



Australian Government

MEM05013 Perform manual production welding

Release: 1

MEM05013 Perform manual production welding

Modification History

Release 1. Supersedes and is equivalent to MEM05013C Perform manual production welding

Application

This unit of competency covers the skills and knowledge required to perform production welding, including spot welding, in a production environment.

Guidance may be required with respect to equipment settings, choice of consumables, gas mixtures and pressures.

Where automated/production welding is required to be performed unit MEM07024 Operate and monitor machine and process and unit MEM07025 Perform advanced machine and process operation, should also be selected as appropriate.

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, should also be selected as appropriate.

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	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, sketches, job sheets or work instructions
2	Weld material using appropriate welding process	2.1	Prepare material for the process to be used following procedures
		2.2	Align material (if required) using dedicated jigs and fixtures
		2.3	Align materials, check alignment and if required adjust alignment using dedicated jigs and fixtures
		2.4	Carry out welding to accepted workplace standards

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.

Material includes one (1) of more of the following:

- metallic, including low carbon steels
- non-metallic

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

- spot
- resistance
- hot air
- ultrasonic

Unit Mapping Information

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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 MEM05013 Perform manual production welding

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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
- preparing and aligning material for welding using dedicated jigs and fixtures
- performing tacking or production welding in a production environment.

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 welding practices and procedures and use of personal protective equipment (PPE)
- function and use of jigs and fixtures in production welding
- function, application and operation of welding equipment within the scope of this unit
- material preparation.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing manual production welding 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
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, 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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