



Australian Government

Department of Education, Employment and Workplace Relations

MEM25009B Form timber shapes using hot processes

Release: 1

MEM25009B Form timber shapes using hot processes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers forming solid timber shapes using hot processes. Laminating by cold processes is covered by Unit MEM25005B (Construct and assemble marine vessel timber components).
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Application of the Unit

Application of the unit	<p>This unit applies to typical applications in the construction of marine vessels including forming and shaping of structural and decorative components.</p> <p>Application and forming operations are conducted within a mould, existing structure or over a former assembly.</p> <p>Predetermined standards of quality and safety are observed and work is carried out following standard operational procedures.</p> <p>All work and work practices are undertaken to regulatory and legislative requirements.</p> <p>Where straightforward construction and assembly of marine timber components is undertaken, including laminating by cold processes, Unit MEM25005B (Construct and assemble marine vessel timber components) should be selected.</p> <p>Where complex forming is required, Unit MEM09021B (Interpret and produce curved 3-dimensional shapes) should also be considered.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM04018B	Perform general woodworking machine operations
	MEM09002B	Interpret technical drawing
	MEM12023A	Perform engineering measurements
	MEM12007D	Mark off/out structural fabrications and shapes
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

Employability Skills Information

Employability skills	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. Determine job requirements	1.1. Specifications are identified from drawings and instructions. 1.2. Appropriate bending process is selected and components are identified. 1.3. Construction sequence is determined. 1.4. Tools and equipment are selected and used appropriate to job requirements.
2. Prepare jigs and templates	2.1. Standard jigs/templates are selected to suit job application. 2.2. Jigs/templates are constructed to suit required shape.
3. Form timber shapes	3.1. Components are constructed to specifications using hot processes. 3.2. Where applicable, laminating/heating equipment is set up according to standard operating procedures, and safety practices are observed. 3.3. Components are constructed and shaped to specifications. 3.4. Final components conform to 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:

- selecting jig/template or fastening method relevant to form application
- using personal protection and applying safety precautions.
- selecting timber to specification and identifying faults
- preparing and operating heating/steaming equipment
- loading and unloading timber for heating/steaming.
- using tools, jigs, moulds and templates
- bending, shaping, assembling and or positioning timber components for clamping or fastening
- fixing clamps or fastenings

REQUIRED SKILLS AND KNOWLEDGE

- checking component size

Required knowledge

Look for evidence that confirms knowledge of:

- relevant job specifications
- safe working practice
- forming and component assembly practices
- heating/steaming equipment types and application
- heating times, temperatures and humidity requirements, where appropriate
- timber types, specifications and characteristics
- fault identification in material, such as twist, shakes, sloping grain
- forming and component assembly practice
- jig/templates types and their application
- jig/template construction process to suit specified shape
- bending and forming processes used for constructing components
- relevant laminating/heating equipment, their use and safety procedures
- heating, construction and shaping of components
- checking specified component size

Evidence Guide

EVIDENCE GUIDE

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.

Overview of assessment

A person who demonstrates competency in this unit must be able to form timber shapes using hot processes. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

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.

Context of and specific resources for assessment

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.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with forming timber shapes using hot processes, or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

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.

EVIDENCE GUIDE

Guidance information for assessment	
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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.

Tools and equipment	May include jigs, templates, steamboxes, cramps, fasteners etc.
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Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Marine craft construction
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