



Australian Government

MEM05025 Perform welding/fabrication inspection

Release: 1

MEM05025 Perform welding/fabrication inspection

Modification History

Release 1. Supersedes and is equivalent to MEM05025C Perform welding/fabrication inspection

Application

This unit of competency defines the skills and knowledge required to perform welding/fabrication inspection by selecting, conducting or verifying appropriate non-destructive tests, establishing and validating welding procedures, ensuring quality assurance is carried out and monitoring procedures.

It applies to welding inspection based on knowledge of welding science and metallurgy, mechanical properties of welded joints, heat treatment procedures and national and technical standards. Test procedures and the range of this standard are determined by applicable Australian and/or international standards.

Where the performance of non-destructive testing is required the appropriate units should also be selected.

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

Band: B

Unit Weight: 12

Pre-requisite Unit

MEM05026	Apply welding principles
MEM09002	Interpret technical drawing
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

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | |
|---|---|---|
| 1 | Determine job requirements | 1.1 Follow standard operating procedures (SOPs) |
| | | 1.2 Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 Identify job requirements from specifications, drawings, job sheets or work instructions |
| | | |
| 2 | Select and organise appropriate non-destructive test procedures or verify previous test procedures | 2.1 Select appropriate non-destructive tests and organise/conduct in accordance with SOPs or job specifications |
| | | 2.2 Verify results of previous testing procedures |
| | | |
| 3 | Establish and validate welding procedure | 3.1 Interpret joint design specification and interpret parameters |
| | | 3.2 Check variables |
| | | 3.3 Document procedures |
| | | 3.4 Organise preparation of a test piece and arrange or conduct prescribed tests |
| | | 3.5 Interpret test results and prepare report identifying required action |
| | | |
| 4 | Ensure quality assurance procedures are | 4.1 Check material identification |
| | | 4.2 Document movement of material through workshop |

Elements describe the essential outcomes.

carried out

Performance criteria describe the performance needed to demonstrate achievement of the element.

in-site

- 4.3 Witness transferring material test certification numbers
- 4.4 Perform identification of consumables in accordance with welding procedures
- 4.5 Monitor storage and use of consumables
- 4.6 Maintain and review quality records to ensure compliance with requirements

5 Monitor procedures in process

- 5.1 Check material forming
- 5.2 Carry out dimensional checks
- 5.3 Make final inspection against specifications

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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.

Non-destructive tests include one (1) or more of the following:

- dye penetrant
- magnetic particle
- radiographic
- ultrasound

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

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