



Australian Government

PMBWELD311E Design plastic pipelines for high temperature and pressure applications

Release: 1

PMBWELD311E Design plastic pipelines for high temperature and 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 PMBWELD311 Design high temperature plastic pressure pipelines.

Application

This unit describes the skills and knowledge required to design in the field, plastics pipelines operating under high pressure and temperature.

The operator may work alone or as a member of a team.

The principally refers to experienced operators who are required to select materials, components and designs for specific high temperature and 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 plastic pipe materials for specific high temperature pressure applications	1.1 Identify suitable plastic materials from national standards, job specifications and work site instructions 1.2 Determine plastics material properties from national standards and material data sheets 1.3 Identify job needs from work site 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 fittings 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 including requirements and layout, according to workplace procedures
4. Determine testing and commissioning procedures	4.1 Determine specific installation test requirements from job specifications and quality standards 4.2 Identify alternative test procedures to meet requirements 4.3 Maintain records and logbooks according to workplace procedures

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 plastic 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 PMBWELD311 Design high temperature 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 PMBWELD311E Design plastic pipelines for high temperature and 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 plastic pipelines for high temperature and pressure applications at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- plastics materials and high temperature pressure pipeline components as described in national standards, sufficient to recognise suitability for specific application and to establish work instructions
- selection requirements for plastics pipeline components
- key variables relating to the installation site.

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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