



QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR STRATEGIC MANUFACTURING INDUSTRY



Contents

1. Introduction and Contacts..... [1]
2. Qualifications Pack..... [2]
3. Glossary of Key Terms [3]
4. OS Units..... [5]
5. Annexure: Nomenclature for QP & OS.. [27]
6. Assessment Criteria..... [29]

What are Occupational Standards (OS)?

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

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Introduction

Qualifications Pack – Utility Hand (Skilled Marine)

SECTOR: STRATEGIC MANUFACTURING

SUB-SECTOR: Ship Building & Ship Repair

OCCUPATION: Repair & Maintenance

REFERENCE ID: SMC/Q 4801

ALIGNED TO: NCO-2015/ 7233.2200 ISCO - NIL

Brief Job Description: Utility Hand (Skilled Marine) assists in the smooth operation and maintenance of the equipment at job sites under close supervision. He has limited responsibility of routine and repetitive activities and is skilled to handle basic range of mechanical maintenance on board ship.

Personal Attributes: The individual has to organize own work which may be routine or repetitive in nature. He should have basic communication (written and oral) and arithmetic skills. Also, understanding the initiative to improve efficiency and effectiveness in work.



Qualifications Pack for Utility Hand (Skilled Marine)

Qualifications Pack Code	SMC/Q 4801		
Job Role	Utility Hand (Skilled Marine)		
Credits (NSQF)	TBD	Version number	1.0
Sector	Strategic Manufacturing	Drafted on	05/11/2016
Sub-sector	Ship Building and Ship Repair	Last reviewed on	13/09/2017
Occupation	Repair & Maintenance	Next review date	12/09/2020
NSQC Clearance on	NA		

Job Details

Job Role	Utility Hand (Skilled Marine)
Role Description	Utility Hand (Skilled Marine) assists in the smooth operation and maintenance of the equipment at job sites under close supervision. He has limited responsibility of routine and repetitive activities and is skilled to handle basic range of mechanical maintenance on board ship.
NSQF level	3
Minimum Educational Qualifications	8 th Standard
Maximum Educational Qualifications	N/A
Prerequisite License or Training	N/A
Minimum Job Entry Age	18 years
Experience	No previous experience is required
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> SMC/N 4801 Assist in shipbuilding at decks on ship SMC/N 9103 Work effectively in a collaborative environment SMC/N 9104 Maintain safe, hygiene and secure environment
Performance Criteria	As described in the relevant OS units



Qualifications Pack for Utility Hand (Skilled Marine)

Definitions	Keywords /Terms	Description
	Sector	Sector is a conglomeration of different business operations having similar businesses and interest. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
	Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
	Occupation	Occupation is a set of job roles, which perform similar/related set of In an industry.
	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 analysis and form the basis of OS.
	Job Role	Job role defines a unique set of functions that together form a unique Employment opportunity in an organization.
	OS	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
	Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
	NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
	Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.	
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'	
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.	
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for	
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.	
Organizational Context	Organizational 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.	
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.	
Core Skills or 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 OS, these include communication related skills that are applicable to most job roles.	



Qualifications Pack for Utility Hand (Skilled Marine)

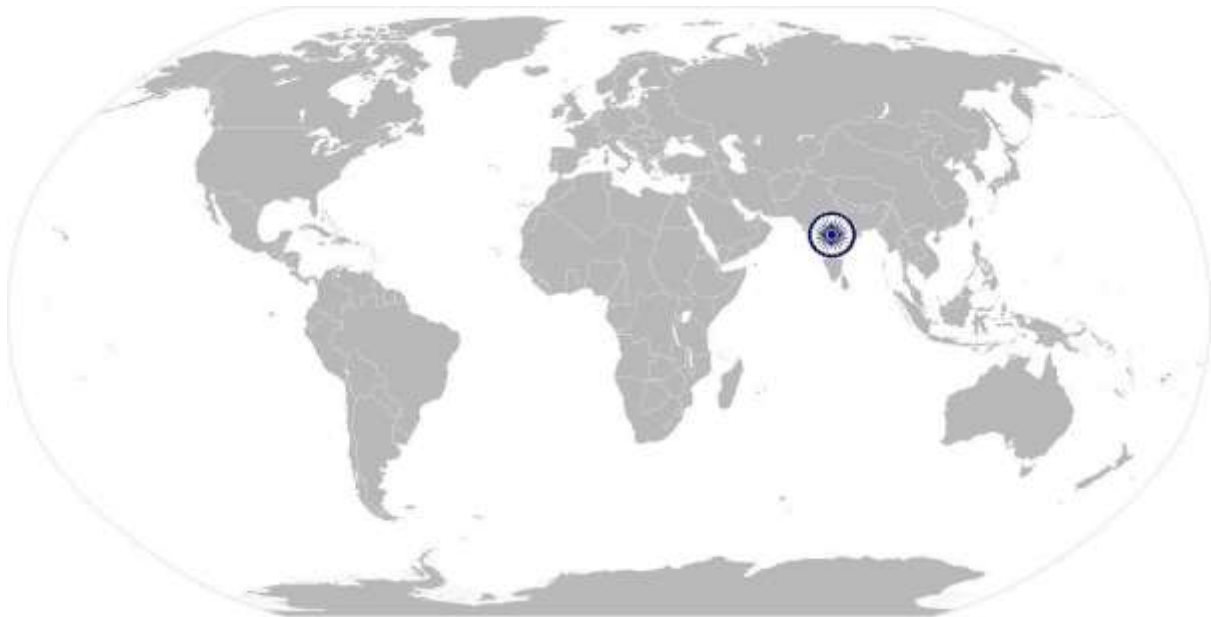
Acronyms	Keywords /Terms	Description
	SMSSC	Strategic Manufacturing Sector Skill Council
	NOS	National Occupational Standards
	NSQF	National Skills Qualification Framework
	NVEQF	National Vocational Educational Qualification Framework
	NVQF	National Vocational Qualification Framework
	OS	Occupational Standards
	PC	Performance Criteria
	QP	Qualification Pack
	SSC	Sector Skills Council



SMC/N 4801

Assist in shipbuilding at decks on ship

National Occupational Standard



Overview

This unit is about assisting in shipbuilding at decks on ship



SMC/N 4801

Assist in shipbuilding at decks on ship

National Occupational Standard

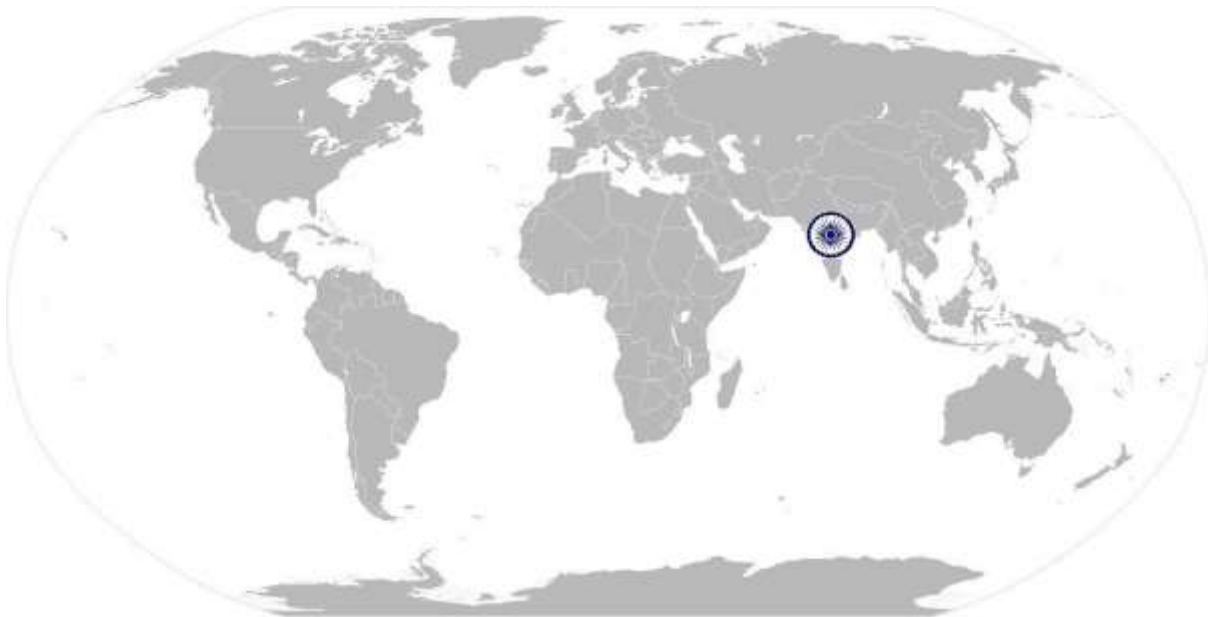
Unit Code	SMC/N 4801
Unit Title (Task)	Assist in shipbuilding decks on ship
Description	This unit is about assisting in shipbuilding at decks on ship under guidance and in accordance to Work Plan Instructions (WPI)
Scope	This unit/task covers the following: <ul style="list-style-type: none"> Assisting in shipbuilding works Assisting in maintenance of equipment/decks
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Assisting in shipbuilding works	To be competent, the user/ individual must be able to: PC1. carry tackles, tools, pulleys and wire rope to the job site PC2. greasing of points on machines with lubricants PC3. fill engine oil, fuel, crane gear box oil and engine coolant PC4. apply lubricants on crane wire ropes, pulley bearings etc PC5. top up all hydraulic oils in hydraulic machineries PC6. handle wire rope slings and shift items with the help of slings and cranes PC7. caution the operator of the equipment as well as site people in case of danger PC8. apply jack properly wherever required PC9. remove obstructions coming in the way of travelling crane PC10. moving different types of cylinders at job sites PC11. deposit tools to section stores
Assisting in maintenance of equipment/decks	To be competent, the user/ individual must be able to: PC12. hose down decks, bulwarks, and super-structure when required PC13. clean the assemblies and the sub – assemblies before fittment PC14. oiling and servicing of parts before integration/assembling PC15. remove hot work pieces on ship under construction
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant occupational health and safety requirements applicable in the work place KA2. importance of working in clean and safe environment KA3. reporting structure, inter-dependent functions, lines and procedures in the work area
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. maintenance of schedule of engines KB2. all machinery lubricating points and type of lubrication KB3. greasing of machine tools, winches and capstans KB4. air and water cooling system on engine KB5. how to clean deck KB6. type and marking on gas cylinders



SMC/N 4801

Assist in shipbuilding at decks on ship

Skills (S)	
A. Core Skills/ Generic Skills	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA1. express statements or information clearly so that others can hear and understand
B. Professional Skills	Teamwork
	The user/individual on the job needs to know and understand how to: SB1. work constructively and collaboratively with others



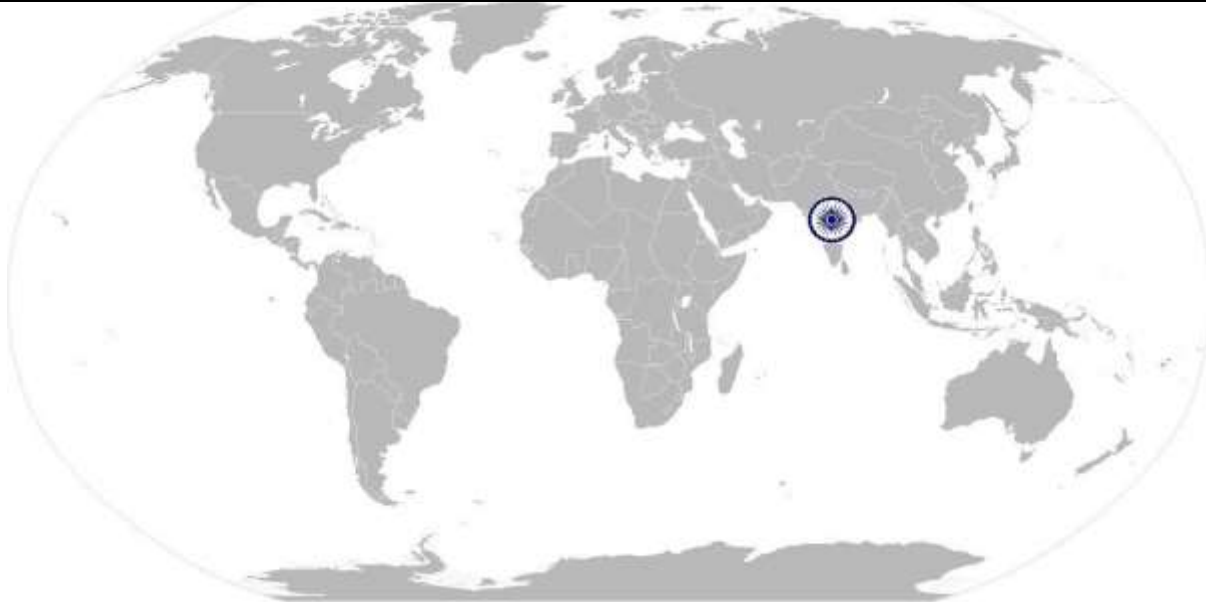


SMC/N 4801

Assist in shipbuilding at decks on ship

NOS Version Control

NOS Code	SMC/N 4801		
Credits (NSQF)	TBD	Version number	1.0
Industry	Strategic Manufacturing	Drafted on	05/11/2016
Industry Sub-sector	Ship Building and Ship Repair	Last reviewed on	13/09/2017
Occupation	Repair & Maintenance	Next review date	12/09/2020



[Back to top](#)



National Occupational Standard



Overview

This unit covers basic practices for working effectively with others in a collaborative environment, such as team work and cooperation, awareness of team and organisational goals, sharing of information, communicating effectively using appropriate etiquettes and behaviours, and interpersonal relations.



SMC/N 9103

Work effectively in a collaborative environment

National Occupational Standard

Unit Code	SMC/N 9103
Unit Title (Task)	Working effectively in a collaborative environment
Description	This unit covers basic practices for working effectively with others in a collaborative environment, such as team work and cooperation, awareness of team and organisational goals, sharing of information, communicating effectively using appropriate etiquettes and behaviours, and interpersonal relations.
Scope	<p>This unit/task covers the following:</p> <p>Activities covered:</p> <ul style="list-style-type: none"> • Working effectively in a team • Etiquettes and behaviors for: <ul style="list-style-type: none"> • understanding & sharing information with others to enable efficient delivery of work • communicating with other members and people internal or external to the organization • Interpersonal relations
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Working effectively in a team	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. define own work and responsibilities</p> <p>PC2. understand individual goals</p> <p>PC3. understand work requirements</p> <p>PC4. collaborate and integrate own work with other people's work</p> <p>PC5. consult with others to achieve smooth workflow</p> <p>PC6. work in a way that shows respect for others</p> <p>PC7. carry out any commitments made to others</p> <p>PC8. seek ways of improvement of work</p> <p>PC9. learn skills from others that help in performing the work efficiently</p> <p>PC10. ensure proper care is given to a fellow worker in case of an accident</p>
Etiquettes and behaviors for sharing information and communicating effectively	<p>To be competent, the user/ individual must be able to:</p> <p>PC11. receive information and instructions accurately from the supervisor and colleagues</p> <p>PC12. seek clarifications where required without disruption of own or others work</p> <p>PC13. pass on accurate information to authorized persons who require it and within agreed timescale and confirm its receipt</p> <p>PC14. communicate with other people clearly and effectively</p> <p>PC15. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism</p> <p>PC16. display active listening skills while interacting with others at work and receiving feedback</p>



SMC/N 9103

Work effectively in a collaborative environment

Interpersonal relations	To be competent, the user/ individual must be able to: PC17. resolve individual disagreements with the concerned person
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the organization and its processes)	The user/individual on the job needs to know and understand: KA1. reporting structure, inter-dependent functions, lines and procedures in the work area KA2. procedures in the organization to deal with conflicts
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. importance of team work in organizational and individual success KB2. value and importance of active listening and assertive communication KB3. importance of communicating clearly and effectively with people face-to-face, by telephone and in writing KB4. importance of discipline for professional success KB5. importance and ways of managing interpersonal conflict effectively KB6. expressing and addressing grievances appropriately and effectively
Skills (S)	
A. Core Skills/ Generic Skills	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA1. read vernacular/English language SA2. read various colour codes, as per standard electrical, mechanical and civil nomenclature
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA3. express statements or information clearly so that others can hear and understand
B. Professional Skills	Team Working Skills
	The user/individual on the job needs to know and understand how to: SB1. work constructively and collaboratively with others SB2. build rapport and cooperative relationships with internal team members and other departments for effective completion of work SB3. resolve conflicts within teams



SMC/N 9103

Work effectively in a collaborative environment

NOS Version Control

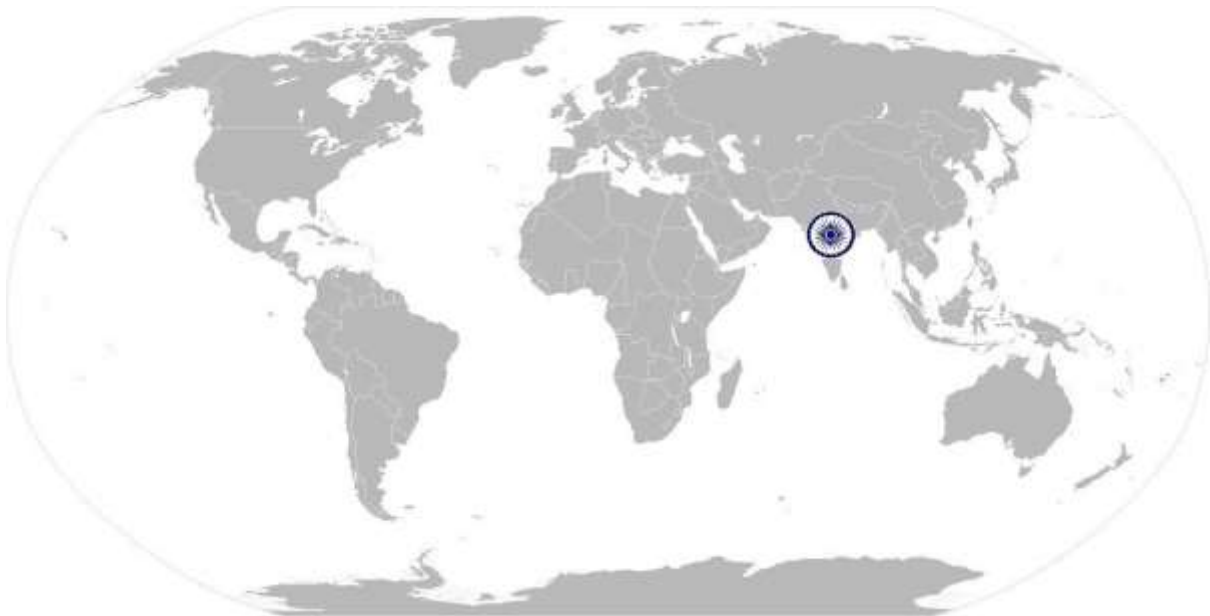
NOS Code	SMC/N 9103		
Credits (NSQF)	TBD	Version number	1.0
Industry	Strategic Manufacturing	Drafted on	05/11/2016
Industry Sub-sector	Common	Last reviewed on	13/09/2017
Occupation	Common	Next review date	12/09/2020



[Back to top](#)



National Occupational Standard



Overview

This unit covers procedures and practices to be followed to maintain a healthy, safe and secure work environment.



SMC/N 9104 Maintain a healthy, safe and secure working environment

National Occupational Standard

Unit Code	SMC/N 9104
Unit Title (Task)	Maintain a healthy, safe and secure working environment
Description	This unit is about maintaining a healthy, safe and secure work environment. It covers responsibilities towards self, others, assets and the environment.
Scope	This unit/task covers the following: Activities covered: <ul style="list-style-type: none"> • maintain healthy workplace environment • maintain safe and secure environment • emergencies, rescue and first-aid procedures
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Maintain healthy workplace	To be competent ,the user/individual on the job must be able to: PC1. maintain cleanliness and hygiene PC2. wear clean and appropriate clothing, footwear and headgear PC3. follow health and hygiene procedures in all the work at all times
Maintain safe and secure environment	To be competent, the user/individual on the job must be able to: PC4. keep a look out for hazards in the workplace related to equipment, clothing, etc PC5. use protective clothing such as gloves, safety glasses, etc for specific tasks & work conditions PC6. report any accidents or near accidents quickly and accurately to the proper person PC7. practice emergency procedures correctly
Emergencies, rescue and first-aid procedures	To be competent ,the user/individual on the job must be able to: PC8. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments PC9. participate in emergency procedures and move injured people and others in correct method during an emergency PC10. perform emergency procedures including raising alarm, efficient evacuation, etc PC11. administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the organization and its	The user/individual on the job needs to know and understand: KA1. responsibilities under the organization’s health, safety and security standards KA2. why it is important to work in a healthy, safe and hygienic way



SMC/N 9104 Maintain a healthy, safe and secure working environment

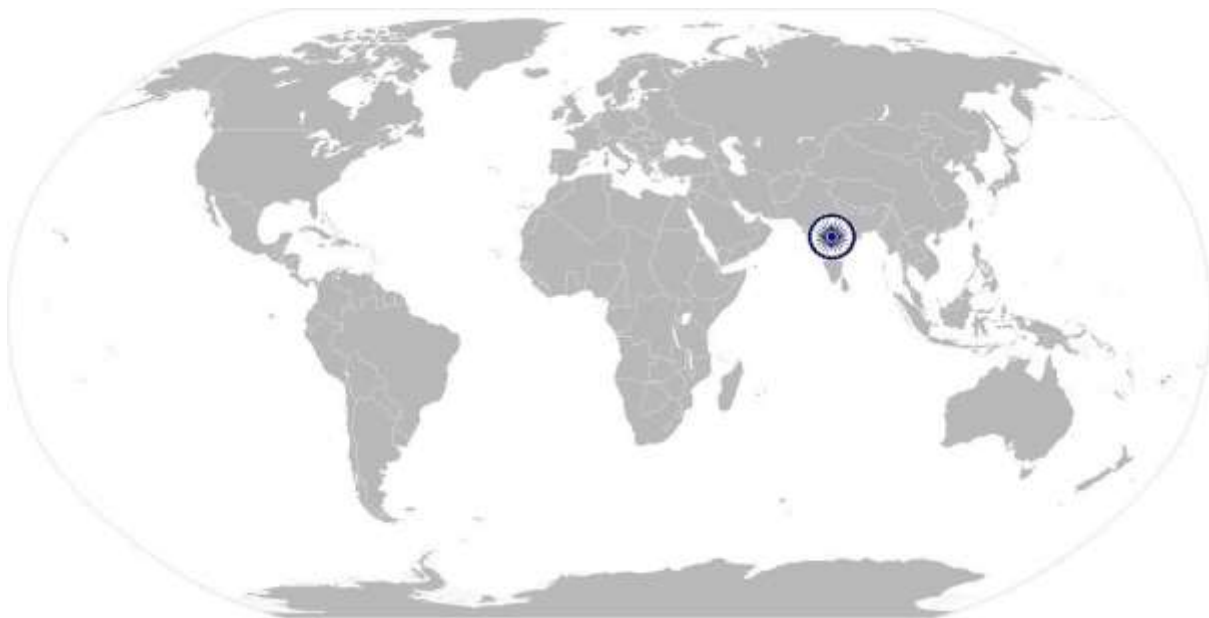
processes)	
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. general rules on hygiene that one must follow</p> <p>KB2. why correct clothing, footwear, safety masks, respiratory masks, gloves, loose cotton and headgear should be worn at all times</p> <p>KB3. understand the physical signs and reactions related to exposures to such hazards</p> <p>KB4. knowledge of entry and exit of vessel and evacuation procedures in case of an emergency</p> <p>KB5. how to dispose waster material in ship</p> <p>KB6. awareness of work going on in surrounding areas</p> <p>KB7. awareness of gasses generated on board of ship</p> <p>KB8. awareness of toxic gases in confined spaces</p> <p>KB9. knowledge of disposal of waste materials</p> <p>KB10. meaning of “hazards” and “risks”</p> <p>KB11. importance of using protective clothing/equipment while working</p> <p>KB12. personal safety, health and dignity issues relating to the movement of a person by others</p> <p>KB13. various types of safety signs and what they mean</p> <p>KB14. the correct procedures for dealing with customers in case of emergencies</p> <p>KB15. content of written accident report</p>
Skills (S)	
A. Core Skills/ Generic Skills	Oral Communication (Listening and Speaking skills)
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. express statements or information clearly so that others can hear and understand</p> <p>SA2. participate in and understand the main points of simple discussions</p>
B. Professional Skills	Teamwork
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. organize work schedule to meet deadlines</p> <p>SB2. work constructively and collaboratively with others</p>



SMC/N 9104 Maintain a healthy, safe and secure working environment

NOS Version Control

NOS Code	SMC/N 9104		
Credits (NSQF)	TBD	Version number	1.0
Industry	Strategic Manufacturing	Drafted on	05/11/2016
Industry Sub-sector	Common	Last reviewed on	13/09/2017
Occupation	Common	Next review date	12/09/2020



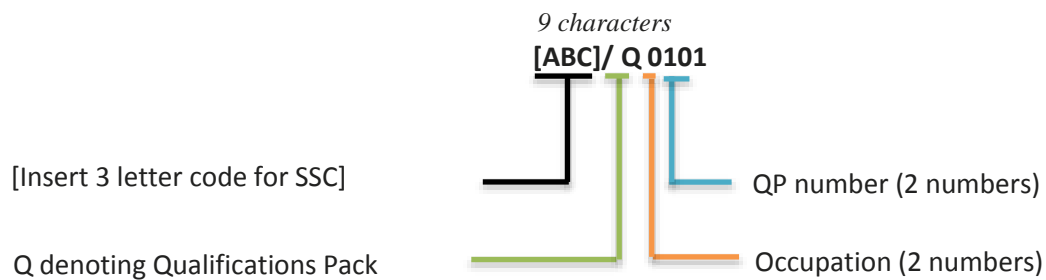
[Back to top](#)



Annexure

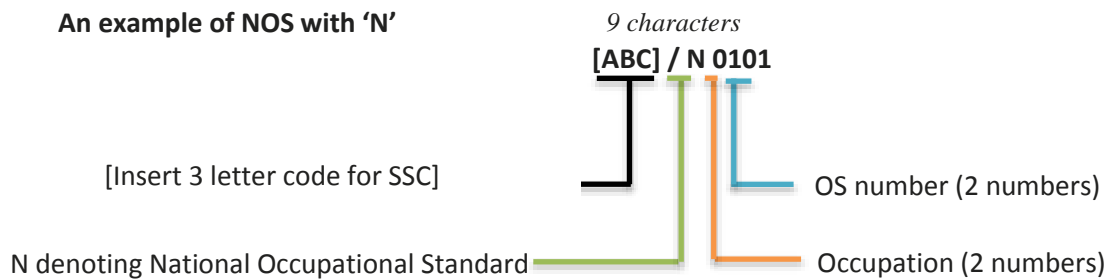
Nomenclature for QP and NOS

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 sectors	Range of occupation numbers
Defence Equipment - Land & Naval Systems	01-30
Ship building & Ship breaking	31-60
Electronic Security Equipment Manufacturing	61-75
Safety & Fire Fighting Equipment	76-90
Common	91-94

Sequence	Description	Example
Three letters	Industry name	SMC
Slash	/	/
Next letter	Whether QP or NOS	Q or N
Next two numbers	Occupation code	1
Next two numbers	OS number	1

Note :

- The range of occupation numbers have been decided based on the number of existing and future occupations in a segment



CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Utility Hand (Skilled Marine)

Qualification Pack SMC/Q 4801

Sector Skill Council Strategic Manufacturing

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. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS Total Marks: 300				Marks Allocation	
Assessment outcomes	Assessment criteria for outcomes	Total marks	Out of	Theory	Skills/ Practical
SMC/N 4801 Assist in shipbuilding at decks on ship	PC1. carry tackles, tools, pulleys and wire rope to the job site	100	6	2	4
	PC2. greasing of points on machines with lubricants		6	2	4
	PC3. fill engine oil, fuel, crane gear box oil and engine coolant		6	2	4
	PC4. apply lubricants on crane wire ropes, pulley bearings etc		7	2	5



Compulsory NOS Total Marks: 300				Marks Allocation	
Assessment outcomes	Assessment criteria for outcomes	Total marks	Out of	Theory	Skills/ Practical
	PC5. top up all hydraulic oils in hydraulic machineries		7	3	4
	PC6. handle wire rope slings and shift items with the help of slings and cranes		7	3	4
	PC7. caution the operator of the equipment as well as site people in case of danger		7	3	4
	PC8. apply jack properly wherever required		7	3	4
	PC9. remove obstructions coming in the way of travelling crane		7	3	4
	PC10. deposit tools to section stores		6	3	3
	PC11. moving different types of cylinders at job sites		7	3	4
	PC12. hose down decks, bulwarks, and super-structure when required		7	2	5
	PC13. clean the assemblies and the sub – assemblies before fittment		7	3	5
	PC14. oiling and servicing of parts before integration/assembling		6	2	4
	PC15. remove hot work pieces on ship under construction		7	3	4
		Total	100	38	62
SMC/N 9102 Work effectively in a collaborative environment	PC1. define own work and responsibilities	100	6	2	4
	PC2. understand organisational, individual and team goals		6	2	4
	PC3. understand work requirements and assigned targets		6	2	4
	PC4. collaborate and integrate own work with other people’s work		6	2	4



Compulsory NOS Total Marks: 300				Marks Allocation	
Assessment outcomes	Assessment criteria for outcomes	Total marks	Out of	Theory	Skills/ Practical
	PC5. consult with others to achieve smooth workflow and help in maximising effectiveness and efficiency in carrying out tasks		6	2	4
	PC6. work in a way that shows respect for others		6	2	4
	PC7. carry out any commitments made to others		6	2	4
	PC8. seek ways of improvement of work		6	2	4
	PC9. learn skills from others that help in performing the work efficiently and share own skills with them, which may benefit their work		6	2	4
	PC10. ensure proper care is given to a fellow worker in case of an accident		6	2	4
	PC11. receive information and instructions accurately from the supervisor and colleagues		6	2	4
	PC12. seek clarifications where required without disruption of own or others work		6	2	4
	PC13. pass on accurate information to authorized persons who require it and within agreed timescale and confirm its receipt		6	2	4
	PC14. communicate with other people clearly and effectively		6	1	5
	PC15. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism		6	1	5
	PC16. display active listening skills while interacting with others at work and receiving feedback		5	1	4
	PC17. resolve individual disagreements with the concerned person		5	1	4
		Total	100	30	70



Compulsory NOS Total Marks: 300				Marks Allocation	
Assessment outcomes	Assessment criteria for outcomes	Total marks	Out of	Theory	Skills/ Practical
SMC/N 9103 Maintain healthy, safe and secure environment	PC1. maintain cleanliness and hygiene	100	10	4	6
	PC2. wear clean clothing		9	4	5
	PC3. follow health procedures		9	4	5
	PC4. keep a look out for hazards		9	3	6
	PC5. use protective clothing/equipment		9	3	6
	PC6. report any accidents or near accidents quickly and accurately to the proper person		9	3	6
	PC7. practice emergency procedures		9	3	6
	PC8. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments		9	3	6
	PC9. participate in emergency procedures and move injured people and others in correct method during an emergency		9	3	6
	PC10. perform emergency procedures		9	3	6
	PC11. administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.		9	3	6
	Total	100	36	64	