

Title	Weld steel pipe using the oxyacetylene welding process		
Level	4	Credits	12

Purpose	<p>This unit standard covers welding of steel pipe to AS/NZS 2980:2007 or equivalent standards or codes, using the oxyacetylene welding (OAW) process, as typically used in heating and ventilating applications.</p> <p>People credited with this unit standard are able to prepare to weld and weld steel pipe using the OAW process; and inspect and repair pipe welds to industry standard.</p>
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Classification	Mechanical Engineering > Welding
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Available grade	Achieved
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Guidance Information

- References

AS/NZS 2980:2007, *Qualification of welders for fusion welding of steels*. Available at <https://standards.govt.nz>.

Health and Safety in Welding. Wellington: Department of Labour, 2006. Available from <http://www.worksafe.govt.nz/>.
- Definitions

Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.

OAW – Oxyacetylene Welding; also referred to as *gas welding*.

Industry standard – AS/NZS 2980:2007, or equivalent.

Safe working practice – formal worksite or company safety policies, or the practices established by *Health and Safety in Welding* or similar codes.

Welding procedure – written work instruction providing all the necessary technical details for a specific welding application.
- Recommended for entry

Unit 2678, *Join steel using the oxyacetylene welding process*.

Outcomes and performance criteria

Outcome 1

Prepare to weld steel pipe using the OAW process.

Performance criteria

- 1.1 Work area is assessed for hazards associated with the OAW process and all necessary precautions taken in accordance with safe working practice.
- Range compressed gas, fire, explosion, fumes, confined space, burns, visible light and infrared radiation, chemicals.
- 1.2 Equipment is selected to meet welding procedure requirements.
- Range cylinders, regulators, flashback arrestors, hoses, torch, tip.
- 1.3 Equipment is assembled and maintained ready for use in accordance with manufacturer's instructions.
- Range maintenance – tip cleaning, checking for leaks, hose repair, reporting defective equipment.
- 1.4 Pipe is prepared and assembled for joining in accordance with welding procedure.
- Range cleaning, edge preparation, tack welding to correct alignment.
- 1.5 Consumables are selected in accordance with the welding procedure.

Outcome 2

Weld steel pipe using the OAW process.

Range 50 mm diameter steel pipe, 3.6 mm wall thickness in the 2G, 5G, and 6G positions;
right angle set-on branch of 50 mm to 32 mm diameter pipe.

Performance criteria

- 2.1 Safety procedures are followed and personal protective equipment is worn in accordance with safe working practice.
- 2.2 Pipe joints are welded to industry standard and in accordance with welding procedure.
- 2.3 Welds are cleaned in accordance with accepted industry practice.

Outcome 3

Inspect and repair pipe welds to industry standard.

Performance criteria

- 3.1 Weld imperfections are identified by visual examination and bend tests.

3.2 Weld imperfections are compared to the permissible levels allowed by industry standard.

3.3 Weld defects are repaired to industry standard.

Range evidence is required of at least one repair.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	30 November 1994	31 December 2018
Revision	2	14 April 1997	31 December 2018
Revision	3	5 January 1999	31 December 2018
Review	4	4 April 2001	31 December 2018
Rollover and Revision	5	20 April 2006	31 December 2018
Review	6	22 May 2009	31 December 2022
Review	7	17 August 2017	N/A

Consent and Moderation Requirements (CMR) reference	0013
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.