



Australian Government

PMBWELD310E Design PVC plastic pipelines for pressure applications

Release: 1

PMBWELD310E Design PVC plastic pipelines for pressure applications

Modification History

Release 1. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBWELD310 Design PVC plastic pressure pipelines.

Application

This unit describes the skills and knowledge required to design polyvinylchloride (PVC) plastics pressure pipeline components under industrial conditions in the field.

This unit applies to an operator working alone or as part of a team.

The unit principally refers to experienced operators who are required to select materials, components and designs for specific pressure applications of PVC pipelines and specify appropriate testing and commissioning.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil.

Competency Field

Welding – Plastic Pipelines, Plastic Welding

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess suitability of PVC pipe materials for specific pressure applications	1.1 Identify materials as grades of PVC, including variations, from national standards, job specifications and worksite instructions 1.2 Determine PVC materials and properties from national standards and material data sheets 1.3 Identify job needs from worksite instructions and job specifications
2. Determine appropriate products from national	2.1 Identify material options from national standards, supplier data sheets, and government codes and regulations

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
standards	2.2 Identify performance limitations of material options from materials knowledge and data sheets 2.3 Identify pipe and component options from national standards, supplier data sheets, and government codes and regulations 2.4 Identify performance limitations of pipe and component options from materials knowledge and data sheets 2.5 Identify suitable jointing methods for pipes and fittings from jointing knowledge 2.6 Identify operational conditions from job specifications and workplace procedures
3. Determine pipeline requirements	3.1 Identify length of pipe required from job specifications 3.2 Identify fittings and number of fittings required from job specifications 3.3 Select pipe and components in the context of specific job needs and product properties 3.4 Identify required jointing equipment or materials from job specifications 3.5 Prepare field operational sheets including requirements and layout, according to workplace procedures 3.6 Adjust design to meet requirements and quality standards
4. Determine testing and commissioning procedures	4.1 Determine specific installation test requirements from job specifications 4.2 Identify alternative test procedures to meet requirements 4.3 Accurately maintain records and logbooks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to produce and interpret technical information.
- Reading skills to interpret job requirements and workplace procedures.
- Writing and oral communication skills to record and report on PVC pipeline design.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to PMBWELD310 Design PVC plastic pressure pipelines.

Links

Companion Volume implementation guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

Assessment Requirements for PMBWELD310E Design PVC plastic pipelines for pressure applications

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit of competency, and demonstrated the ability to:

- design PVC plastic pipelines for pressure applications at least once, and adjust the process as required to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- PVC materials and pressure pipeline components as described in national standards, sufficient to recognise suitability for specific application and to establish work instructions.
- selection requirements for PVC plastic pressure pipeline components
- key variables relating to the installation site
- typical and atypical process and product problems, including early warning signs, possible causes and corrective actions
- organisational procedures relevant to the work environment or job role
- hazards that may arise in the job or work environment, and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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