



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **MEM25003B Set up marine vessel structures**

**Release: 1**

## **MEM25003B Set up marine vessel structures**

### **Modification History**

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers setting up marine vessel structures. It includes straightforward levelling and alignment.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to work undertaken individually or as part of team environment.</p> <p>Structures include composite, metal and timber requiring a location/erection process. Structures would typically be those where fairness and load bearing is critical and/or where building/marine regulations may apply. Specifications for the structure would be supplied via engineering drawings or similar and include site location information. Structures would include framework such as hull framing, deck framing, superstructures, jig construction, stairways, walkways, tanks, platforms, cradles etc. completed prior to commencement of installation work.</p> <p>Levelling and alignment undertaken would be of a straightforward nature, which may include plumb bob/lines, spirit levels, water and dumpy levels etc. This unit does not include fixed structures, such as jetties, wharves, moorings etc.</p> <p>Materials include timber and other non-metallic materials.</p> <p>Where erection of metal structures is required, Unit MEM10001C (Erect structures) should be selected.</p> <p>Where construction and assembly of entirely marine timber components is undertaken, Unit MEM25005B (Construct and assemble marine timber components) should be selected.</p> <p>Where lifting or rigging skills are required, appropriate materials handling units should be accessed.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		
<b>Path 1</b>	MEM09002B	Interpret technical drawing
	MEM12007D	Mark off/out structural fabrications and shapes
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Inspect and prepare site	1.1. The site is checked for location, dimensions and levels in accordance with industry standards. 1.2. Minor alterations, corrections or adjustments are undertaken with approval of appropriate authority. 1.3. Surfaces and materials/components are prepared for use. 1.4. Structural components and materials are identified.
2. Undertake levelling and measurement readings	2.1. Principles of levelling and measurement reading are applied. 2.2. Task requirements are determined. 2.3. Levelling procedures are identified. 2.4. Levelling equipment is selected and set up to operating procedures. 2.5. Levelling measurements are taken accurately. 2.6. Levelling tasks are completed to specifications.
3. Erect marine vessel structures	3.1. All work is carried out safely and in accordance with defined procedures. 3.2. Components of structure are prepared correctly for sequential erection. 3.3. Components are erected and fixed according to specifications. 3.4. Structure alignment meets required specifications.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- checking construction site location, dimension and levelling
- effecting minor alterations, corrections or adjustments
- identifying and confirming relative structural components and material species against job specification
- selecting and using levelling and measurement tools/methods

**REQUIRED SKILLS AND KNOWLEDGE**

- taking measurements
- applying engineering principles and techniques
- using tools and measuring equipment
- interpreting specifications, establishing alignment requirements and achieving levelled structures
- identifying safe working requirements
- making adjustments to achieve correct specifications

**Required knowledge**

Look for evidence that confirms knowledge of:

- 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 in accordance with job specifications
- process for obtaining levelling and measurement reading
- levelling and measurement tools/methods
- levelling method used to level equipment/component assembly structure
- levelling equipment and set-up procedure
- engineering principles, techniques, tools and equipment for levelling and measurement
- personal protective equipment and safe working practices
- safety principles for erecting structures
- sequence of assembly of component structure
- erecting and fixing methods

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	<p>A person who demonstrates competency in this unit must be able to set up marine vessel structures in readiness for fixing. Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<p><b>Context of and specific resources for assessment</b></p>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with setting up marine vessel structures, or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<p><b>Method of assessment</b></p>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

**EVIDENCE GUIDE**

<b>Guidance information for assessment</b>	
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Appropriate authority</b>	Appropriate authority may be a supervisor, customer, surveying agency, etc.
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>	



## Competency field

Competency field	Marine craft construction
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