



Australian Government

MARN020 Manage seaworthiness of a vessel up to 100 metres

Release: 1

MARN020 Manage seaworthiness of a vessel up to 100 metres

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 vessel in a seaworthy condition for all stages of a voyage or operation being undertaken.

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

It includes supervising weather tight and watertight integrity of vessel, taking actions to meet changed sea and weather conditions and maintaining records.

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 and a Mate up to 100 metres Near Coastal, as specified in Marine Order 505.

Seafarers seeking certification should check with AMSA.

Pre-requisite Unit

Not applicable.

Competency Field

N – Seamanship

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Supervise weather tight and watertight integrity of vessel

- 1.1** Principal structural components of vessel are identified from vessel drawings to understand the function of these components in relation to conventional vessel design
- 1.2** Pumping and pipeline systems of vessel are investigated to establish survivability of vessel in case of flooding and damage control
- 1.3** Procedures for maintaining weather tight and watertight integrity of vessel are interpreted and implemented according to vessel safety management plan and regulations
- 1.4** Crew are instructed on requirements of plan and their responsibilities
- 1.5** Actions are instigated to confirm weather tight and watertight integrity of vessel at all times

2 Take action to meet changed sea and weather conditions

- 2.1** Weather forecasts and observations of sea and weather conditions are used to predict situations that may jeopardise vessel weather tight and watertight integrity
- 2.2** Effect of severe wind and rolling in associated sea conditions on vessel weather tight and watertight integrity is recognised
- 2.3** Effect of water on deck on vessel weather tight and watertight integrity is ascertained
- 2.4** Appropriate action is taken to maintain vessel weather tight and watertight integrity according to organisational procedures

3 Maintain records

- 3.1** Relevant documents and records are completed and maintained, as required, according to regulatory and organisational requirements
- 3.2** Relevant documents are sent to appropriate bodies and copies are filed according to regulatory and organisational requirements
- 3.3** Documents are stored according to regulatory and organisational requirements

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 MARN013 Manage seaworthiness of a vessel up to 80 metres.

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 MARN020 Manage seaworthiness of a vessel up to 100 metres

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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:

- appropriately using bilge and other pumping arrangements
- assessing damage control measures
- completing required records
- establishing procedures for restoring or managing weather tight and watertight integrity during an emergency
- reading and interpreting vessel specifications, drawings and operational manuals.

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:

- bilge pumping arrangements
- different vessel types
- effects of adding and removing weights, water on deck, slack tanks, rolling period, stiff and tender vessel, and additions or alterations to vessels
- principal parts of vessel and their various functions
- structural components, including:
 - design characteristics attributing to watertight integrity
 - principal components of vessel structure
 - structural arrangements to restrain fires
 - watertight and collision bulkheads
- weather tight and watertight integrity of vessel, including:
 - closing openings
 - ensuring passenger distribution does not exceed allowed limits
 - ensuring stores, cargo and equipment are properly stowed and lashed
 - maintaining stability condition within approved limits
 - methods for testing tanks and other watertight openings
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- a commercial vessel greater than or equal to 12 metres in length
- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and personal protective equipment (PPE) currently used in industry.

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