



**Australian Government**

# **Assessment Requirements for MARM008**

## **Evaluate vessel stability**

**Release: 1**

# Assessment Requirements for MARM008 Evaluate vessel stability

## 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, performance criteria and range of conditions on at least one occasion and include:

- Analysing, planning and carrying out vessel stability calculation should be undertaken for at least five different types and size of vessels and include:
- applying relevant work health and safety/occupational health and safety (WHS/OHS) requirements and work practices
- carrying out accurate and reliable calculations associated with vessel stability using basic stability criteria calculations, including interpreting and correlating resultant data
- interpreting measurements and observations required when maintaining vessel stability
- providing high quality reports
- reading and interpreting vessel specifications and drawings
- reading, interpreting and applying simple instructions for maintaining vessel stability
- selecting and using relevant equipment according to instructions.

## Knowledge Evidence

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

- basic stability theory, including:
  - equilibrium
  - impact of design and hull shape on stability
  - principles of stability
  - relationship between weight and buoyancy in relation to floating bodies
  - reserve buoyancy
  - terms and definitions
- difference between transverse and longitudinal stability, and causes of list and trim
- effects of density of water on draught and freeboard of vessel
- effects on vessel stability that has been bilged
- information contained in basic stability data book supplied to vessel and how this information is used to maintain vessel in a stable condition during operations

- marine Safety (Domestic Commercial Vessel) National Law
- principal design features of vessels related to stability and watertight integrity, such as:
  - maintenance and survey requirements necessary to maintain watertight integrity of vessel
  - openings in hull and on main deck of vessel and safe working practices that must be followed to maintain watertight integrity
- principal factors that affect operational stability of vessel and related measures that can be taken to maintain stability, including:
  - adding and removing weights
  - additions and alterations to vessel structure
  - free surface effect of slack tanks
  - operation of lifting equipment
  - roll period
  - stiff and tender condition
  - water on deck
- recording stability calculations in survey report
- relationship between lightship, loaded displacement and deadweight
- relevant WHS/OHS legislation and policies
- steps involved in bringing unstable vessel to a stable condition.

## Assessment Conditions

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

Assessment must satisfy the National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) standards.

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.

Assessment must occur in workplace operational situations or where these are not available, in simulated workplace operational situations or an industry-approved marine operations site that replicates workplace conditions, where evaluating vessel stability can be conducted.

Resources for assessment include access to:

- relevant documentation including workplace procedures, regulations, codes of practice and operation manuals
- tools, equipment, materials and personal protective equipment currently used in industry required to evaluate vessel stability.

Performance should be demonstrated consistently over time and in a suitable range of contexts.

## Links

Companion Volume implementation guides are found in VETNet -

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