

Chemical Injection

Electric Drive Pour Point Depressant Injection Package

Date

April 2021

Client

Major Onshore Refinery Operator

Location

UK Onshore

Scope

To supply an electric drive Pour Point Depressant injection package. Injection Rate: 0-1800 litres per hour Duty Process Pressure: 13.8 barg Fluid Viscosity: Up to 600 cP Ambient Temperature: -15 to +30 °C Skid ATEX Classification: Zone 2 IIA T3 Power Requirement: 440V 3ph 50hz Chemical reservoir: Tanker (by others)

Required Injection Rate: 0-1800 litres per hour

Duty Process Pressure: 13.8 barg

Fluid Viscosity: Up to 600 cP

Ambient Temperature: -15°C to 30°C

Skid ATEX Classification: Zone 2 IIA T3

Power Requirement: 440V 3ph 50hz

Chemical reservoir: Tanker (by others)

Solution

- ICR proposed SPX Flow Internal Gear Pumps in a duty/standby arrangement c/w variable speed electric motors
- Motor speed was locally controlled by a skid-mounted Ex d control panel
- Coriolis Flowmeter power supplied via the control panel
- On-skid equipment earthing provided along with On-skid cable support system
- Package was installed on a painted carbon-steel base frame c/w integral sloping drop tray with drain valve, certified lifting points, sling set and spreader lift beam
- Tubing, fittings, valves and components supplied in 316 stainless steel
- Discharge manifold fitted with dissimilar check valves for increased reliability

Results & Benefits

- Pumps capable of pumping viscous fluids at the required flowrate
- Bespoke control system configured to accept incoming power from client distribution board Overpressure safety built into design with discharge pressure relief valves
- Stable discharge flow and pressure through use of pulsation dampeners
- Real time flow rates and cumulative flow displayed locally on Coriolis flowmeter

