



Project: Easington Terminal Works Contractor: Costain/Online Design Engineering End User: Centrica Storage
 Product: Reciprocating Compressor Location: UK Year: 2011

Application

The packaged Reciprocating Compressor forms part of the facilities for the York Offshore Terminal at Easington in the UK. The engineering contractors for this project were Costain Oil, Gas & Process Ltd and Online Design Engineering Ltd, with the purchase order being placed by the end user, Centrica Storage.

Description

The scope of supply for this project comprised:

- Skid Mounted and fully packaged Ariel Reciprocating Compressor, Frame JGJ/2 Oil Lubricated
- Skid mounted process train comprising Air Coolers and knock out drums
- Acoustic Enclosure for the Compressor
- Piping system was #150 inlet and #600 outlet supplied in Stainless Steel materials
- Modular Double Block & Bleed Isolation Valves were used extensively across the whole package
- Overall Skid Package dimensions were 5.9m (l) x 5.2m (w) x 6.1m (h)



Challenges

Some of the challenges OGS faced and overcame during the execution of the project included:

- The package design needed to accommodate a range of Inlet Pressure cases.
- Despite being located onshore, this package was part of an expansion to an existing facility, so space was limited. There was a noise restriction on site of 80dB(A) and an acoustic enclosure was provided to cover the compressor and motor. This enclosure was designed to be retractable to provide access for routine maintenance.
- There was a high CO₂ and free water content in the feed gas and careful material selection was required to prevent any potential corrosion issues.
- A Variable Speed Drive was selected to provide the full operating range required.
- Acoustic and pipe stress analysis were carried out by OGS to ensure that vibration and torsional stresses were minimised.