

<b>Title</b>	<b>Describe steel welding in a gas network</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>6</b>

<b>Purpose</b>	People credited with this unit standard are able to describe steel welding in a gas network.
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<b>Classification</b>	Gas Industry > Gas Network Construction
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 This unit standard is intended for, but is not limited to, workplace assessment. The range statements relate to enterprise specific equipment, procedures, and processes.
- 2 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturer's specifications, company procedures and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of:  
Health and Safety at Work Act 2015;  
Resource Management Act 1991;  
AS/NZS 4645.1:2018 *Gas distribution networks – Network management*;  
AS/NZS 4645.2:2018 *Gas distribution networks – Steel pipe systems*;  
AS/NZS 2885.1-2018 *Pipelines – Gas and liquid petroleum Design and construction*;  
AS 2885.3-2018 *Pipelines – Gas and liquid petroleum Operation and maintenance*;  
AS/NZS 2885.2:2018 *Pipelines – Gas and liquid petroleum Part 2: Welding*;  
and any subsequent amendments and replacements.
- 4 References  
Australian standards (AS) may be found at [www.standards.org.au](http://www.standards.org.au);  
Australian/New Zealand standards (AS/NZS) may be found at [www.standards.govt.nz](http://www.standards.govt.nz).
- 5 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 6 Welding qualifications required for work in gas networks are described in *AS/NZS 2885.2:2018 Pipelines – Gas and liquid petroleum Part 2: Welding*.

## 7 Definition

*Company procedures* mean the documented methods for performing work activities, and include health and safety, operational, environmental, and quality management requirements. They may refer to legislation, regulations, guidelines, standard operating procedures, manuals, codes of practice, or policy statements.

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## Outcomes and performance criteria

### Outcome 1

Describe steel welding in a gas network.

#### Performance criteria

1.1 Steel weld types are described.

Range butt, fillet.

1.2 Welding techniques and their use are described.

Range Tungsten Inert Gas (TIG), Metal Inert Gas (MIG), Shielded Metal Arc (Stick Welding).

1.3 Potential environmental and safety hazards and controls associated with steel welding in a gas network are described.

Range hazards may include – flames, heat, ultraviolet radiation, x-rays, fumes, electrical voltage, electrical current, stray current, gas release, excavations, other utilities, confined working, weather, vehicles and public;  
controls may include – fire blankets, fire extinguishers, exclusion zones, decommission and purge, ventilation, protective shields, earthing, current drainage bonds, gas detection equipment, safe access and egress, weather shields, temporary traffic control, signage, barriers, personal protective equipment, continuity bond; evidence of six hazards and controls are required.

1.4 Weld inspection techniques are described in terms of application.

Range radiography, ultrasonic, magnetic particle crack detection, dye-penetration.

1.5 Factors to be considered prior to welding in a gas network are described.

Range pipe and fitting material grade and compatibility, carbon equivalent, pipe condition inspection, minimum pipe wall thickness, maximum/minimum flow rate, cathodic protection, welding inspection, welder qualifications, weld numbering, weld locations.

1.6 Procedural requirements for welding in a gas network are described.

Range weld procedure specification, weld procedure qualifications, weld repair procedure, weld inspection records, contingency plan, non-routine operation procedure.

<b>Planned review date</b>	31 December 2025
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 June 1997	31 December 2018
Revision	2	3 August 2000	31 December 2018
Revision	3	10 October 2002	31 December 2018
Review	4	20 November 2006	31 December 2018
Review	5	17 August 2017	31 December 2023
Review	6	27 May 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
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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 MITO New Zealand Incorporated [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.