

Title	Demonstrate knowledge of and select pipes and fittings for pipeline construction and maintenance		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to demonstrate knowledge of: pipes; fittings, support structures and components; and, select pipes and fittings, for pipeline construction and maintenance.
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Classification	Infrastructure Works > Infrastructure Works Utilities
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Available grade	Achieved
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Guidance Information

- 1 Legislation and references relevant to this unit standard include:
Health and Safety at Work Act 2015 and Resource Management Act 1991;
National Code of Practice for Utilities' Access to the Transport Corridors, available from <http://www.nzuag.org.nz/national-code/>;
AS/NZS 2280:2014, *Ductile iron pipes and fittings*;
AS/NZS 3725:2007, *Design for installation of buried concrete pipes*;
WSAA 109-2011 *Industry Standard for Flange Gaskets and O-rings Appendix D – Flange jointing procedure*, available from Water Services Association of Australia: <https://www.wsaa.asn.au/shop/product/7371>;
Technical Note PP 811-TN PE Flange Connections, available from <http://www.performancepipe.com/en-us/Documents/PP811-TN%20PE%20Flange%20Adapters.PDF>.
Territorial authority requirements.
- 2 Assessment against this unit standard must take place in a workplace environment. Assessment parameters will depend on site-specific equipment, procedures, and practices. Practices must reflect industry best practice and comply with legislative requirements.
- 3 Definitions
Company requirements include the policy, procedures, and methodologies of the company. They include legislative and regulatory requirements applicable to the company or a specific site. Requirements are documented in the company's health and safety plans, traffic management plans, contract work programmes, quality assurance programmes, policies, and procedural documents.
Contract specifications include plans, diagrams, and special technical conditions. They do not include special administrative conditions.

Fittings may refer to connections (tapping saddles, junctions, access point connectors), bends (sweeping, tight), valves (isolation, backflow, pressure reducing, air release), filters, joiners, hydrants, and/or meters.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of pipes for pipeline construction and maintenance.

Range three of – glass reinforced plastic (GRP), ductile iron, steel, polyethylene, concrete, PVC.

Performance criteria

- 1.1 Pipes are described in terms of their handling requirements, performance in ground, and applications.
- 1.2 Pipes are described in terms of their available sizes and wall thicknesses, and pressure rating where relevant.
- 1.3 Pipes are described in terms of techniques and requirements for cutting and jointing.

Outcome 2

Demonstrate knowledge of fittings, support structures, and other components for pipeline construction and maintenance.

Performance criteria

- 2.1 Fittings are described in terms of their uses, pipe class or pressure ratings, sizes, and classes.

Range five of – tees, bends, couplings, compression fittings, joiners, flanges, tapping bands, tapping saddles, reducers.
- 2.2 Fittings are described in terms of their selection criteria for differing pipe types, diameters, and classes or pressure ratings.
- 2.3 Support structures, access chambers, and inspection points are described in terms of their purpose, function, and materials.

Outcome 3

Select pipes and fittings for pipeline construction or maintenance.

Performance criteria

- 3.1 Pipes are selected in accordance with contract specifications and company procedures.

- 3.2 Fittings are selected for compatibility with pipes, and in accordance with contract specifications and company procedures.

Replacement information	This unit standard replaced unit standard 23278.
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Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	29 November 2018	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Connexis Infrastructure ITO qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.