

Pipeline Pressure Testing

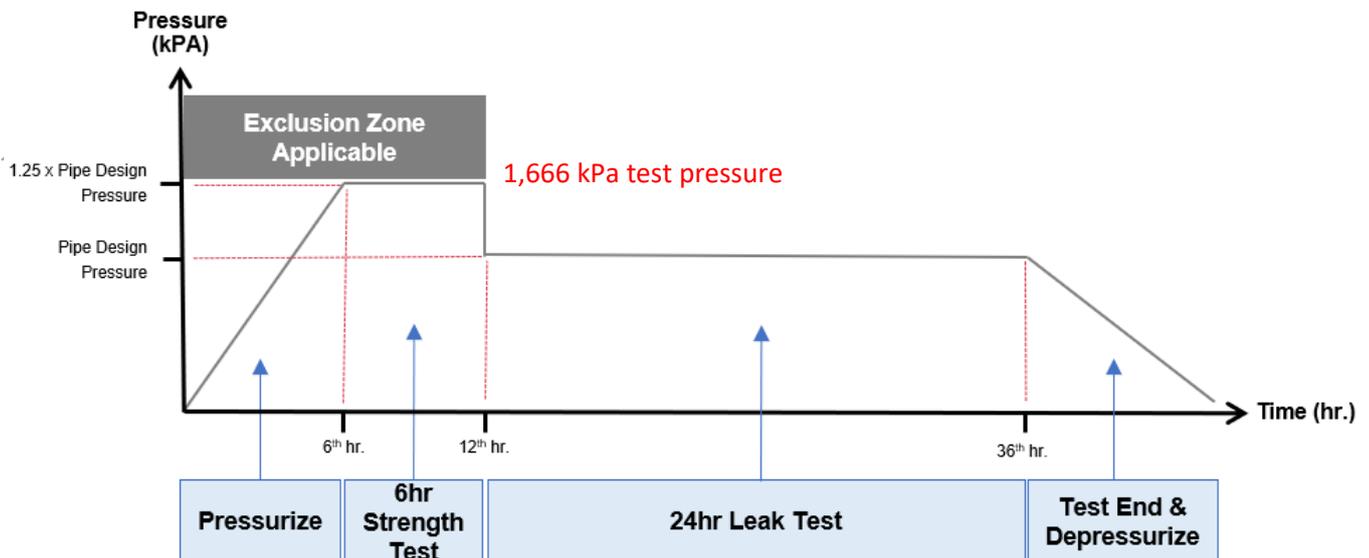
January 2022

As part of the Surat Gas Project, Arrow Energy pressure tests new gas and water pipelines to ensure the safety and integrity of below ground infrastructure prior to commissioning.

The tests are carried out in accordance with the requirements of the *Australian Pipelines and Gas Association Ltd (APGA) Code of Practice for Upstream Polyethylene Gathering Networks in the Coal Seam Gas Industry*.

What is involved in a pressure test?

There are several stages in the testing process including a strength and leak test.



The pipeline is tested to around 1.25 times its maximum operating pressure to prove the strength of the pipeline material, its connections and joints

The pressure is then reduced to maximum operating pressure and monitored for 24-hours, observing for any pressure drop, which would indicate a leak.

(Variations on the above method can be utilised in accordance with Code of Practice requirements)

Operating pressure for gathering infrastructure can be anything up to the pipe design pressure. The following chart compares pipe design pressures with commonly known pressurised items:

	 Standard Vehicle Tyre Pressure Range	 SDR 21* Poly Pipe Design Pressure	 BBQ Gas Bottle Pressure Range (27-43 degrees Celsius)	 SDR 11* Poly Pipe Design Pressure
				PIPE TO BE TESTED 22/01/2022
Approximate pressure	193-234 kPa	667 kPa	883 – 1358 kPa	1,333 kPa

*SDR = Standard Dimension Ratio (pipe diameter: wall thickness)

How are pipelines tested

Pipelines are tested by using air (pneumatic) or water (hydrostatic). The table below shows the testing methods and characteristics.

	Uses compressed air	Uses water under pressure	Consists of a strength and leak test	Approx. 36 hours to complete	Applications
Pneumatic	✓		✓	✓	Preferred method for pipelines (long sections)
Hydrostatic		✓	✓	✓	Preferred method for pre testing for road crossings, 3 rd party crossings etc

Exclusion zones

Safety is Arrow's first priority, and all testing is carried out in line with the code of practice. When conducting pressure testing, temporary exclusion zones may be required to ensure risks are as low as reasonably practicable. Arrow will:

- engage with landholders who may have restrictions on their properties
- reduce exclusion zones on private and public land, such as road reserves, as much as possible, while ensuring compliance with relevant safety requirements and codes of practice
- implement Traffic Management Plans where exclusion zones overlap or approach road reserves.



At no time will emergency access be denied

Traffic Management Plan

Where Arrow activity is likely to impact a road and/or traffic flow, an independent traffic engineering consultant is engaged to develop a Traffic Management Plan (TMP) for approval by the relevant road authority (Department of Transport and Main Roads or the local council) before work can commence. A TMP includes:

- hours of operation
- the test location and its boundaries
- alternate traffic routes, where possible
- signage and speed limit requirements
- video message board requirements

Site-specific pressure testing plan

Arrow will engage with landholders and occupiers if they have pressure testing activities on - or under - their property. Site-specific pressure test information may include:

- A map identifying temporary exclusion zones
- Alternate property entry or exit routes, if applicable
- Contact details for on-site personnel during the test.

Notification emails will be shared with neighbours, and the broader community which may also include information on road closures or traffic management, if this is required during the test.

If you have any other questions in relation to Arrow's activities in your area, please contact us:

Contact details

Freecall: 1800 038 856

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