



**Australian Government**

**MEM05042 Perform welds to code standards using flux core arc welding process**

**Release: 2**

# MEM05042 Perform welds to code standards using flux core arc welding process

## Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05042 Perform welds to code standards using flux core arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05042B Perform welds to code standards using flux core arc welding process.

## Application

This unit of competency defines the skills and knowledge required to prepare and produce welds to code standards using flux core arc welding (FCAW) and applies to the production of butt and fillet welds in all positions on a range of materials.

Welds produced to the standard of this unit would typically conform to AS 1210-2010 Pressure vessels, AS 4041-2006 (R2016) Pressure piping, and American Society of Mechanical Engineers (ASME) IX, or equivalent. This unit, in conjunction with unit MEM05026 Apply welding principles, may satisfy the requirements of AS 1796-2006 (R2016) Certification of welders and welding supervisors, Certificate 8F.

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

Band: B

Unit Weight: 6

## Pre-requisite Unit

MEM05007	Perform manual heating and thermal cutting
MEM05026	Apply welding principles
MEM05047	Weld using flux core arc welding process
MEM05048	Perform advanced welding using flux core arc welding process
MEM05051	Select welding processes
MEM05052	Apply safe welding practices
MEM05056	Perform routine flux core arc welding
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling

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

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, drawings, job sheets or work instructions
2	<b>Prepare welding materials and equipment for FCAW welding to code standard</b>	2.1	Prepare materials to produce weld to code standard
		2.2	Perform routine maintenance on welding equipment
		2.3	Set up welding equipment
3	<b>Weld joints using FCAW to procedure</b>	3.1	Weld materials according to weld procedure specification
		3.2	Rectify discontinuities to ensure compliance to code

Elements describe the essential outcomes.

**specifications**

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

requirements

3.3 Maintain weld records 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.

**Routine maintenance includes the following:**

- ensuring gun, cable and contact tip are in good condition

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

- flame cut and ground or machined
- pre-heating
- setting up of jigs, fixtures, clamps

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

- carbon/manganese steel on plate, pipe and rolled sections
- low alloy steel on plate, pipe and rolled steel sections

## Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM05042 Perform welds to code standards using flux core arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05042B Perform welds to code standards using flux core arc welding process.

## **Links**

Companion Volume implementation guides are found in VETNet -

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