



Australian Government

MEM10010 Install pipework and pipework assemblies

Release: 1

MEM10010 Install pipework and pipework assemblies

Modification History

Release 1. Supersedes and is equivalent to MEM10010B Install pipework and pipework assemblies

Application

This unit of competency defines the skills and knowledge required to plan, prepare and install pipework and assemblies.

Where pipework is to be cut by mechanical or thermal methods, or where welding processes are used, the appropriate unit(s) should also be selected.

Where the pipework is to be formed and shaped using mechanical and/or thermal techniques then unit MEM05010 Apply fabrication, forming and shaping techniques should also be selected.

Where pipework and assemblies are to be part of a system/process covered by legislative/regulatory requirements, units associated with the appropriate welding certificates for the pipe material and particular application must 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

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Competency Field

Installation and commissioning

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 | Plan the installation of pipework and pipework assemblies | 2.1 | Ensure quantity and type of pipework and pipework assemblies are selected according to specifications |
| | | 2.2 | Determine the appropriate sequence for the installation of pipework and pipework assemblies according to the installation type and specifications and other applicable factors |
| | | 2.3 | Prepare the work area for installation of pipework and pipework assemblies |
| | | | |
| 3 | Prepare pipework and pipework assemblies for assembly | 3.1 | Clean pipework according to SOPs |
| | | 3.2 | Ensure all pipework and assemblies are purged according to SOPs |
| | | 3.3 | Ensure pipework and assemblies are capped/sealed |
| | | | |
| 4 | Install pipework and assemblies | 4.1 | Install enclosures/hangers/support systems without damage or distortion to the surrounding environment or other services |
| | | 4.2 | Install pipework and assemblies without damage or distortion to pipework, assemblies or surrounding |

Elements describe the essential outcomes.

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

environment or other services

4.3 Leak test pipework in accordance with SOPs

4.4 Install all ancillary devices and materials to specification

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.

Pipework and pipework assemblies of a variety of sizes and/or wall thickness include one (1) or more of the following:

- ferrous
- non-ferrous
- plastic

Joining systems include one (1) or more of the following:

- collars
- unions
- flanges

Enclosures include the following:

- metal and PVC

Hangers and support systems include one (1) or more of the following:

- pipe/tube bundle support
- ties
- unistrut
- trays
- ladder racks
- ducts

Leak tests include one (1)

- soapy water

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or more of the following:

- water immersion
- compressed air

Ancillary devices and materials include one (1) or more of the following:

- insulation materials
- valve control systems

Legislation and regulations include the following:

- building regulations and gas/fluid pipeline regulations

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM10010B Install pipework and pipework assemblies

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM10010 Install pipework and pipework assemblies

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, drawings, legislative and regulatory requirements for installing pipework and pipework assemblies
- preparing installation of pipework and pipework assemblies by determining sequence of installation
- ensuring all pipework are cleaned, purged and capped/sealed
- installing pipework and pipework assemblies using hangers and support systems without damage or distortion to the surrounding environment or other services
- leak testing pipework to specifications
- installing all ancillary devices and materials to specifications.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- installation techniques
- site and safety requirements
- cleaning procedures and the applications and precautions for using solvents/cleaning material
- purging techniques, applications and precautions
- capping/sealing pipework and assembly methods
- identification of location/layout of pipework and assemblies and application and characteristics of enclosure/hanging/supporting systems
- pipework, ancillary installation and joining procedures
- leak testing applications and uses
- regulations and legislative requirements, including building regulations and gas/fluid pipeline regulations.

Assessment Conditions

- Assessors must:
 - have vocational competency in installing pipework and pipework assemblies at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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