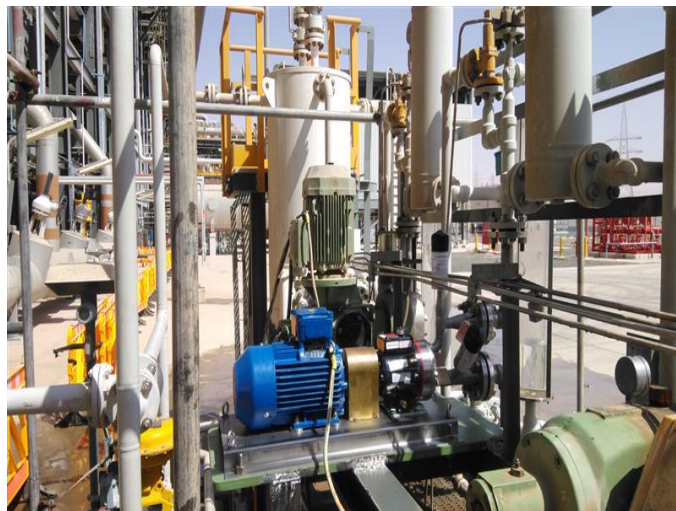


Application story



Absorber Wash Water Make-up Pumps

Location UAE (Installation: June 2018)

Hydra-Cell model 2 x G10XKSTSNEPB & 2 x G15XDSTNNEPB with special flanges with pulsation dampener ports

Type of application Absorber Wash Water Make-up Pumps

Flow rate G10 – 1.1m3/hr / G15 – 1.3m3/hr

Liquid Demineralised Water

Pressure G10 - 10 barg / G15 - 98 barg

Application details

The absorber in a gas processing plant has the purpose of removing acid gases from the feed. This is usually a fractionation column equipped with trays or packing beds.

The absorber column operates at the feed gas pressure, with usually a minimum pressure of around 5 barg to make the process work. There is no limit on high pressure as far as the process is concerned.

Feed gas pressure must be positive due to the high freezing point of the amine solutions used for gas sweetening.

The wash water pumps are used to inject deionised water at the top of the absorber at the top tray to remove the amine carried over with the treated gas. The water cascades down to the bottom tray of the water wash section and removed. This is treated and recycled.

The gas exists in the absorber and then goes onto the gas dehydration unit where the gas is dried with TEG.

For this continuous duty application, the customer required a hydraulically balanced diaphragm pump to ensure the demineralised water did not cause maintenance issues with seals and packing.

The previously installed pumps were API 674 plunger pumps which had excessive packing maintenance due to the corrosive and non-lubricating nature of the demineralised water.

Since installation until 2021, no maintenance has been needed on the Hydra-Cell pumps other than the annual oil change.

Advantages of Hydra-Cell pump on this application

www.hydra-cell.co.uk

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