



Australian Government

PMBWELD305E Install polyethylene plastic pipelines for pressurised applications

Release: 1

PMBWELD305E Install 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 PMBWELD305 Install polyethylene plastic pressure pipelines.

Application

This unit describes the skills and knowledge required to install polyethylene (commonly referred to as PE) plastic pressure pipeline components in the field.

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

The unit principally refers to the technician confirming that materials are suitable for the specific pressure applications, preparing for and performing jointing, and repairing and servicing polyethylene plastic pressure pipes and pipeline components.

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 – Pipeline Installation, Plastic Pipelines

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 worksite instructions 1.2 Determine polyethylene materials 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 their

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technologies	known properties and limitations properties and limitations 2.2 Assess suitability of thermal welding jointing systems from their known properties and limitations 2.3 Assess suitability of chemical bonding jointing systems from their known properties and limitations of chemical bonding jointing systems 2.4 Perform trial jointing using mechanical jointing and thermal fusion methods, and identify, rectify and report on non-conformance according to workplace procedures 2.5 Assess quality against job specifications
3. Determine requirements for working with polyethylene pipeline components	3.1 Identify requirements for handling and transport of polyethylene materials from work health and safety regulations and workplace procedures, and according to relevant standards 3.2 Determine requirements for long-term polyethylene pipe storage from job specifications and according to relevant standards 3.3 Determine requirements for polyethylene pipe installation, including additional materials, from job specifications and according to relevant standards
4. Perform service connection and repair of polyethylene pipelines	4.1 Determine service connection requirements from job specifications and according to relevant standards 4.2 Identify alternative service connection methods that meet job requirements 4.3 Perform service connection to meet job requirements 4.4 Assess pipeline to determine repair requirements and according to relevant standards 4.5 Perform repair of installation to meet job requirements
5. Assess quality of completed installation	5.1 Identify quality standards and test procedures for installation to meet 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.

- Writing and oral communication skills to record and report on test and quality-assurance results.

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 PMBWELD305 Install 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 PMBWELD305E Install polyethylene plastic pipelines for pressurised 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 polyethylene plastic pipelines for pressurised applications, at least once, and adjust the installation process as required to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- types of materials and components being used
- range of methods for mechanical jointing, fusion welding, service connections and 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
- storage, handling and transport procedures for polyethylene pipeline units
- assessment methods and criteria for polyethylene pipeline repair
- 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
- typical process and product problems, including early warning signs, possible causes and corrective actions
- 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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