

# Unit of Competency CPCPCM2049

## Cut mild steel using oxy-acetylene equipment

### Application

This unit specifies the skills and knowledge required to use oxy-acetylene equipment to carry out basic cutting of mild steel.

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 cutting requirements.	<p>1.1 Access, read and determine cutting requirements from relevant job plans and specifications, codes, Australian standards, manufacturer's specifications and jurisdictional requirements.</p> <p>1.2 Identify and apply workplace, 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 appropriate tools and equipment, including personal protective equipment (PPE).</p> <p>2.3 Prepare work area to support efficient cutting with oxy-acetylene equipment.</p>
3. Perform cuts and inspect.	<p>3.1 Set up oxy-acetylene cutting equipment according to relevant codes, Australian standards, manufacturer's specifications and jurisdictional requirements.</p> <p>3.2 Select tip size appropriate for the materials to be cut.</p> <p>3.3 Adjust cutting pressures to manufacturer recommendations for the materials to be cut.</p> <p>3.4 Prepare materials for cutting according to relevant job plans and specification, codes, Australian standards, manufacturer's specifications and jurisdictional requirements.</p> <p>3.5 Mark out materials prior to cutting.</p> <p>3.6 Set flame and perform cuts according to the specified cutting procedures to affect a clean cut.</p> <p>3.7 Visually inspect completed cuts for compliance with relevant job plans and specifications.</p>
4. Clean up.	<p>4.1 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>4.2 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 CPCPCM2049A Cut using oxy-LPG-acetylene equipment.

## Links

Companion Volume Implementation Guide:

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

# Assessment Requirements for CPCPCM2049 Cut mild steel using oxy-acetylene equipment

## Performance Evidence

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

- marking out and cutting the following materials from relevant job plans and specifications, using hand-held oxy-acetylene cutting equipment:
  - o cut 150 mm x 150 mm mild steel plate (up to 8 mm thick) into three equal pieces
  - o cut (up to 8 mm thick) mild steel disc to fit a DN40 to DN100 diameter mild steel pipe
  - o cut three holes to fit up to DN50 branch pipes into a length of up to DN100 diameter mild steel pipe.

## Knowledge Evidence

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

- the safe and operating principles of oxy-acetylene equipment
- the potential fumes and health and safety risks from high temperatures on materials
- the properties of materials and the effect of heat on the properties of metal
- hot work permit
- types of gases used for cutting mild steel
- how to access relevant information from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements
- tools, materials and equipment to cut mild steel using oxy-acetylene equipment
- work health and safety (WHS) requirements for cutting 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.

## Links

Companion Volume Implementation Guide:

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