

Alkylation Unit Column



PROJECT OVERVIEW

Thornton Engineering manufactured an Alkylation Unit Column for the production of high-octane fuel for an Australian-based refinery. The scope of work included:

- Vessel design and detailing, including third-party verification
- Statutory design registration
- Global procurement of raw materials
- Development of several weld procedures including exotics
- Manufacture of vessel, platforms, ladders and pipe supports
- Column Section Stress Relieving
- Testing of vessel – hydrostatic, proof load testing
- Surface treatment
- Transport to site
- Steel was sourced internationally from a Belgium mill due to the strict chemical restrictions and Hydrogen Induced Cracking (HIC) resistance.

All fabrication for the project was performed in-house, giving Thornton Engineering greater project control with less reliance on sub-contractors and less risk on scheduled activities. This column was treated as two assemblies in our 25m Stress Relieving Oven, then hydrotested and painted in our 40m in-line paint shop.

This column was successfully delivered on time to client specifications for a planned shutdown.

PROJECT SPECIFICATION

Year	2020
Dimensions	32m (H) x 3.0m OD
Design Pressure	1035 / -80 kPa(g)
Material	A516-65N (HIC+S54)
Classification	Class 1B
Thickness	30mm
Weight	110T



Project Enquiries

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