



Australian Government

MEMPE002 Use electric welding machines

Release: 1

MEMPE002 Use electric welding machines

Modification History

Release 1. Supersedes and is equivalent to MEMPE002A Use electric welding machines.

Application

This unit of competency defines the skills and knowledge required to use manual metal arc, gas metal arc or gas tungsten arc welding machines.

The welding is not required to meet any Australian Standard. Fillet and butt welds would typically be performed on low carbon or mild steels and aluminium if required. The basic settings for the welding machine and welding materials are supplied to the individual.

This unit describes entry-level skills and knowledge in preparation for employment within the metal, engineering, manufacturing and associated industries and is suitable for use in institutional-based vocational programs. Skills development take places under direct supervision.

It is not to be used in a traineeship or apprenticeship training program or associated qualifications. It is only to be used in pre-employment programs and carries no credit towards apprenticeship/trade and other qualification types in manufacturing and engineering.

This skills in this unit are intended to be developed in combination with the project unit, MEMPE006 Undertake a basic engineering project.

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

Pre-requisite Unit

Nil

Competency Field

Pre-employment

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify weld requirements	1.1 Comply with work health and safety (WHS) requirements at all times 1.2 Identify weld requirements from work information in consultation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	with a supervisor 1.3 Identify which type of welding is suitable for the job 1.4 Identify location of welds in accordance with job requirements 1.5 Confirm weld locations with supervisor
2. Prepare for welding	2.1 Clean and prepare low carbon or mild steel or similar ready for welding 2.2 Set up welding equipment according to given instructions
3. Perform welding	3.1 Use and wear appropriate personal protective equipment (PPE) in accordance with procedures 3.2 Follow safe welding practices 3.3 Weld materials to job requirements 3.4 Clean welds safely 3.5 Store completed work as instructed
4. Complete work requirements	4.1 Clear work area of waste and clean according to requirements 4.2 Maintain and/or store machines, tools and equipment according to instructions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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.

Work information includes one or more of the following:	• drawings • sketches • job instructions
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	• schematics • diagrams • technical manuals.
Type of welding includes one or more of the following:	• manual metal arc welding • gas metal arc welding • tungsten metal arc welding.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEMPE002A Use electric welding machines.

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 MEMPE002 Use electric welding machines

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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 and include:

- following work instructions and safe work practices
- reading and interpreting routine information on written job instructions
- preparing materials
- setting electric welding equipment according to given instructions on at least two occasions
- using electric welding machines to weld metal pieces together on at least two occasions
- cleaning and storing of equipment.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

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 work and welding practices and use of personal protective equipment (PPE)
- safe machine operation procedures
- types of welding and weld requirements
- material and equipment preparation requirements
- basic marking out techniques
- behaviour of metals under heat
- welding processes and properties
- post-welding treatments.

Assessment Conditions

- Assessors must:
 - have vocational competency in using electric welding machines 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 as the case requires
- This unit must be assessed in a learning institution and must cover skills usually be developed by an individual working alone under direct supervision
- Assessment must be in conjunction with assessment of the project unit and other units integrated into the project
- 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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