DESIGN, FABRICATION & INSTALLATION OF PIPING FOR A DEAERATOR PRESSURE VESSEL

Client: Rio Tinto
Location: Gladstone, QLD
Year of Completion: 2018
Project Type: Metal Fabrication & Shutdown Services

0 Weld fails

Engaged by Rio Tinto, Pructon was required to remove and replace the existing 14T deaerator vessel with a new vessel of different design, which had recently failed. The deaerator is a mechanical device that is used to remove dissolved gases from boiler feedwater. This process protects the steam systems from potential damage from corrosive gases.

The project involved the disconnection of all welded pipework and grating, and the replacement and reconnection of the pipework of differing materials and configurations. Pructon undertook the engineering and design of this pipe network, including finite element analysis of the pipework.

Pructon's mechanical crew successfully replaced the vessel and pipework under a tight schedule during the Cogen Outage plant shutdown. All welds were inspected and passed all quality requirements.

Scope of Work

- Off-site fabrication of pipework
- Demolition of redundant pipe and structural steel
- Installation of pressure vessel and associated pipework
- Pressure welding of Stainless Carbone piping
- Cladding of pipework
- Commissioning of vessel

Benefits

- All quality requirements were achieved
- Pructon delivered project as per the clients design