



Australian Government

PMBWELD306E Design polyethylene plastic pipelines for pressurised applications

Release: 1

PMBWELD306E Design polyethylene plastic pipelines for pressurised 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 PMBWELD306 Design polyethylene plastic pressure pipelines.

Application

This unit describes the skills and knowledge required to design and specify appropriate testing and commissioning procedures while under industrial conditions in the field for polyethylene (PE) plastic pressure pipelines.

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 pressure applications of plastic pipelines to requirements, and specify appropriate testing and commissioning with high pressure water.

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 polyethylene pipe materials for specific pressure applications	1.1 Identify materials as grades of polyethylene from national standards, job specifications and work site instructions 1.2 Determine polyethylene materials properties from national standards and material data sheets 1.3 Identify job needs from worksite instructions and job specifications
2. Determine appropriate	2.1 Identify material options from national standards, supplier data

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
products from national standards	sheets, and government codes and regulations 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 type and number of fittings required from job specifications 3.3 Select pipe and components in context of specific job needs and product properties 3.4 Identify jointing equipment or materials from job specifications 3.5 Prepare field operational sheets according to workplace procedures 3.6 Adjust the design to meet requirements and quality standards
4. Determine testing and commissioning procedures	4.1 Determine specific installation test requirements from job specifications and quality standards 4.2 Establish procedures for commissioning of work to be done from job specifications 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 perform measurements and interpret technical specifications.
- Reading skills to interpret job specifications and workplace procedures.
- Writing and oral communication skills to record and report on procedures and produce field operational sheets.

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 PMBWELD306 Design polyethylene 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 PMBWELD306E Design polyethylene plastic pipelines for pressurised 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 PMBWELD306 Design polyethylene plastic pressure pipelines.

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 polyethylene plastic pipelines for pressurised applications at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- polyethylene 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 polyethylene pressure pipeline components
- Australian Standards relevant to the materials being used and products being made, including requirements for:
 - handling and transport of polyethylene drainage materials
 - long-term polyethylene pipe storage
 - polyethylene pipe installation
 - service connection of non-pressure polyethylene pipelines
 - repair of non-pressure polyethylene pipelines
- key variables relating to the installation site and other factors that may affect design
- commissioning requirements and tests.

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.

Links

Companion Volume implementation guides are found in VETNet –

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