



TEG CONTACTOR

CASE STUDY

CATEGORY
PRODUCTS / PRESSURE VESSELS

Equipment : V-361 TEG Contactor

Industry : Oil & Gas

Reference : LA2354

Client: Process Group for Tru Energy

Year : 2008-2009

The Requirement : A new gas processing plant in southern Victoria required a Triethylene glycol (TEG) Contactor vessel. The high pressure separation process required a heavy wall low temperature impact tested material. The combination of requirements and the vessel's size resulted in an engineering intensive project from design through to logistics and site delivery

Process Group were the process designers for the plant and commissioned LA Services to carry out the mechanical design, fabrication assembly and transport of the vessel. In addition to the requirements imposed by the applicable standards there was a suite of project requirements that stipulated additional requirements such as hardness and nickel limits, heat treatments, NACE compliance and NDE requirements.

Scope included Design, Draft, Verify and Register



PROJECT DETAILS

Engineering

- Design Pressure : 12,000 kPag
- Design Temperature -29°C to 70°C
- Dimensions : 2.0m ID x 11.2 long overall
- Mass : 79,200 kg
- Standard : AS1210 Class 1
- PWHT 650°C per 25mm

Materials

- Shell & heads : AS 1548-5-490 impact -40°C
- Flanges & nozzles : ASTM A350-LF2

Manufacturing

- NDE 100% visual, UT & MT
- Hydro pressure 18,000 kPa

Surface Treatment

- 3 coat system 160um

Delivery / Transport

CIF, Southern Victoria



Planning

The 100mm wall thickness presented a number of project planning hurdles from the manufacture of Australian boilerplate in the dimensions required, normalising, contract rolling and logistics of the finished vessel. Project planning was carried out in conjunction with suppliers assessing equipment limits at each stage of manufacture to model lead times and handling methodologies ensuring a safe and problem free design to deliver cycle.

Challenges

The custom milling of the 100mm thick plates required negotiations with Bluescope. Constraints in tonnage per plate resulted in plates being welded before rolling to make the required length. Working closely with both Bluescope and the contract rollers, a solution was found to form the plates and testing to ensure joint integrity. Normalising had to be carried separately to the milling process, LA Services modified their oven to handle the 9000C temperature to complete this scope in-house.

Notes

The high pressure required the use of self reinforced nozzles, for the 600NB manways this required scalloping of the 100mm thick stub to suit the shell profile, to save time this was performed by the nozzle manufacture.

[Find out more at www.la.services](http://www.la.services)

Contact us for further details on our projects

77A Carrington St

Revesby NSW 2212

+61 2 9780 8000

enquiries@la.services

