The user/individual on the job needs to know how to:</p> <p>SB4. plan and estimate the time for each activity</p> <p>SB5. maintain punctuality</p> <p>SB6. should respond to the supervisor in a timely manner</p> <p>SB7. prioritize and execute tasks based on instructions</p> <p>SB8. be a team player and achieve joint goals</p>
<p>Customer centricity</p>	
<p>The user/individual on the job needs to know and understand:</p> <p>SB9. importance of timely circulation of information</p> <p>SB10. urgency of priority requests as per the instructions</p> <p>SB11. be soft spoken and well dressed with the passengers</p>	

LSC/N3901

Perform duties in a passenger vessel

	Problem solving
	The user/individual on the job needs to know how to: SB12. understand customer issues and resolve them effectively SB13. cater to specific requirements
	Analytical thinking
	The user/individual on the job needs to know how to: SB14. analyse the trend of customer requirement to identify most common requests
	Critical thinking
	The user/individual on the job needs to know how to: SB15. be soft spoken and well dressed with the passengers SB16. focus on task at hand and complete it without errors and delays

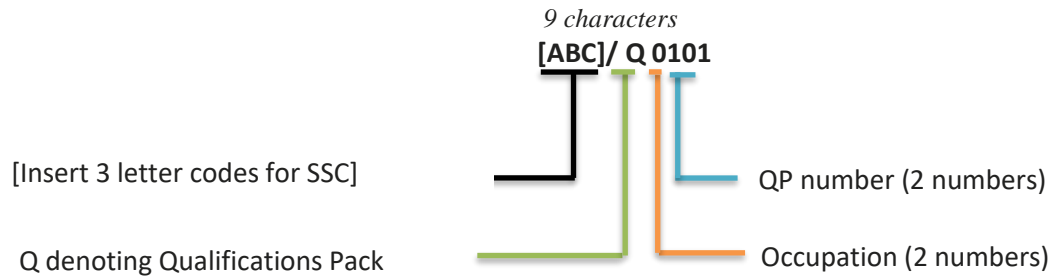
NOS Version Control

NOS Code	LSC/N3901		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Passenger services	Next review date	28/03/2022

Annexure

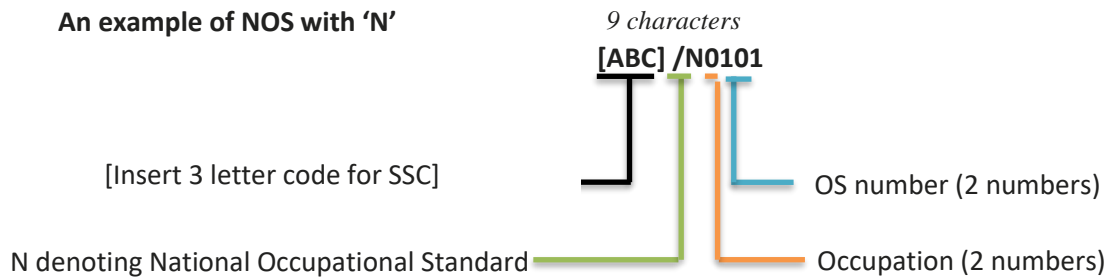
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



[Back to top...](#)

The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Warehousing	1 to 9
Land Transportation	10 to 14
EXIM/ Freight Forwarding/ Customs Clearance	21 to 23
Courier/Express	15 to 20
E-Commerce	24 to 30
Supply Chain	31 to 34
Port Terminals, ICD and CFS	35 to 41
Inland Waterways	42 to 46
Liquid Logistics	47 to 49
Air Cargo Operations	61 to 62
Rail Logistics	50 to 55
Cold Chain Logistics	86 to 94
Generic Occupations	95 to 99

Sequence	Description	Example
Three letters	Industry name	LSC
Slash	/	/
Next letter	Whether QP or NOS	Q / N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Vessel Operator Grade 1

Qualification Pack LSC/Q4101

Sector Skill Council Logistics

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 criterion
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of unsuccessful completion, the trainee may seek re-assessment on the Qualification Pack

Compulsory NOS					
Total Marks: 600				Marks Allocation	
Assessment Outcomes	Assessment Criteria for Outcomes	Total Marks	Out of	Theory	Skills Practical
LSC/N4101 Perform basic navigation	PC1. takeover bridge activity from incumbent after checking the activities to be undertaken	100	12	4	8
	PC2. act upon orders stated using various nautical terms		12	4	8
	PC3. maintain lookout and general surveillance of the vessel		12	4	8
	PC4. watch for changes in environment weather conditions, obstacles in course and possible collisions		11	3	8
	PC5. identify other vessels in operation based on the call signs and flags		11	3	8
	PC6. record bridge activity, observations and communicate		10	3	7
	PC7. handover the required details to the reliever		11	3	8
	PC8. locate the position using latitude and longitude on the map and globe		11	3	8
	PC9. identify different geographies and		10	3	7

	location, major navigation river routes on the map				
			100	30	70
LSC/N4001 Perform basic preventive maintenance	PC1. adhere to procedures and guidelines for personal protective equipment (PPE) and other relevant safety regulations while performing basic maintenance activities	100	6	2	4
	PC2. ensure that tools and equipment used are in a safe and serviceable condition		6	2	4
	PC3. ensure work area is clean and safe from hazards		6	2	4
	PC4. perform visual inspection of vessel deck for corrosions, missing paints, damages, fractures, need for oiling and greasing, etc. and inform the master		6	2	4
	PC5. obtain orders for preventive maintenance		6	2	4
	PC6. collect the appropriate material and equipment such as hand-tools, power tools and PPEs from stores		6	2	4
	PC7. clean off the rust, oil paint, grease, salt and dirt from the surface of the vessel and its equipment as per the stated procedure		6	2	4
	PC8. perform surface painting as per SOP		5	2	3
	PC9. dispose of paint residues, solvents, etc. in an environmentally friendly manner		5	2	3
	PC10. perform basic preventive maintenance of power tools as per manufacturer's specification		4	1	3
	PC11. perform lubrication of various deck equipment and wires as per the lubrication plan		4	1	3
	PC12. Perform greasing with use of grease guns and oiling equipment		4	1	3
	PC13. perform visual inspection and identify problem areas that require basic carpentry work		4	1	3
	PC14. execute planning, sawing and make joints and other carpentry operations		4	1	3
	PC15. check and review the quality parameters for carpentry work		4	1	3
	PC16. receive and understand instructions and checklist for planned electrical maintenance		4	1	3
	PC17. check for adequate precautions		4	1	3

	with respect to handling electrical equipment and wear PPEs before starting the task				
	PC18. adhere to isolation and emergency procedures		4	1	3
	PC19. change plugs, replace bulbs and tubes, rig up cluster lights and portable lamps, as required		4	1	3
	PC20. connect severed wires, test for current using testing equipment		4	1	3
	PC21. check and review the quality parameters for electrical maintenance work		4	1	3
			100	30	70
LSC/N4009 Perform mooring and rope work	PC1. obtain mooring plan from the master	100	9	3	6
	PC2. check condition of messenger, heaving line, stopper, mooring ropes, SWL of winches, fairleads, chocks and bollards etc.,		7	2	5
	PC3. clean, maintain non-slip mooring deck and keep snap-back zone clear		7	2	5
	PC4. signal to linesman when sending heaving line ashore		7	2	5
	PC5. lay out mooring rope, prepare heaving line and stopper		9	3	6
	PC6. arrange one standby spare heaving line; and monitor stress of mooring rope		7	2	5
	PC7. control mooring rope speed when paying out/heaving up		7	2	5
	PC8. monitoring vessel movement/clearance		7	2	5
	PC9. make various knots, bends, hitches and whipping on ends of rope, and various splices of ropes as required		7	2	5
	PC10. make various kinds of 'Whipping' on the ends of ropes		7	2	5
	PC11. make and fit building grips like the 'U' of the grip		7	2	5
	PC12. use knotting, spicing and stoppers for rigging		6	2	4
	PC13. securely rig and unrig safety nets, rat guards, bosun's chair, pilot ladders, etc.		7	2	5
	PC14. place blocks and tackles on the vessel to secure cargo and equipment during handling operations		6	2	4
			100	30	70
LSC/N4002	PC1. obtain details of daily task from the	100	7	2	5

Perform basic welding and fitting	master				
	PC2. collect the right tool for the task based on job and size requirement from the store		7	2	5
	PC3. check that the operation area is free from hazards and wear appropriate PPEs		7	2	5
	PC4. perform fitting operations including measuring, sawing, drilling, threading etc.		7	2	5
	PC5. prepare welding surface by cleaning, de-rusting, chipping, brushing and other techniques		7	2	5
	PC6. segregate empty and filled gas cylinders and check for upright position and presence of flashback arrester and safety disk on the acetylene		7	2	5
	PC7. check hose pipes for damages, remove dirt and dust, connect hose pipes and use as per defined colour codes		7	2	5
	PC8. maintain acetylene regulator away from water, oil, etc.		7	2	5
	PC9. place the torch at safe distance while igniting ensuring that the opening key is in the cylinder		7	2	5
	PC10. check for leakage near nozzle, gas pressure and overheating at nozzle while operating as precaution		4	1	3
	PC11. execute the welding joints as per requirement		6	2	4
	PC12. shut the acetylene valve and then the oxygen supply to shut down the welding		6	2	4
	PC13. do not place the used or worn out electrodes or hot tools on the floor separately and dispose them safely		6	2	4
	PC14. store welding equipment and gas cylinders, segregating empty and filled in gas cylinders		6	2	4
	PC15. maintain record of stores and equipment allocation		4	1	3
	PC16. inform work area supervisor on completion of work		5	2	3
		100	30	70	
LSC/N9904 Maintain integrity and ethics in operations	PC1. refrain from indulging in corrupt practices	100	5	2	3
	PC2. avoid using company's funds, property or resources for undertaking personal activities		5	2	3

	PC3. protect customer's information and ensure it is not misused		5	2	3
	PC4. protect data and information related to business or commercial decisions		5	2	3
	PC5. avoid acceptance of cash or kind from vendors for support or contract negotiations		5	2	3
	PC6. demonstrate and practice ethics in day-to-day processes and dealings with customers and colleagues		5	2	3
	PC7. avoid nepotism		5	2	3
	PC8. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical		6	2	4
	PC9. report promptly all violations of code of ethics		5	2	3
	PC10. dress up and conduct in a professional manner		5	2	3
	PC11. communicate with clients and stakeholders in a soft and polite manner		5	2	3
	PC12. follow etiquettes in accordance to the place		5	2	3
	PC13. check for regulatory documentation and compliances for the shop floor as per information from the supervisor		6	2	4
	PC14. perform activities considering the regulatory requirements		5	2	3
	PC15. use PPEs in accordance to regulatory requirements		6	3	3
	PC16. identify the different types of dangerous goods and handling methodologies		6	3	3
	PC17. follow the SOP for handling of different types of dangerous goods		6	2	4
	PC18. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical		5	2	3
	PC19. promptly report all regulatory violations		5	2	3
			100	40	60
LSC/N4102 Follow health and safety procedures in	PC1. wear a life jacket and immersion suit	100	3	1	2
	PC2. safely jump from a height into the water		3	1	2

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vessels	PC3. swim while wearing lifejacket		3	1	2
	PC4. right an inverted life raft while wearing life jacket		3	1	2
	PC5. board a life raft or survival vessel from the vessel or the water while wearing life jacket		3	1	2
	PC6. keep afloat without life jacket		3	1	2
	PC7. operate survival craft, life raft and its equipment and communication devices		3	1	2
	PC8. assess the casualty and immediate medical needs and threat to own safety		3	1	2
	PC9. position casualty and apply resuscitation techniques		4	2	2
	PC10. apply measures to control bleeding, cover and secure burn injuries using bandages and emergency medical kit		3	1	2
	PC11. apply measures for basic shock management		3	1	2
	PC12. assist in rescue and transport of the casualty		3	1	2
	PC13. take due precautions like – segregate and store, ensure proximity to firefighting equipment, etc. while storing inflammable materials on-board the vessel		3	1	2
	PC14. regularly monitor the inflammable material and cargo for fire hazards		4	2	2
	PC15. organise and maintain the firefighting equipment to make it easily accessible and operable during emergencies		4	2	2
	PC16. check fire and smoke alarms for functionality		3	1	2
	PC17. keep the emergency response routes and escape routes clear		4	2	2
	PC18. use different protective equipment and high pressure breathing equipment		3	1	2
	PC19. use different type of firefighting equipment to extinguish a fire, when required		3	1	2
	PC20. participate in fire and emergency drills		3	1	2
	PC21. inform and take appropriate action when discovering a potential emergency		3	1	2
	PC22. recognize the emergency signal and respond as per the emergency plan		3	2	1
	PC23. follow the designated escape		3	1	2

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	routes				
	PC24. follow safe and environmental friendly working practices		3	1	2
	PC25. follow precautions while entering closed areas and hazardous areas on-board the vessel		3	1	2
	PC26. maintain effective communications in person and while using vessel communication devices and systems		3	1	2
	PC27. follow vessel security plan		3	2	1
	PC28. identify security risks and threats, communicate and initiate action as per vessel security plan		4	2	2
	PC29. undertake regular vessel inspection with respect to vessel and cargo security		4	2	2
	PC30. check that all cargo containers, holds and hatches are secured		3	1	2
	PC31. check security equipment and system for functionality and maintenance		4	2	2
			100	40	60

Electives					
Elective 1.1 - Deck Operations - perform look out duties in navigation					
Total marks 100				Marks allocation	
Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Practical
LSC/N4103 Perform look out duties in navigation	PC1. stand on the Bridge wings and keep an all-round look out (sight & hearing)	100	10	3	7
	PC2. report any sighting and hearing of any sound signals to the on-duty staff		10	3	7
	PC3. identify and report the location of sighting, sound		10	3	7
	PC4. identify the sound, light and flag signals pertaining to ships' operations and manoeuvres and report		10	3	7
	PC5. assess the values displayed in GPS and radar and integrate them in the tasks of his watch duty		9	3	6
	PC6. observe the direction of the ship's head on a gyro-compass (gyro course) and magnetic compass periodically		9	3	6
	PC7. observe the waves and swell and estimate the water state as per Beaufort scale		9	3	6
	PC8. take readings of thermometer,		8	2	6

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	barometer, hygrometer, etc.				
	PC9. identify the location of ship on map by reading the latitude and longitude		9	3	6
	PC10. identify navigational lighthouses, buoys and shapes		8	2	6
	PC11. hoist any combination of flag and signs on the halyards as required		8	2	6
			100	30	70
Elective 1.2 - Deck Operations - Perform cargo handling					
Total marks 100				Marks allocation	
Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Practical
LSC/N4003 Perform cargo handling	PC1. wear the appropriate PPE for material handling	100	7	2	5
	PC2. use vessel's derricks and ropes to load/unload cargo		9	3	6
	PC3. oversee safe loading and discharge of ro-ro cargo		9	3	6
	PC4. assist in organizing cargo on board the vessel		9	3	6
	PC5. assist in opening hatch/hold of vessel hold for loading/discharging bulk cargo		9	3	6
	PC6. check that the hold coaming is functional, to avoid water from going into the hold		8	2	6
	PC7. close and secure the hatch post operations and check for weather tight seal		7	2	5
	PC8. check that cargo is securely hatched, lashed and blocked to avoid any movement using different methods of blocking, lashing, shoring, chocking, etc.		7	2	5
	PC9. secure cargo faces during part discharges		7	2	5
	PC10. secure heavy loads and heavy lifts		7	2	5
	PC11. stow and secure vehicles, trailers and containers		7	2	5
	PC12. lash and rig paper rolls, steel coils, steel billets, crates, plates and timber cargo in a safe and secured way		7	2	5
	PC13. segregate and secure hazardous cargo separately at designated place		7	2	5
			100	30	70
Elective 1.3 - Deck Operations - Perform deck assistance					
Total marks 100				Marks allocation	

Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Practical
LSC/N4004 Perform deck assistance	PC1. attend post trip muster meeting and take task schedule	100	7	2	5
	PC2. collect and use life jacket and VHF radio communication		7	2	5
	PC3. assist in securing crowd control line and lining up the cargo		7	2	5
	PC4. assist in disembarking the cargoes from the boarding hatch/ hold		7	2	5
	PC5. assist in cleaning duties as directed		7	2	5
	PC6. assist master in readying the vessel		7	2	5
	PC7. assist in securing safety lines for departure		7	2	5
	PC8. monitor cargo and crowd control line during the deck watch duty		7	2	5
	PC9. enforce the vessel rules and maintain passenger and crew safety		7	2	5
	PC10. identify and report on need for repairs and maintenance activity on deck		7	2	5
	PC11. perform the repair or maintenance as instructed		6	2	4
	PC12. maintain deck department stores, spares, equipment and tools		6	2	4
	PC13. maintain general cleanliness of the vessel and deck		6	2	4
	PC14. assist in maintenance and repair of deck equipment		6	2	4
	PC15. assist with the operation, maintenance and testing of the ship's firefighting equipment		6	2	4
			100	30	70
Elective 2.1 - Engine Operations - Perform basic engine room operations					
Total marks 100				Marks allocation	
Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Practical
LSC/N4201 Perform basic engine room operations	PC1. obtain work schedules and orders from engine room in-charge/master	100	7	2	5
	PC2. take necessary safety precautions while working with engine with respect to electrical equipment, thermal and chemical exposure, moving parts, etc.		7	2	5
	PC3. inspect, operate and test all machinery and equipment		7	2	5
	PC4. assist in safe and efficient operation of the propulsion machinery		7	2	5

	and auxiliary equipment				
	PC5. monitor the operational parameters and condition of machineries		7	2	5
	PC6. update engine room log regularly		7	2	5
	PC7. notify the master in event of any serious occurrence or irregularity in operation		7	2	5
	PC8. maintain cleanliness of main engine and auxiliary units		4	1	3
	PC9. check stowage and security of the engine room stores		7	2	5
	PC10. check tanks for adequacy of fuel, water, slops, ballast, etc.		7	2	5
	PC11. periodically check operating and standby equipment of repair and maintenance requirement		7	2	5
	PC12. perform periodic greasing of machines as part of maintenance		7	2	5
	PC13. perform wiping as and when required		5	2	3
	PC14. respond to engine room alarms		5	2	3
	PC15. maintain log book of operational activities of machines and engine		4	1	3
	PC16. report to in case any fault or irregularities in machinery		5	2	3
			100	30	70
Elective 2.2 - Engine Operations - Perform oiler and fitter duties					
Total marks 100				Marks allocation	
Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Practical
LSC/N4202 Perform oiler and fitter duties	PC1. examine machinery for specified pressure, flow and adequacy of lubricant	100	7	2	5
	PC2. fill oil and grease reservoirs according to machinery lubrication SOP		9	3	6
	PC3. read pressure and temperature gauges and record data in engineering log		9	3	6
	PC4. clean strainers and filters in various systems		9	3	6
	PC5. keep working area clean and in orderly condition		9	3	6
	PC6. maintain engine room by sweeping, mopping, scrubbing and performing routine painting		8	2	6
	PC7. test the fitted equipment prior to use		7	2	5
	PC8. check for basic repairs and fitting requirement for different engine and machine parts		7	2	5

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	PC9. use bench vice and filing, marking and tapping tools and other hand-tools for basic fitting repairs		7	2	5
	PC10. use power tools and drill machine for grinding and drilling		7	2	5
	PC11. check for secured joints, leakages, robustness		7	2	5
	PC12. periodically log routine checks and functions		7	2	5
	PC13. keep working area clean, neat and in orderly condition		7	2	5
			100	30	70

Options					
Option 1 - Passenger vessel operations - Perform duties in a passenger vessel					
Total marks 100				Marks allocation	
Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Practical
LSC/N3901 Perform duties in a passenger vessel	PC1. interact with passengers to understand their requirement regarding catering, laundry and housekeeping	100	10	3	7
	PC2. convey the order to supervisor or chef		10	3	7
	PC3. assist in preparing the food item, its garnishing and presentation of cutlery		10	3	7
	PC4. deliver the services to the passenger		10	3	7
	PC5. maintain the cutlery and kitchen in clean and hygienic manner		10	3	7
	PC6. conduct daily housekeeping and cleaning services of passenger quarters		10	3	7
	PC7. maintain passenger facilities like gym, swimming pool, entertainment centre, etc.		10	3	7
	PC8. check that all necessary precautions are being taken by passengers before using facilities		10	3	7
	PC9. check that the facilities are regularly cleaned and document the same		10	3	7
	PC10. check and prevent passengers from leaning onto vessel railings, going into restricted areas		10	3	7
			100	30	70

Annexure: Trainer qualification and equipment requirement

Trainer qualification –

- Diploma/ Class XII pass with minimum 5 years of experience in vessel operations (of which minimum 2 years as Vessel operator grade 2) in either deck or engine operations
- Has detailed knowledge of vessel engine room operations including equipment operation, troubleshooting, maintenance, repair and overhauling etc. (or)
- Has detailed knowledge of vessel deck operations including deck maintenance, clearing, painting, repairing, navigation, watch keeping, report writing etc.
- Has supervisory and reporting skills
- The trainer should have the ability to read write and communicate in vernacular language, Hindi and English

Training Equipment requirement –

PPEs, SOPs and manuals, vessel models, various simulations for deck and engine operations, cargo operations, different types of ropes used in vessel, different equipment for deck and engine, model cargo, cargo handling equipment, maintenance tools and tackles, different equipment for deck and engine, first aid kit, firefighting equipment, life jacket, safety jacket, raft, housekeeping equipment, cleaning equipment, crowd control equipment, vessel safety lines, navigation charts, maps buoys, flags, sound and light signals, GPS monitor, thermometer, barometer, hygrometer etc.