



Australian Government

PMBWELD308 Install PVC plastic pressure pipelines

Release: 1

PMBWELD308 Install PVC plastic pressure pipelines

Modification History

Release 1. Supersedes and is equivalent to PMBWELD308B Install PVC plastic pressure pipelines

Application

This unit of competency covers the skills and knowledge required to install polyvinylchloride (PVC) plastic pressure pipes and pipeline components in the field. It applies to PVC in the form of UPVC, MPVC or OPVC. Pipelines may be used for transmission of gaseous and water based fluids.

This unit of competency applies to experienced operators who are required to confirm that materials are suitable for the specific pressure applications; prepare for and perform chemical and mechanical jointing, repairs and service connections; and solve problems within area of responsibility.

This unit of competency applies to an experienced operator demonstrating theoretical and technical knowledge and well developed skills in situations that require some discretion and judgement. The operator may work alone or as a member of a team or group and will work in liaison with other shift team members, team leader and supervisor, as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Welding

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 **Identify applications for alternative jointing**

1.1 Identify properties and limitations of mechanical jointing systems

1.2 Identify properties and limitations of chemical bonding

	technologies		jointing systems
		1.3	Perform trial jointing for all methods, identify non-conformance, report and rectify
		1.4	Assess quality against specification requirements.
2	Determine methods for handling, storage, transport and installation of PVC pipeline components	2.1	Identify requirements for handling and transport of PVC materials
		2.2	Determine requirements for long-term storage
		2.3	Determine requirements for installation, including additional materials
3	Identify appropriate service connection and repair techniques	3.1	Determine service connection requirements
		3.2	Identify alternative service connection methods to meet requirements
		3.3	Perform service connection to meet requirements
		3.4	Determine repair requirements
		3.5	Identify alternative repair options
		3.6	Perform repair installation to meet requirements
4	Assess quality of completed installation by determining appropriate testing and commissioning procedures	4.1	Determine specific installation test requirements
		4.2	Identify alternative test procedures to meet requirements
		4.3	Assess quality of completed installation
		4.4	Refer problems outside area of responsibility to appropriate person
		4.5	Solve problems within area of responsibility
		4.6	Maintain quality records

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace, manual handling and hazardous materials
- Australian/international standards relevant to the materials being used and products being made including one or more of:
 - AS/NZS 1477:2006 PVC pipes and fittings for pressure applications, or its replacement
 - AS/NZS 4441:2008 Oriented PVC (PVC-O) pipes for pressure applications, or its replacement
 - AS/NZS 4765:2007 Modified PVC (PVC-M) pipes for pressure applications, or its replacement
 - AS/NZS 2566.2:2002 Buried flexible pipelines – Installation, or its replacement
 - AS/NZS 2032:2006 Installation of PVC pipe systems ,or its replacement
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Tools and equipment

Tools and equipment include:

- mechanical and chemical bond jointing equipment
- service connection and repair equipment
- jigs and fixtures
- measurement devices, including one or more of:
- pressure gauges
- timers
- callipers
- computer-based monitors.

Additional tools and equipment will be selected as required from:

- calculators
- hand tools used in this process
- hoists/lifting equipment not requiring any special permits or licences
- manual handling aids such as hand carts and trolleys
- relevant personal protective equipment (PPE).

Hazards

Hazards must be identified and controlled. Identifying hazards requires consideration of:

- hazardous products and materials
- cutting equipment
- sharp edges, swarf and scrap
- protrusions or obstructions
- slippery surfaces, spills or leaks
- rotational equipment or vibration
- smoke, dust, vapours or other atmospheric hazards
- high temperatures

- electricity
- gas
- gases and liquids under pressure
- structural hazards
- equipment failures
- machinery, equipment and product mass
- other hazards that might arise.

Problems Routine and non-routine problems must be resolved.

Non-routine problems must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person.

Non-routine problems are unexpected problems or variations of previous problems and include one or more of:

- variations in quality
- emergency situations
- intermittent faults.

Operational knowledge includes one or more of:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people.

Routine problems are predictable and have known solutions and include one or more of:

- variable materials, pipes and components as supplied
- equipment malfunction or wear and tear
- variable field site conditions
- limitations in available data on specific job requirements.

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMBWELD308B Install PVC 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>