

Unit of Competency CPCPCM2052

Weld mild steel using oxy-acetylene equipment

Application

This unit specifies the skills and knowledge required to weld metals associated with the fabrication, installation and repair of plumbing components and systems using oxy-acetylene 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.	<p>1.1 Access, read and determine welding requirements from relevant job plans and specifications, codes, Australian standards, manufacturer's specifications and jurisdictional requirements.</p> <p>1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.</p>
2. Prepare for work.	<p>2.1 Create a materials list and collect materials.</p> <p>2.2 Select and check the serviceability of appropriate tools and equipment including personal protective equipment (PPE).</p>
3. Prepare materials and welding equipment.	<p>3.1 Clean and prepare material using appropriate tools and techniques according to workplace procedures.</p> <p>3.2 Prepare work area to support efficient welding with oxy-acetylene equipment.</p> <p>3.3 Assemble and set up welding equipment, including cylinders and regulators, according to workplace procedures.</p> <p>3.4 Select welding tips, settings and consumables to meet job requirements and welding procedures according to workplace procedures.</p>
4. Perform welding.	<p>4.1 Weld materials to job requirements using safe welding practices.</p> <p>4.2 Take appropriate action to report or remedy defects in materials or welding equipment, including adjustments to settings and welding technique.</p> <p>4.3 Clean welds according to workplace requirements.</p> <p>4.4 Access information and complete documentation according to workplace requirements.</p>
5. Clean up.	<p>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.</p> <p>5.2 Clean tools and equipment, check for serviceability and report any damage, and store and secure.</p>

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 to CPCPCM2052A Weld using oxy-acetylene equipment.

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPCPCM2052

Weld mild steel using oxy-acetylene equipment

Performance Evidence

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

- using oxy-acetylene welding equipment to weld the following:
 - a flat butt weld up to 6 mm mild steel plate, 150 mm long
 - a vertical butt weld up to 6 mm mild steel plate, 150 mm long
 - a rotated butt weld around up to DN100 mild steel pipe located in a horizontal position and rotated during welding.

Knowledge Evidence

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

- the dangers associated with oxy-acetylene welding in the fabrication and installation of plumbing systems
- the properties of materials and the effect of heat on properties of metal
- the set-up and operating principles of oxy-acetylene welding equipment
- types of gases used for welding mild steel
- hot work permit
- uses and characteristics of mild steel in the plumbing and services industry
- how to access relevant information, including codes and standards
- tools, materials and equipment used to weld mild steel using oxy-acetylene equipment
- work health and safety (WHS) requirements for welding mild steel using oxy-acetylene 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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