



Australian Government

MARJ004 Inspect and report defects and damage to vessel

Release: 1

MARJ004 Inspect and report defects and damage to vessel

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to inspect and report defects and damage to vessels.

This unit applies to a Watchkeeper Deck, Master up to 500 gross tonnage (GT) and Master up to 80 metres Near Coastal.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

J – Environment

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 Plan inspections

- 1.1 Elements of the vessel structure critical to the safety of the vessel are identified
- 1.2 Location of defects and damage caused by vessel operations and the environment are ascertained
- 1.3 Parts of the vessel to be inspected for defects and damage are identified
- 1.4 Inspections are scheduled to ensure all parts are covered within a given time
- 1.5 Damage control plan is developed to ensure the seaworthiness of the vessel

- | | | |
|---|------------|---|
| 2 Check condition of vessel in normal and emergency situations | 2.1 | Organisational procedures for coverage and frequency of tests and inspections on the vessel are complied with |
| | 2.2 | Watertight integrity is checked and appropriate action is taken to prepare for prevailing and forecast weather and sea conditions |
| | 2.3 | Degree to which vessel is secured is appropriate to prevailing and forecast conditions |
| | 2.4 | Defects and damage are reliably detected and appropriate action is taken to rectify the situation |
| | 2.5 | Irregularities beyond own ability to rectify are recognised in time to enable remedial action to be taken |
| 3 Prepare reports | 3.1 | Reports are completed and maintained as required according to regulatory and organisational requirements |
| | 3.2 | Relevant reports 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

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.

Elements of the vessel

- ballast tanks

structure include one or more of the following:

- bulkheads
- cargo holds
- cargo tanks
- frames
- fresh water tanks

Defects and damage include one or more of the following:

- cargo operation damage
- damage to structures through heavy weather
- damage caused by corrosion
- defects to ballast water tank vents

Vessel operations and the environment include one or more of the following:

- loading and unloading operations
- severe weather conditions

Parts of the vessel include one or more of the following:

- cargo holds
- deck structures
- hatch covers
- machinery spaces
- ventilators and fire closing devices

Coverage includes one or more of the following:

- areas requiring inspection under the planned maintenance schedule and survey requirements

Reports include one or more of the following:

- defects and damage reports to management
- inspection records
- maintenance reports
- survey reports

Unit Mapping Information

This is a new unit. This unit is equivalent to MARJ5002A Inspect and report defects and damage to vessel.

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 MARJ004 Inspect and report defects and damage to vessel

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:

- adhering to procedures to distinguish between normal and defective or damaged parts of vessel
- developing damage control plans
- developing effective planning documents
- identifying those elements of the vessel structure that are critical to vessel safety
- inspecting and reporting defects and damage to cargo spaces, hatch covers and ballast tanks
- interpreting and following procedures for the coordination of planned maintenance processes
- preparing appropriate reports on inspection and maintenance outcomes.

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:

- causes of corrosion to cargo spaces and ballast tanks, and how corrosion can be identified and prevented
- construction, layout and subdivision of a vessel, including freeboard and bulkhead deck, watertight compartments, weather tight compartments, the bulkhead of the vessel and collision bulkhead
- corrosion control measures
- damage control measures that may be required to maintain the integrity of a hull in a range of typical emergency situations
- how to ensure reliable detection of defects and damages
- own ability and limits to rectify irregularities and faults
- parts of the vessel to be inspected each time in order to cover all parts within a given period
- planned maintenance systems for vessel and associated maintenance inspection procedures
- principal features of vessel structure
- principal stresses that act on vessel structure

- principles and procedures to ensure watertight integrity of vessel hull in both normal and emergency situations
- procedures for checking and inspecting vessel seaworthiness
- properties and application of materials used to construct vessels
- purpose of the enhanced survey program
- typical vessel construction features and stress characteristics
- where to look for damage and defects most commonly encountered due to loading and unloading operations, corrosion, severe weather conditions
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices

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

Companion Volume implementation guides are found in VETNet -

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