Australian Government

MARA011 Contribute to basic operations of ships in polar waters

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

Application

This unit involves the skills and knowledge required to contribute to basic operations of ships in polar waters.

This unit applies to people working in the maritime industry in the capacity of:

- Chief Mate
- Deck Officers
- Engineering Officers
- Engineers
- Masters
- Ratings.

Licensing/Regulatory Information

This unit is equivalent to and delivers the objectives of the following STCW provisions:

- STCW Reg V/4 (1 and 2) and Code Section A-V/4 (1), Table A-V/4-1.

Legislative and regulatory requirements are applicable to this unit:

- This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as Chief Mate, Deck Officers, Engineering Officers, Engineers, Masters or Ratings for basic operations of ships in polar waters and to meet regulatory requirements this unit must be delivered consistent with Marine Orders and with the relevant sections of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).

- Those regulatory requirements include STCW International Maritime Organization (IMO) model course competencies and areas of knowledge, understanding and proficiency, together with the estimated total hours required for lectures and practical exercises. Teaching staff should note that timings are suggestions only and should be adapted to suit individual groups of trainees depending on their experience, ability, equipment and staff available for training.

Pre-requisite Unit

Not applicable.

Competency Field

A - Handling Cargo and Vessel Stability

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Contribute to safe operation of vessels in polar waters	**1.1** Ice properties and their characteristics and relevance to safe ship operations are correctly identified
	1.2 Ice information and publications are used and interpreted correctly and applied appropriately
	1.3 Visible and infrared satellite images and egg charts are used to identify ice conditions
	1.4 Meteorological and oceanographic data is coordinated with ice data
	1.5 Measurements and observations of weather and ice conditions are accurate and used appropriately when planning a passage
	1.6 Ship characteristics are identified and their limitations under different ice conditions and impact of operating in a cold environment
	1.7 Procedures for assessing risk are made before entering ice
	1.8 Ship and crew are prepared for operations in ice and low air temperatures in accordance with workplace procedure and principles
	1.9 Communication with personnel is clear, concise and accurate and information is understood and acted upon
	1.10 Procedures for loading and unloading cargo and embarking and disembarking passengers in low

		temperatures where appropriate, are correctly identified using Polar Code and Polar Water Operations Manual
		1.11 Procedures for monitoring ballast water for icing, engine temperatures and anchor watch concerns in ice and transit near ice are correctly identified using Polar Code and Polar Waters Operations Manual
		1.12 Information from radar is interpreted and analysed in accordance with lookout procedures with special caution, regarding identification of dangerous ice features
		1.13 Information obtained from navigational charts, electronic charts and publications is relevant, assessed, interpreted and applied correctly
		1.14 Primary method of position fixing is frequent and appropriate for the prevailing conditions and routing through ice
		1.15 Performance checks and tests of navigation and communication systems comply with recommendations for operations in high latitude and low air temperature
2	**Monitor compliance with legislative requirements**	**2.1** Relevant sections of Polar Water Operations Manual are identified and applied to operations
		2.2 Communication is conducted in accordance with local, regional and international standard procedures
		2.3 Legislative requirements relevant to regulations, codes and practices are identified and applied correctly to operations
3	**Apply safe work practices when responding to emergencies**	**3.1** Hazardous situations are identified and appropriate actions are taken for hazardous situations for ship and individual crew members
		3.2 Actions taken are in accordance with Polar Water Operations Manual, accepted principles and procedures to ensure safety of operations and avoidance of pollution of the marine environment
		3.3 Personal protective equipment (PPE) is used correctly and safe working practices are observed at all times
		3.4 Actions taken are in accordance with emergency procedures and plans and are appropriate to the situation

		and nature of the emergency
	3.5	Legislative requirements relevant to regulations, codes and practices are identified and applied correctly to operations
	3.6	PPE is used correctly and defects and damages are detected and promptly reported
4 Ensure compliance with pollution prevention and prevent environmental hazards	**4.1**	Legislative requirements relevant to regulations, codes and practices are identified and applied correctly to operations
	4.2	Limitations on vessel discharges are identified and selected correctly in accordance with the Polar Code
	4.3	Limitations on vessel discharges and plans for storing are correctly applied in accordance with Polar Water Operations Manual and Waste Management Plan
	4.4	References that provide details of areas to be avoided are identified
	4.5	Factors that must be considered when managing waste stream during polar voyages are identified

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This is a new unit. No equivalent unit.

Links

Companion Volume implementation guide can be found in VetNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2