

Oil Refinery, North Lincolnshire, UK

Ultrafine Water Filtration for the Desulphurisation of Diesel Fuel

Oil Refinery situated in North Lincolnshire, UK

The oil refinery utilises a process water ultrafine filtration system that is managed by SUEZ.

Background

The refinery infrastructure was upgraded to enable production of ultra-low sulphur diesel. The increased capacity to process sour crudes needs a constant supply of highly purified water, allowing the Steam Methane Reformer to function effectively.

Description of the solution

The first stage of filtration is removal of coarse particles such as pipeline debris. The process water inlet filters comprise of a single BOLLFILTER Automatic Type 6.18 DN200 alongside a bypass or back-up filter, a single BOLLFILTER Simplex Type 1.03.2. Fitted directly on the potable water supply pipeline, the water is filtered to 200-micron to protect the downstream water systems. The BOLLFILTERS prevent blockage of the ultrafine filters, the de-ionising filters and chemical treatment systems to ensure the required flow is maintained, resulting in efficient production of process water for the Steam Methane Reformer. The BOLLFILTERS are a fully automated, robust units that backflush the accumulated debris to waste, controlled by timers with DP override.

Advantages and benefit for the customer

The water quality has been consistently high since the filters were commissioned and due to the performance of the BOLLFILTERS, contamination in the system is kept to a minimum and ensures smooth operation. Installing BOLLFILTERS for solids removal will extend the lifetime of a typical Ultrafine Filtration System. The BOLLFILTERS will operate for many years with minimal maintenance.

Summary

The potable water to feed the Ultrafine Filtration System passes through one automatic BOLLFILTER filtration unit before transferring to the Ultrafine Filtration System. The BOLLFILTERS are an important part of the whole system, preventing minute debris particles entering the ion exchange units, which has the potential to shut the system down. The filters are maintained to a high standard by way of regular planned maintenance by BOLLFILTER engineers.

System

- 1 x BOLLFILTER Automatic Type 6.18 DN200
- 1 x BOLLFILTER Simplex Type 1.03.2 DN200
- Filtration Level: 200 micron
- Flow Rate: 216 m³/hr
- Operating Pressure: 3 bar



BOLLFILTER Engineer attending UK Industrial site



BOLLFILTER Type 6.18 DN200 and Type 1.03.2 DN200



Left: SUEZ ion removal and treatment system
Right: 1 micron filtered water storage ready for use



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