



Australian Government

Assessment Requirements for MARM012

Conduct a range of surveys on domestic commercial vessels

Release: 1

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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.

A range of surveys should be conducted on domestic commercial vessels in at least three or more contexts and include:

- analysing and evaluating available data and observations to form logical conclusions
- applying relevant work health and safety/occupational health and safety (WHS/OHS) requirements and work practices
- carrying out engineering measurements and applying metric and imperial conversions
- communicating effectively verbally and in writing
- developing and using research techniques to identify gaps in knowledge and to recognise professional development opportunities
- developing effective planning documents
- disseminating and clarifying technical information
- identifying strengths, weaknesses and failure modes of common marine construction materials
- implementing WHS/OHS principles and protection of the marine environment
- interpreting engineering drawings and diagrams
- interpreting relevant legislation, regulations, codes of practice, standards and rules
- managing risks
- providing customer service
- providing high quality reports
- reading and interpreting vessel plans
- recognising own professional limitations
- undertaking research and analysis using relevant reference material
- using computers
- working independently and unsupervised
- writing technical reports.

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:

- acoustic and thermal insulation principles and practices
- awareness of working stresses in vessel under load or in a seaway
- basic principles of stability, procedures for incline experiments, simple roll test, stable and unstable equilibrium
- commercial vessel classifications and survey requirements for various areas of operations
- compatibility and durability of construction materials
- composite production methods, quality assurance and secondary bonding techniques
- damage propagation caused by defects, poor engineering practice and/or transmission of dynamic forces
- domestic commercial vessel systems, installation and maintenance
- documentation and checklists:
 - construction drawings
 - defect list
 - historical records
 - National Standard for the Administration of Marine Safety (NSAMS) Section 4
 - procedural forms
 - safety management systems
 - stability book
 - standard operating procedures
 - vessel files
- elementary ergonomic design principals and methods for reducing harm to crew in a seaway
- environmental controls and regulations
- forms, causes and prevention of corrosion in a marine environment
- galvanic series of common metals used in boat building
- hull forms and vessel types
- implications of poor ventilation practice
- insurance, liability and professional indemnity
- interaction of vessel structures, mechanical systems and appropriate installation practices
- maintaining watertight integrity
- marine craft construction:
 - methods, materials and vessel anatomy
 - terminology and definitions
- marine-grade adhesives, mechanical fasteners, sealants and caulking materials
- marine protective coatings, fairing compounds and finishes
- principles of sheathing
- repair techniques and maintenance procedures for common marine craft construction materials

- report writing formats
- safe working practices and risk assessment procedures
- suitable structural support for out-of-water vessels to prevent topple, sag, hog and/or damage from local stress concentrations
- vessel construction and repair principles and practices, and the National Standard for Commercial Vessels (NSCV)
- welding techniques, procedures and standards
- WHS/OHS legislation, policies and procedures.

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 a range of surveys on domestic commercial vessels can be conducted.

Resources for assessment include access to:

- relevant documentation including workplace procedures, regulations, codes of practice and operation manuals
- tools, equipment and personal protective equipment currently used in industry to conduct surveys on domestic commercial vessels.

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>