



**Australian Government**

# **MEM05057 Perform routine submerged arc welding**

**Release: 1**

# MEM05057 Perform routine submerged arc welding

## Modification History

Release 1. New unit

## Application

This unit of competency defines the skills and knowledge required to prepare the materials and carry out routine submerged arc welding (SAW) and applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard.

Where welding is required to meet AS 1554 General Purpose or equivalent codes, work health and safety (WHS) regulations and/or licensing requirements Unit MEM05023 Weld using submerged arc welding process should also be selected.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, as appropriate should also be selected.

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

**Band: A**

**Unit Weight: 2**

## Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

## Competency Field

Fabrication

## Elements and Performance Criteria

Elements describe the essential outcomes.

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

1	<b>Determine job requirements</b>	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, sketches, job sheets or work instructions
2	<b>Prepare materials and equipment for welding</b>	2.1	Identify location of welds in accordance with procedures and job specifications
		2.2	Clean and prepare materials ready for welding
		2.3	Set up welding equipment to meet work requirement
		2.4	Select settings and consumables to suit application
3	<b>Perform routine welding using SAW</b>	3.1	Weld materials to job requirements
		3.2	Clean welds according to SOPs

## 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.

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**Welds include the following:**

- butt
- fillet

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

- low carbon
- mild steels

**Preparation includes one (1) or more of the following:**

- preheating
- setting up:
  - jigs
  - fixtures
  - clamps
- joint preparation

**Welding equipment includes the following:**

- welding head
- electrodes/filler wire
- flux hopper

**Consumables include the following:**

- filler wire
- flux

**Clean includes the following:**

- slag
- spatter

## Unit Mapping Information

No equivalent unit.

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>