



Australian Government

MARM003 Identify factors that affect a commercial vessel's fitness for purpose

Release: 1

MARM003 Identify factors that affect a commercial vessel's fitness for purpose

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to identify the construction and design characteristics that contribute to the watertight integrity and fitness for purpose of a commercial vessel.

This unit applies to people who assist marine surveyors or who undertake administration duties in the maritime industry and/or marine surveying sector.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

M – Marine Surveying

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.

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| 1 Plan for vessel survey | 1.1 | Range of commercial vessels that may be surveyed or inspected are identified and survey regime for each is accurately documented |
| | 1.2 | Hull shapes of typical commercial vessels are identified and verified for accuracy with surveyor |
| | 1.3 | Type of survey to be carried out is accurately identified and basic survey plan is developed |
| 2 Identify and explain structural | 2.1 | Types, properties and application of common materials used in construction of typical commercial vessels are identified |

components and materials		and noted in survey plan
	2.2	Basic structural components used on typical commercial vessels are correctly identified and noted in survey plan
	2.3	Inspection requirements for materials and components are documented and verified with surveyor
3 Identify issues relating to vessel water and weather tight integrity	3.1	Range and types of deterioration that affect fitness for purpose of a vessel are identified and confirmed with surveyor
	3.2	Preservation and corrosion control methods to maintain fitness for purpose are outlined and confirmed with surveyor
	3.3	Deterioration of vessel hull or structure is accurately identified either in water or on slipway
	3.4	Typical requirements concerning watertight and weather tight structural integrity of vessels are identified and confirmed with surveyor
4 Determine vessel reporting requirements	4.1	Need for vessel to be fit for its intended purpose is outlined and where questionable, is reported to relevant personnel
	4.2	Condition of vessel and related action is communicated clearly and concisely with others
	4.3	Mandatory and regulatory reporting requirements in relation to general work practices are followed

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.

Commercial vessels must include: vessels defined as commercial in Marine Safety (Domestic Commercial Vessel) National Law

Common materials include one or more of the following:	• aluminium • ferro cement • fibre composites • fibre reinforced plastic • plywood • steel • timber
Components include one or more of the following:	• bulk heads • collision bulkheads • deck • deck beams • deck plating • hatches and hatchways • hull • keel • portholes • propellers • rudders • stem and stern • stringers • strakes and chines • thrusters • ventilators
Range and types of deterioration include one or more of the following:	• dissimilar metals • fungal attack • insect attack • metal fatigue and corrosion • osmosis
Preservation and corrosion control methods include one or more of the following:	• design • earthing and bonding • fendering and insulation • impressed current systems • preservation of metals: • sacrificial anodes • anti-corrosive paints • preservation of timber: • painting • oiling • varnishing
Relevant personnel	• delegates of the national regulator

include one of the following:

- owners and operators of commercial vessels

Unit Mapping Information

This unit replaces and is equivalent to MARM3003A Identify factors that affect a commercial vessel's fitness for purpose.

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 MARM003 Identify factors that affect a commercial vessel's fitness for purpose

Modification History

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

- applying relevant work health and safety/occupational health and safety (WHS/OHS) requirements and work practices
- communicating effectively verbally and in writing when describing and reporting condition and fitness for purpose of commercial vessels
- developing effective planning documents
- following required:
 - WHS/OHS procedures and precautions when monitoring condition and fitness for purpose of commercial vessels
 - work schedules according to organisational requirements
- providing accurate and reliable information
- providing the required amount of detail in reports
- reading, interpreting and applying instructions, stability book, vessel plans and specifications relevant to inspecting condition and fitness for purpose of commercial vessels
- recognising routine indicators of deterioration when inspecting condition and fitness for purpose of commercial vessels
- using technical terms related to vessel construction, components and material.

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:

- applicable commonwealth, state/territory legislation, regulations, standards, codes of practice and established safe practices relevant to full range of processes for conducting a survey for commercial vessels
- causes and indicators of vessel deterioration
- construction, layout and subdivision requirements of a range of different commercial vessels
- corrosion and deterioration control measures including surface preparation and coatings
- methods for determining fitness for purpose of commercial vessels

- principal stresses that act on structure of commercial vessels
- properties and application of materials used in constructing commercial vessels
- WHS/OHS requirements and safe work practices.

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 factors that affect fitness for purpose of a commercial vessel can be identified.

Resources for assessment include access to:

- relevant regulatory and equipment documentation including that impacts on work activities
- tools, equipment, material and personal protective equipment currently used in industry.

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

Links

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