



**Australian Government**

# **MEM05064 Establish and maintain a weld record management system**

**Release: 1**

# **MEM05064 Establish and maintain a weld record management system**

## **Modification History**

Release 1. New unit.

## **Application**

This unit of competency was developed for post trade engineering fabrication training and the recognition of skills associated with the establishment and maintenance of a formal weld record management system for an enterprise.

It defines general record keeping skill and knowledge requirements as well as specific welding related skill and knowledge required for the establishment of an enterprise level weld record management system as defined by the unit in conjunction with its prerequisites.

The unit is intended to apply in occupations such as welding supervisor, welding engineer and in other relevant occupations responsible for establishing and maintaining welding record management systems for an enterprise.

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

Band: B

Unit Weight: 4

## **Pre-requisite Unit**

MEM05061 Apply basic metallurgy principles to welding applications

MEM05078 Apply welding principles

MEM05085 Select welding processes

MEM11011 Undertake manual handling

MEM12023 Perform engineering measurements

MEM12024 Perform computations

MEM13015 Work safely and effectively in manufacturing and engineering

MEM14006 Plan work activities

MEM16006 Organise and communicate information

Plus one or more of the following units and their prerequisites:

MEM05060 Perform welds to code standards using submerged arc welding process  
MEM05079 Perform welds to code standards using flux core arc welding process  
MEM05080 Perform welds to code standards using gas metal arc welding process  
MEM05081 Perform welds to code standards using gas tungsten arc welding process  
MEM05082 Perform pipe welds to code standards using manual metal arc welding process  
MEM05083 Perform welds to code standards using manual metal arc welding process  
MEM05088 Perform welds to code standards using oxy fuel gas welding process

## Competency Field

Fabrication

### Elements and Performance Criteria

| Elements                                                | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| Elements describe the essential outcomes.               | Performance criteria describe the performance needed to demonstrate achievement of the element.                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1. Determine weld record management system requirements | <p>1.1 Establish capability requirements of weld record management system in conjunction with relevant stakeholders</p> <p>1.2 Determine general record keeping requirements including traceability, system access, security and privacy requirements</p> <p>1.3 Determine scope of welding records and parameters required to be recorded in weld record management system</p> <p>1.4 Investigate available weld record management system formats and recommend an appropriate format for approval</p> |
| 2. Establish weld record management system              | <p>2.1 Establish a codes and standards library</p> <p>2.2 Establish an identification system for items and individual entries</p> <p>2.3 Establish procedures for record data entry, approval or verification before entry</p> <p>2.4 Establish access and security procedures for storing, retrieving, amending, backing up and deleting records</p>                                                                                                                                                   |
| 3. Maintain weld record management system               | <p>3.1 Monitor welding and fabrication operations to identify any changes required to scope of the welding records management system</p> <p>3.2 Establish protocols to ensure currency of standards and codes in standards library</p>                                                                                                                                                                                                                                                                  |

## 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.

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|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scope of welding record management system includes one or more of the following: | <ul style="list-style-type: none"> <li>welding, material, and consumable standards and codes relevant to the organisation</li> <li>draft and approved Procedure Qualification Records (PQRs)</li> <li>draft welding procedure specifications</li> <li>Welding Procedure Specifications (WPS) including pre-qualified WPSs and WPSs for standard welding procedures</li> <li>job records including customer details, order receipt, order completion, welds required, customer quality specifications including specified standards and codes for the job,</li> <li>individual weld nonconformities and faults and record of corrective or preventative actions taken</li> <li>weld mapping traceability records</li> <li>individual welders' pre-qualifications</li> <li>other qualifications and certificates held by welders</li> <li>individuals and/or organisations authorised to approve individual PQR and WPS documents and pre-qualify welders</li> <li>destructive and non-destructive test (NDT) records.</li> <li>individual audit and regulatory reports.</li> </ul> |
| Welding parameters include one or more of the following:                         | <ul style="list-style-type: none"> <li>material specification and grade</li> <li>material preparation requirements</li> <li>joint details</li> <li>process type</li> <li>position</li> <li>run sequence and pass number</li> <li>welding process</li> <li>filler material</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>• material diameter</li> <li>• current</li> <li>• voltage</li> <li>• polarity</li> <li>• wire feed speed</li> <li>• travel speed</li> <li>• pre and post heat input.</li> </ul>                                                                                                                                                                                                         |
| Traceability requirements are unique identifiers in the weld records management system to allow identification of one or more of the following:                                                                                                                                               | <ul style="list-style-type: none"> <li>• jobs</li> <li>• procedure qualification records</li> <li>• welding procedure specifications</li> <li>• welders</li> <li>• weld joints including welder, date welded, process, consumables used, and any tests and fault corrections</li> <li>• NDT and other test reports relevant drawings and plans</li> <li>• other items as specified by the fabricator and/or client.</li> </ul> |
| Weld record management system formats include one or more of the following:                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• standard PC program records</li> <li>• PC based specific apps and programs for weld record management systems</li> <li>• cloud based specific apps and programs for weld record management systems</li> <li>• manual filing systems.</li> </ul>                                                                                                                                       |

## Unit Mapping Information

No equivalent unit.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>