



Australian Government

MEM05004C Perform routine oxy acetylene welding

Release: 1

MEM05004C Perform routine oxy acetylene welding

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing materials and performing routine oxy acetylene welding.
------------------------	--

Application of the Unit

Application of the unit	This unit applies in a maintenance or manufacturing environment where the welding is not required to meet an Australian standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels. Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, OHS regulations and/or licensing requirements, Unit MEM05022C (Perform advanced welding using oxy acetylene process) should be selected. Band: A Unit Weight: 2
--------------------------------	---

Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
-----------------------------	--

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
---	--

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Location of welds is identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected.
4. Perform routine welding using oxy acetylene	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with oxy acetylene fuel gas
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instructions
- using measurement skills for joint preparation and routine oxy acetylene welding

Required knowledge

Look for evidence that confirms knowledge of:

- preparatory requirements
- materials and consumables properties and characteristics
- equipment and equipment settings
- fuel gas properties and applications

REQUIRED SKILLS AND KNOWLEDGE

- post welding treatments
- weld characteristics
- any applicable industry standards, NOHSC guides, State/Territory regulatory codes of practice/standards
- safe work practices and procedures
- safe welding practices
- use and application of personal protective equipment for routine oxy acetylene welding

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to prepare materials and carry out routine oxy acetylene welding.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing routine oxy acetylene welding or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Guidance information for

EVIDENCE GUIDE**assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Mild and low carbon steel and cast iron
Prepared	Preheating, setting up jigs, fixtures, clamps, joint preparation
Equipment	Hoses, blowpipes, regulators
Consumables	Filler rods, fluxes
Oxy acetylene	The term 'oxy-acetylene' is used here to describe a range of fuel gases, including acetylene, LPG, hydrogen etc.
Cleaned	Fluxes

Unit Sector(s)**Unit sector****Co-requisite units**

Co-requisite units	

Co-requisite units		

Competency field

Competency field	Fabrication
-------------------------	-------------