



# NORTH RYDE PRS UPGRADE

CASE STUDY

**CATEGORY**  
PRODUCTS / PIPING & SKIDS

**Project Name :** North Ryde PRS Upgrade

**Industry :** Oil and Gas

**Reference :** LA3299

**Client:** Downer for Jemena

**Year :** 2014

## Overview

Upgrade of the natural gas network supplying 70% of the Northern Sydney region. Projects associated with live natural gas supply carry risks across supply disruption, equipment integrity and workmanship assurance. Managing these places emphasis on project planning and quality. This project brought together mechanical fabrication, instrument and electrical, factory acceptance testing, civil works and live gas line tie-ins while maintaining the existing gas supply

## Scope

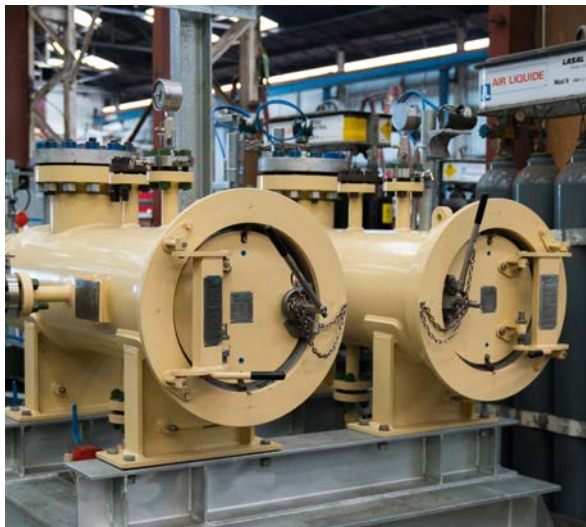
The project scope was to replace the existing two underground Primary Regulating Stations (PRS) with two above regulating pipe runs and tie them into the existing natural gas supply pipeline.



# PROJECT DETAILS

## Design

- Design Pressure : 4,936 kPag
- Design Temperature : -3 to 60°C
- Dimensions : 17m long x 2m wide
- Standard : AS4041 Class 2A & AS2885



## Materials

- Pipe A333 Gr6
- Flanges & fittings A420 WPL6, A350 LF2
- Values & Instruments Free issue

## Manufacturing

- Piping NDE 100% on Butt joints
- Skid Frame 10% MT
- Hydro pressure upto 7,404 kPag
- Assembly, E&I Fitout
- Site: 2 x Hot Taps, inlet & outlet Tie-ins

## Surface Treatment

- Piping - Three coat system to 350um
- Structural - Galvanised
- Underground - Stopaq wrapped



## Planning

Planning the works required coordination with the end user to suit their wider asset management schedule and gas distribution risk management strategies. There was also a need to take into account the free issue equipment supply chain plan so the skid's trial assembly could utilise these parts for spool spacing where needed while maintaining project continuity. The final assembly required coordination between sub-contractors for drying, E&I hook-up and the client's Factory Acceptance Testing team while ensuring the skid's tie-in spools were progressing to match the planned civil works.

## Challenges

The project's main challenge was completing the PRS skid installation and the gas pipeline Hot Taps to confirm in the tie-in spool's final dimensions. By planning and delivering on these two work fronts it ensured the tie-ins could be done in parallel to other required works enabling the project to be completed within a window that suited the end user's gas distribution management time frame.

## Notes

To minimise site works the tie-in spools were pre-fabricated as much as possible, tested, painted and wrapped with Stopaq, while still allowing for transport and final joints to suit the site dimensions. This minimised the number of site joints to be welded and tested, which are costly activities in the field and are typically on the critical path for such projects.

## Client Feedback

*"To Tony Clark and all the boys from L&A Pressure Welding, many thanks again for your help, you are a valued partner of Downer and your ability to work collaboratively on this project was fantastic."* - Project Manager for Downer

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