Butadiene storage facilities – Propylene refrigeration

Jam Petrochemical Co, Assaluyeh, Iran

JPC built a new butadiene production, storage and export facility in Assaluyeh, a hot, saline, humid and corrosive area. Butadiene is a sensitive product that will degrade and polymerise if not kept cool, so refrigeration is a critical service.

For this project, we supplied two refrigeration units, each with 2 x 100% compressor systems. The intermediate storage unit is designed to maintain the temperature of the spherical butadiene storage tanks, and the export unit chills the butadiene before it is pumped into ships for export.

Propylene was chosen as the refrigerant, for its excellent performance, ready availability at the site, environmental friendliness and low cost.

Plate exchangers were used extensively in the propylene side of these systems, providing a large saving in system propylene charge, space, weight and cost, as well as high efficiency and excellent corrosion resistance.

- Zone 2 hazardous area
- 513 kW at -1°C (Intermediate unit)
- 389 kW at -1°C (Export unit)
- Mycom 160L screw compressors for all duties
- Flooded shell and tube evaporators, with two separate bundles in one shell for the intermediate storage unit.
- Brazed plate economiser for intermediate unit and refrigerant-cooled brazed plate oil coolers.
- Semi-welded plate heat exchanger condensers
- Locally mounted control panels; systems controlled directly from the client DCS

The system can operate at all load variations all year round, from 100% down to 0% capacities.

After commissioning, RE has provided maintenance, spares and technical support for this refrigeration unit.

Refrigeration Engineering International Pty Limited

Australia • UAE

9 Charcoal Close, Unanderra NSW 2526 Australia • Tel: +61 (0)2 4262 3000 • www.refeng.com.au • info@refeng.com.au

ACN 156 300 506 • ABN 80 156 300 506 • RTA AU07408