



Australian Government

MEM07014 Perform electro-discharge machining (EDM) operations

Release: 2

MEM07014 Perform electro-discharge machining (EDM) operations

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM07014 Perform electro-discharge machining (EDM) operations (Release 1).

Release 1. Supersedes and is equivalent to MEM07014B Perform electro-discharge (EDM) machining operations.

Application

This unit of competency defines the skills and knowledge required to perform electro-discharge machining (EDM) operations and applies to a range of EDM operations and engineering materials.

This unit has been primarily developed for Engineering Tradesperson - Mechanical apprenticeship training and the recognition of trade-level skills in performing EDM operations.

Where the selection and use of power tools/hand held operations is required unit MEM18002 Use power tools/hand held operations should also be selected.

Where electrodes are required to be manufactured see appropriate machining units.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM07005	Perform general machining
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

MEM18001 Use hand tools

Competency Field

Machine and process operations

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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|---|-----------------------------------|--|
| 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 | Prepare to undertake work | 2.1 Determine sequence of operations |
| | | 2.2 Select correct electrode to ensure finished component conforms to drawing specifications |
| | | 2.3 Calculate electrode surface area and set process parameters to give safe, accurate and efficient operation |
| | | 2.4 Set up job relative to electrode to ensure required position is obtained |
| 3 | Perform EDM | 3.1 Operate electro-discharge machine to produce components to drawing specifications |
| | | 3.2 Check components for compliance with specifications |
| | | 3.3 Rectify non-compliant product in accordance with SOPs |

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, accessibility of the item, and local industry and regional contexts) are included.

Electrodes include the following:

- all types and grades of graphite electrodes

Job set up includes the following:

- correct use of work holding devices and selection of EDM fluids, spark generation, cycle time, power settings and dielectric fluids for the requirement of a particular job

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM07014 Perform electro-discharge machining (EDM) operations (Release 1).

Release 1. Supersedes and is equivalent to MEM07014B Perform electro-discharge (EDM) machining operations.

Links

Companion Volume implementation guides are found in VETNet -

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