



Australian Government

MARA022 Manage loading, discharging and stowing of cargo

Release: 2

MARAO22 Manage loading, discharging and stowing of cargo

Modification History

Release 2. This is the second release of this unit of competency in the MAR Maritime Training Package.

- Minor statement changes in unit Application
- Minor statement change in Knowledge Evidence.

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 the loading, discharging and stowage of cargo to prevent damage or deterioration of cargo and to deliver it, as far as is possible, in as good a condition and order as it was when received onboard.

It includes planning the stow, planning load/unload with stevedores, preparing for loading, controlling loading/unloading of cargo, managing ballast management operations and monitoring care of cargo during voyage.

This unit applies to people working in the maritime industry in the capacity of Master on commercial vessels up to 45 metres Near Coastal.

Licensing/Regulatory Information

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 a Master up to 45 metres Near Coastal as specified in Marine Order 505.

Seafarers seeking certification should check with AMSA.

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 Plan the stow

- 1.1 Loading manual is interpreted to determine operational loading conditions
- 1.2 Still water shear forces and bending moments in any load or ballast condition are identified and not exceeded
- 1.3 Load is planned to ensure stresses in vessel are minimised by evenly distributing cargo
- 1.4 Load is planned to avoid incompatible cargo stowage
- 1.5 Regulations relating to hazardous materials/dangerous goods are observed, where appropriate
- 1.6 Load is planned for unloading sequence
- 1.7 Vessel cargo carrying capacity is not exceeded for appropriate load line
- 1.8 Vessel trim is calculated to allow for optimum vessel performance at sea

2 Plan load/unload with stevedores

- 2.1 Available port/vessel cargo handling gear and equipment are determined
- 2.2 Handling capacity of cargo handling gear and equipment are established
- 2.3 Pumping capacity of cargo pumps is verified
- 2.4 Availability and status of human resources are resolved
- 2.5 Cargo manifest is made available
- 2.6 Cargo stowage plan is completed and agreed with stevedores
- 2.7 Stability calculation is made and checked against vessel stability information manual
- 2.8 Notice of readiness to load/unload is provided

3 Prepare for loading

- 3.1 Holds are checked to ensure they are clean, dry and free

- of odour
- 3.2 Safety arrangements in holds are verified to ensure they are operational
 - 3.3 Supplies of dunnage and mats are reviewed to ensure there are sufficient available
 - 3.4 Bilges are covered with tarpaulins/wrappers before loading
 - 3.5 Checks are made to ensure cargo is correctly identified, inspected and confirmed against documentation
 - 3.6 Preparations for loading are monitored according to stowage plan and organisational procedures
- 4 Control loading/unloading of cargo**
- 4.1 Instructions are given to crew and stevedores involved in cargo loading/unloading according to cargo stowage plan
 - 4.2 Compliance with regulations, procedures and instructions pertaining to type of cargo being handled is managed during loading/unloading operations
 - 4.3 Loading/unloading is monitored to ensure loading rate is not exceeded in the case of bulk or liquid cargo
 - 4.4 Vessel stability is observed during loading/unloading operations
 - 4.5 Loading/unloading operations are checked against stowage plan
 - 4.6 Cargo is secured and lashed according to lashing plan
 - 4.7 All cargo handling documentation is completed according to organisational procedures and regulatory requirements
- 5 Manage ballast management operations**
- 5.1 Ballast discharge requirements of port authority are complied with
 - 5.2 Ballast management activities are monitored according to organisational procedures, ballast water management plan and port authority requirements
 - 5.3 Ballast management problems are identified and appropriate actions are taken to minimise risk to the environment

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| 6 Monitor care of cargo during voyage | 6.1 Vessel plan for care of cargo during the voyage is implemented according to organisational and customer requirements, and relevant regulations |
| | 6.2 Ventilation and humidity control systems are checked |
| | 6.3 Actions required to maintain the wellbeing of cargo during the voyage is initiated according to customer requirements and organisational procedures |
| | 6.4 Compliance with safety and hazard minimisation procedures and regulations related to cargo care is managed at all times during the voyage to maintain safety of personnel, cargo and vessel |
| | 6.5 Appropriate action is taken in the event of a cargo-related incident or emergency to rectify problem, secure cargo and maintain safety of vessel and personnel |

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 unit replaces and is equivalent to MARA003 Manage loading, discharging and stowing of cargo.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>