



Australian Government

PMBWELD307E Install plastic pipelines for high temperature applications

Release: 1

PMBWELD307E Install plastic pipelines for high temperature 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 PMBWELD307 Install high temperature plastic pressure pipelines.

Application

This unit describes the skills and knowledge required to install plastics pipeline components operating under high-pressure and -temperature conditions.

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

The unit principally refers to operators working on the installation of plastic pipelines, including preparing and performing jointing, and performing repairs.

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 pressure applications	1.1 Identify plastic materials from national standards, job specifications and worksite instructions 1.2 Determine plastic material properties from national standards and material data sheets 1.3 Identify job needs from work site instructions and job specifications
2. Identify applications for alternative jointing	2.1 Assess suitability of mechanical jointing systems from known properties and limitations

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
technologies	2.2 Assess suitability of thermal welding jointing systems from known properties and limitations 2.3 Assess suitability of chemical bonding jointing systems from known properties and limitations 2.4 Perform trial jointing using mechanical jointing and thermal fusion methods, and identify, rectify and report on non-conformance 2.5 Assess quality against job specifications
3. Determine requirements for working with of plastics pipeline components	3.1 Identify requirements for handling and transport of plastics materials from job requirements 3.2 Determine requirements for long-term pipe storage from job requirements 3.3 Determine requirements for pipe installation, including additional materials from job requirements
4. Perform service connection and repair of plastic pressure pipelines	4.1 Determine service connection requirements from job requirements 4.2 Identify alternative material connection methods to meet job requirements 4.3 Perform service connection to meet job requirements 4.4 Determine repair requirements from job requirements 4.5 Identify alternative repair options that meet job requirements 4.6 Repair installation to meet job requirements
5. Assess quality of completed installation	5.1 Identify quality standards and test procedures for installation according to job specifications 5.2 Follow test procedures to assess quality of completed installation against job specifications and report results 5.3 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 of job.
- Reading skills to interpret job specifications and workplace procedures.

- Writing and oral communication skills to record and report on the installation of plastic pipelines.

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 PMBWELD307 Install 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 PMBWELD307E Install plastic pipelines for high temperature 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:

- install plastic pipelines for high temperature 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:

- polybutylene (PB), polypropylene (PP), cross-linked polyethylene (PEX A1/PEX), polyvinylidene fluoride (PVDF) and chlorinated polyvinyl chloride (CPVC) materials and pipeline components as described in national standards to recognise suitability for specific installation
- methods of handling, storage and transport of PB, PEX, PP, A1/PEX composites, PVDF and CPVC plastics components
- range of methods relevant to types of materials or components for:
 - mechanical jointing
 - chemical bonding
 - service connections
 - repairs
- 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
- production workflow sequences and materials demand
- quality requirements and range of suitable tests to establish quality level of work
- key variables that may affect quality of work and how to manage them, including:
 - alignment

- materials and conditions for joint
- integrity of joint
- general conformance to specification
- organisational procedures relevant to the work environment and job role.

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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