
Belhaven: Powerful Grundfos Solution has solved Belhaven's CIP problems

Based on the shores of the Firth of Forth in the Royal Burgh of Dunbar – about thirty miles east of Edinburgh – Belhaven Brewery is the largest regional brewer in Scotland.

From the historic brewery a portfolio of branded beers are produced and sold to their own estate of public houses in Scotland and to a wide range of free trade customers, as well as to the takehome and export markets.

The Situation

Belhaven Brewery was not satisfied with its CIP (Clean in Place) system. This hinged on an AOD (Air Operated Diaphragm) pump that scavenged cleaning solution from beer holding tanks via a flow plate to the CIP feed tank during the routine cleaning process. However, the pump model in use struggled with drawing the solution from the outer tanks – some of which stood more than 20 m away. The pump would frequently become air locked and fail to empty the tanks satisfactorily.

Furthermore, the exiting system was also noisy and exerted a lot of vibration and stress on the pipe work installation. Due to these faults the operating and maintenance costs were starting to add up.

The Grundfos Solution

An essential point of effective CIP is to keep liquid levels low. However, this often leads to vortexing and air entrainment in the CIP solution: common problems faced by CIP scavenge pumps. To overcome these problems Grundfos distributors in Scotland,

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LOCATION:

United Kingdom

COMPANY:

Belhaven Brewery

Barr + Wray, leaders in Fluid Handling, Filtration and Water Treatment supplied a Grundfos Sipla 28.1 Bloc Super 2 1/2"/2 1/2"/4.0/4 self-priming, liquid ring, scavenge pump. This Grundfos Sipla model was selected due to its excellent suction capacity as well as its ability to pump entrained air without air locking. The top casing connections ensure that liquid is retained in the housing whilst the pump is stationary. By doing so, the pump is primed ready for re start

The Grundfos Sipla is a self-priming, liquid ring pump, designed specifically for scavenge applications in CIP return systems. Because the range can handle liquids with high air content it is very popular in the pharmaceutical, cosmetics and food industries.

The Outcome

Since installation, the Grundfos pump has proven itself capable of servicing all the tanks, including evacuating the CIP solution from over 20m of 3" diameter suction pipe from the furthest vessels.

Ronnie Muir, Engineering Manager for Belhaven Brewery commented "Since the Grundfos system has been installed, we have seen improvements in; scavenge ability, shorter CIP times, reduced costs improved tank cleaning, lower noise levels, less vibration, pipe work stresses and lower life cycle costs. Ronnie continued, "This solution has solved several problems that we have had for a long time. So far it has proved to be reliable and cost effective. I look forward to working with Barr + Wray and Grundfos for our future pump requirements".