



Australian Government

MARA006 Monitor loading, unloading and stowage of cargo

Release: 1

MARA006 Monitor loading, unloading and stowage of cargo

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to monitor the loading, stowage, securing and care of cargo during the voyage and the unloading of cargo according to the cargo plan, organisational procedures and vessel stowage limitations.

This unit applies to the work of a Watchkeeper Deck, Master up to 500 gross tonnage and Master up to 80 metres Near Coastal.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo and Vessel Stability

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1 Review cargo plan	1.1	Cargo plan is interpreted to determine required cargo operations
	1.2	Cargo plan is checked to ensure cargo is evenly distributed
	1.3	Cargo plan is assessed to ensure incompatible cargo stowage is avoided
	1.4	Cargo plan is evaluated to ensure regulations relating to hazardous materials/dangerous goods are observed, where appropriate
	1.5	Cargo plan is checked to ensure unloading sequence is effective

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| 2 Prepare for loading | <div>2.1 Holds are checked to ensure they are clean, dry and free of smell</div> <div>2.2 Safety arrangements in holds are verified to ensure they are operational</div> <div>2.3 Supplies of cargo protection and securing material are reviewed to ensure there are sufficient available</div> <div>2.4 Bilge suctions are protected before loading</div> <div>2.5 Checks are made to ensure cargo is correctly identified, inspected and confirmed against documentation</div> <div>2.6 Preparations for loading are monitored according to stowage plan and organisational procedures</div> <div>2.7 Ballast discharge plan is identified and understood and appropriate actions to support this plan are undertaken</div> |
| 3 Supervise loading/unloading of cargo | <div>3.1 Instructions are given to crew and stevedores involved in cargo loading/unloading according to cargo stowage plan</div> <div>3.2 Compliance with regulations, procedures and instructions pertaining to type of cargo being handled is managed during loading/unloading operations</div> <div>3.3 Loading/unloading is monitored to ensure the loading rate is not exceeded in the case of bulk or liquid cargo</div> <div>3.4 Vessel stability is observed during loading/unloading operations</div> <div>3.5 Loading/unloading operations are checked against stowage plan</div> <div>3.6 Cargo is secured and lashed according to lashing plan</div> <div>3.7 Cargo handling documentation is completed according to organisational procedures and regulatory requirements</div> |
| 4 Monitor care of cargo during voyage | <div>4.1 Vessel plan for care of cargo during voyage is implemented according to organisational and customer requirements, and relevant regulations</div> <div>4.2 Ventilation and humidity control systems are checked</div> <div>4.3 Actions required to maintain the wellbeing of cargo during the voyage are initiated according to customer requirements</div> |

and organisational procedures

- 4.4 Compliance with safety and hazard minimisation procedures and regulations related to cargo care is managed at all times during the voyage to maintain the safety of personnel, cargo and vessel
- 4.5 Appropriate action is taken when defects or damage to cargo are detected

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

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

- Cargo plan must include:
- cargo weight
 - correct description and stowage of hazardous and dangerous goods
 - description of cargo to be loaded
 - load/discharge port
 - segregation of non compatible cargo
 - stowage of refrigerated containers

- Incompatible cargo stowage includes one or more of the following:
- cargo liable to taint
 - dangerous and hazardous goods

Hazardous materials/dangerous goods includes one or more of the following:

- any cargo described in the International Maritime Dangerous Goods (IMDG) Code as hazardous or dangerous

Cargo includes one or more of the following:

- bulk cargo
- containerised cargo
- deck cargo
- heavy lift cargo
- liquid cargo
- refrigerated cargo
- any other material, equipment or machinery that may be safely handled and stowed on vessel

Cargo handling documentation includes one or more of the following:

- cargo gear register
- cargo receipts
- Cargo Securing Manual
- logbook entries
- Note of Protest
- Notice of Readiness to load or discharge
- operation orders and instructions
- safety data sheets (SDS)/material safety data sheets (MSDS)
- safety management system relating to cargo carriage
- ship/shore safety checklists

Actions required to maintain the wellbeing of cargo include one or more of the following:

- maintaining adequate ventilation
- monitoring cargo spaces
- temperature control of refrigerated or cooled cargo

Defects or damage to cargo include one or more of the following:

- damage caused by cargo movement
- deterioration of perishable cargo
- water ingress

Unit Mapping Information

This is a new unit. This unit is equivalent to MARA5002A Monitor loading, unloading and stowage of cargo.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARAO06 Monitor loading, unloading and stowage of cargo

Modification History

Release 1. New unit of competency.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- carrying out cargo operations according to cargo plan or other documents and established safety rule/regulations, equipment operating instructions and shipboard stowage limitations
- establishing and maintaining effective communications during loading and unloading
- handling dangerous, hazardous and harmful cargo to comply with international regulations, recognised standards and codes of safe practice
- identifying and solving problems associated with loading, unloading, stowage and care of cargo
- initiating timely action in response to defects or damage
- monitoring and anticipating problems and risks associated with loading, unloading, stowage and care of cargo
- monitoring use of equipment in loading, unloading, stowage and care of cargo
- reading, interpreting and applying instructions, regulations, procedures and information associated with loading, unloading, stowage and care of cargo.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- ballast management issues and procedures
- cargo handling documentation requirements
- cargo lifting equipment and safe working loads
- container position numbering
- effect of cargo, including heavy lifts, on the seaworthiness and stability of the vessel
- effects of different types of cargo operations on vessel trim and stability
- effects on cargo handling of sea conditions, wind and weather
- effects on stability during loading and discharging operations including heeling moments from gear and loads
- methods of caring for various types of cargo
- methods of handling various types of cargo

- operational characteristics of different types of shipboard and terminal-based cargo handling equipment and facilities
- principles of cargo care
- procedures for carrying out calculations involving weights, capacities, stowage factors
- relevant sections of applicable maritime regulations
- relevant work health and safety (WHS)/occupational health and safety (OHS) and cargo handling legislation, codes of practice, policies and procedures
- safe handling, stowage and securing of cargo including dangerous, hazardous and harmful cargo, and their effect on the safety of life and the vessel
- standard stowage position numbering systems used on container vessels
- typical cargo handling problems and hazards, and appropriate preventative and remedial actions and solutions
- typical types and sizes of shipping containers
- usual methods of container packing, loading and discharging, stowage, dunnaging
- various types of cargo likely to be carried; their peculiar characteristics, liability to damage, decay or deterioration; their measurements, hazards and problems; appropriate preventative and remedial action and solutions
- ways of restricting vessel stress levels within permitted levels within permitted limits during loading/discharging cargo.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

Links

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