



Australian Government

MARA019 Manage advanced liquefied gas tanker cargo operations

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 manage advanced liquefied gas tanker cargo operations.

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/1-2 (3 and 4) and Code Section A-V/1-2 (2), Table A-V/1-2-2.

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 advanced operations on liquefied gas tankers 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

Elements describe the essential outcomes.

1 Perform work safely and monitor all cargo operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Communication with personnel is clear, concise and accurate and information is understood and acted upon
- 1.2** Cargo operations are carried out in a safe manner, taking into account liquefied gas tanker designs, systems and equipment
- 1.3** Cargo operations are planned, risk is managed and carried out in accordance with accepted principles and procedures to ensure safety of operations and avoid pollution of the marine environment
- 1.4** Potential non-compliance with cargo operation-related procedures are identified and rectified promptly
- 1.5** Pumping operations are carried out in accordance with accepted principles and procedures relevant to the type of cargo
- 1.6** Proper loading, stowage and unloading of cargo is undertaken to ensure that stability and stress conditions remain within safe limits at all times
- 1.7** Actions taken and procedures are followed and correctly applied, and the appropriate shipboard cargo-related equipment used
- 1.8** Calibration and use of monitoring and gas detection equipment are in compliance with operational practices

		and procedures
	1.9	Procedures for monitoring and safety systems ensure that all alarms are detected promptly and acted upon in accordance with workplace emergency procedures
	1.10	Personnel are allocated duties and informed of procedures and standards of work to be followed in a manner appropriate to the individuals concerned and in accordance with safe operational practices
2	Recognise physical and chemical properties of liquefied gas cargoes	
	2.1	Information resources are used effectively to identify properties and characteristics of liquefied gases and their impact on safety, the environment and vessel operation
	2.2	Information resources are used effectively to identify properties and characteristics of related gases and their impact on safety and vessel operation
3	Take precautions to prevent hazards	
	3.1	Cargo-related hazards to the vessel are identified, risk assessed, and control measures are implemented
	3.2	Cargo-related hazards to personnel are correctly identified and proper control measures are taken
	3.3	Gas-detection devices are used in accordance with manuals and workplace practices
4	Apply work health and safety (WHS)/occupational health and safety (WHS) precautions	
	4.1	Procedures designed to safeguard personnel and the ship are observed at all times
	4.2	Safe working practices are observed, and appropriate safety and protective equipment is correctly used
	4.3	Working practices are conducted in accordance with legislative requirements, codes of practice, permits to work and environmental concerns
	4.4	Breathing apparatus are used correctly by personnel
	4.5	Entry into enclosed spaces is undertaken in accordance with workplace procedures
5	Respond to emergencies	
	5.1	Type and impact of the emergency is promptly identified, and the response actions conform with workplace emergency procedures and contingency plans

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| | 5.2 | Order of priority, the levels and timescales of making reports and informing personnel are undertaken relevant to the nature of the emergency and accurately reflect the urgency of the problem |
| | 5.3 | Evacuation, emergency shutdown (ESD) and isolation procedures are undertaken appropriate to the nature of the emergency and are implemented promptly |
| | 5.4 | Medical emergency procedures are identified and required actions taken in a medical emergency conform to current recognised first aid practices and international guidelines |
| 6 | Take precautions to prevent pollution of the environment | |
| | 6.1 | Operations are conducted in accordance with accepted principles and workplace procedures to prevent pollution of the atmosphere |
| | 6.2 | Operations are conducted in accordance with accepted principles and workplace procedures to prevent pollution of the environment |
| 7 | Monitor and control compliance with legislative requirements | |
| | 7.1 | Cargo handling is conducted in compliance with relevant IMO instruments |
| | 7.2 | Cargo handling is conducted in compliance with industrial standards and codes of safe working practices |
| | 7.3 | Workplace documentation is completed in accordance with workplace procedures |

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>