



Australian Government

MEM04019 Perform refractory installation and repair

Release: 1

MEM04019 Perform refractory installation and repair

Modification History

Release 1. Supersedes and is equivalent to MEM04019B Perform refractory installation and repair

Application

This unit of competency defines the skills and knowledge required to repair and install/replace all types of refractory, including relining furnaces, treatment vessels, ladles and launders.

It applies to the installation of the heat insulating material used inside molten metal vessels and includes material which can be machine rammed, hand rammed, forked or vibrated and includes refractory bricks and fibreboard.

Where routine repair/repointing of refractory during operational maintenance is required unit MEM04001 Operate melting furnaces and MEM04007 Pour molten metal, should also be selected as appropriate.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

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
MEM18002	Use power tools/hand held operations

Competency Field

Casting and moulding

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, sketches, job sheets or work instructions |
| | | |
| 2 | Inspect and knock out refractory | 2.1 Identify specific areas of the refractory for repair or replacement |
| | | 2.2 Determine sequence of operations to remove refractory to meet the job specification |
| | | 2.3 Select appropriate tools and equipment to safely remove damaged refractory |
| | | 2.4 Remove and dispose of damaged refractory according to requirements |
| | | |
| 3 | Prepare refractory materials | 3.1 Select appropriate refractory materials to meet specifications |
| | | 3.2 Mix refractory media to requirements |
| | | |
| 4 | Install refractory | 4.1 Determine installation of refractory sequence of operations |
| | | 4.2 Install refractory using appropriate tools, equipment and techniques |

Elements describe the essential outcomes.

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

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|---|------------------------|-----|--|
| 5 | Cure refractory | 5.1 | Cure refractory to specifications using appropriate equipment, techniques and procedures |
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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.

- Installed includes one (1) or more of the following:**
- hand ramming
 - machine ramming
 - forked
 - internal and external vibration

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>