



Australian Government

MEM25003 Set up marine vessel structures

Release: 2

MEM25003 Set up marine vessel structures

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM25003 Set up marine vessel structures (Release 1).

Release 1. Supersedes and is equivalent to MEM25003B Set up marine vessel structures.

Application

This unit of competency defines the skills and knowledge required to set up marine vessel structures using straightforward levelling and alignment procedures.

Structures requiring a location/erection process using framework would typically be those where fairness and load bearing is critical and/or where building/marine regulations can apply. Specifications for the structure would be supplied via engineering drawings or similar and include site location information.

This unit does not include fixed structures, including jetties, wharves and moorings.

Where construction and assembly of entirely marine timber components is undertaken unit MEM25005 Construct and assemble marine vessel timber components should also be selected.

Where lifting or rigging skills are required appropriate materials handling units should also be selected.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12007	Mark off/out structural fabrications and shapes
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities

MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Competency Field

Marine craft construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Inspect and prepare site	2.1	Check the site for location, dimensions and levels in accordance with industry standards
		2.2	Undertake minor alterations, corrections or adjustments with approval of appropriate authority
		2.3	Prepare surfaces and materials/components for use
		2.4	Identify structural components and materials
3	Undertake levelling and measurement readings	3.1	Apply principles of levelling and measurement reading
		3.2	Determine task requirements
		3.3	Identify levelling procedures
		3.4	Select levelling equipment and set up according to SOPs

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

3.5 Take levelling measurements

3.6 Complete levelling tasks to specifications

4 **Erect marine vessel structures**

4.1 Prepare components of structure for sequential erection

4.2 Erect components and fix according to specifications

4.3 Ensure structure alignment meets required specifications

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for 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.

Structures include one (1) or more of the following:

- composite
- metal
- timber

Framework includes one (1) or more of the following:

- hull framing
- deck framing
- superstructures
- jig construction
- stairways
- walkways
- tanks
- platforms
- cradles composites

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Materials include one (1) or more of the following:

- timber
- other non-metallic materials

Levelling and alignment includes one (1) or more of the following:

- plumb bob/lines
- spirit levels
- water and dumpy levels
- laser levels
- electronic levels

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM25003 Set up marine vessel structures (Release 1).

Release 1. Supersedes and is equivalent to MEM25003B Set up marine vessel structures.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM25003 Set up marine vessel structures

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and confirming relative structural components and materials species/types against job specifications
- checking the construction site location for dimensions and levelling and carrying out minor alterations, corrections and adjustments to ensure site is ready in consultation with the appropriate authority, including supervisor, customer and surveying agency
- undertaking levelling and alignment procedures using appropriate tools, equipment and methods and making adjustments where required to establish alignment requirements and erecting levelled structures in accordance with specifications and procedures.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- practices used for checking construction site location, dimensions and levelling procedures
- procedures for effecting authorised minor alterations, correction or adjustment
- practices used to prepare surfaces, materials/component structures
- structural components and material species/types
- process for obtaining levelling and measurement reading
- levelling and measurement equipment/tools and methods used to level equipment/component assembly structure
- engineering principles, techniques, set-up procedures and tools for levelling and measurement
- sequence of assembly of component structure
- erecting and fixing methods.

Assessment Conditions

- Assessors must:
 - have vocational competency in setting up marine vessel structures at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- 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.

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