



Australian Government

PMBWELD303E Install polyethylene plastic pipelines for non-pressure drainage

Release: 1

PMBWELD303E Install polyethylene plastic pipelines for non-pressure drainage

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 PMBWELD303 Install polyethylene (non-pressure) drainage pipelines.

Application

This unit describes the skills and knowledge required to install polyethylene (commonly referred to as PE) plastic non-pressure drainage 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 installation and repair of non-pressure polyethylene drainage pipelines, mechanical and welded joints, and repair of previously installed systems with pipeline connections.

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 non-pressure drainage 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 worksite 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 2.2 Assess suitability of thermal welding jointing systems from their known properties and limitations of thermal welding jointing systems 2.3 Perform trial jointing for mechanical jointing and thermal fusion methods, and identify, rectify and report on non-conformance 2.4 Assess quality against job specifications
3. Determine requirements for working with polyethylene non-pressure drainage pipeline components	3.1 Identify requirements for handling and transport of polyethylene drainage materials from job specifications 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 from job specifications and according to relevant standards
4. Perform service connection and repair of non-pressure polyethylene pipelines	4.1 Determine service connection requirements from job requirements and according to relevant standards 4.2 Identify alternative service connection methods to meet job requirements 4.3 Perform service connection to meet job requirements 4.4 Determine required repairs from job requirements and according to relevant standards 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 specific to installation from to job specifications 5.2 Follow test procedures to visually 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 installation of polyethylene 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 PMBWELD303 Install polyethylene (non-pressure) drainage 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 PMBWELD303E Install polyethylene plastic pipelines for non-pressure drainage

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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 non-pressure drainage, at least once, to meet job specifications, including the selection and application of mechanical and fusion welding jointing methods.

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, special service connections, and pipeline repair work
- 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
- 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
- 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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