

Unit of Competency CPCPCM2053

Weld using metal arc welding equipment

Application

This unit specifies the skills and knowledge required to weld metals associated with the fabrication and installation of plumbing components, using manual metal arc welding equipment.

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Prerequisite Unit

CPCPCM2043 Carry out WHS requirements

Elements and Performance Criteria

1. Identify welding requirements.	<ul style="list-style-type: none">1.1 Access, read and determine welding requirements from relevant job plans and specifications, codes, Australian standards, manufacturer's specifications and jurisdictional requirements.1.2 Identify and apply workplace work health and safety (WHS) and environmental requirements associated with manual metal arc welding tasks.1.3 Select materials to be welded according to workplace procedures.
2. Prepare for work.	<ul style="list-style-type: none">2.1 Create a materials list and collect materials.2.2 Select and check the serviceability of appropriate tools and equipment, including personal protective equipment (PPE).2.3 Prepare work area to support efficient performance of metal arc welding.
3. Prepare materials and equipment for welding.	<ul style="list-style-type: none">3.1 Clean and prepare materials for welding.3.2 Identify tools and techniques appropriate to the preparation of the materials to be welded.3.3 Set up welding equipment and select correct electrodes according to workplace procedures and job specifications.
4. Weld items.	<ul style="list-style-type: none">4.1 Perform weld of materials according to relevant job plans and specifications, codes, Australian standards, manufacturer's specifications and jurisdictional requirements using safe welding practices.4.2 Clean material and prepare for welding in accordance with workplace procedures.4.3 Visually inspect weld to ensure weld is fit for purpose.
5. Clean up.	<ul style="list-style-type: none">5.1 Clear the work area, and dispose of, reuse or recycle materials in accordance with state and territory legislation and workplace policies and procedures.5.2 Clean tools and equipment, check for serviceability and report any damage, and store and secure.

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent CPCPCM2053A Weld using manual metal arc welding equipment.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCPCM2053 Weld using metal arc welding equipment

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- using manual metal arc welding equipment to:
 - o weld butt joint in mild steel plate up to 8 mm, 150 mm long
 - o fillet weld mild steel plate up to 8 mm, 150 mm long
 - o pad weld mild steel plate up to 8 mm, 150 mm long.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- dangers associated with manual metal arc welding plumbing components
- the properties of materials and the effect of heat on properties of metal operating principles of manual metal arc welding equipment
- defects associated with manual metal arc welding
- hot work permit
- use and characteristics of materials:
 - o electrodes
 - o mild steel plates
- how to access relevant information, including codes and standards
- tools, materials and equipment used to weld using metal arc welding equipment
- work health and safety (WHS) requirements for welding using metal arc welding equipment.

Assessment Conditions

Assessors must satisfy the requirements for assessors listed in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

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