Compact Mutrator Cuts Costs At ICI

ICI Chemicals and Polymers is achieving significant cost savings from the installation of a low maintenance Mutrator sewage pump system from Mono® NOV at its chlorine manufacturing plant in Lostock, Cheshire.

The pump previously used on sewage from the two-acre site was unable to cope with increased demand and generated a £3,000 annual repair bill, with additional costs for the hire of tankers to clear the resulting sewage build-up.

Mono carried out an on-site survey of ICI's specific needs at Lostock, where 70 people are employed, before recommending the Compact Mutrator. This is a complete sewage pumping station, incorporating two Mono progressing cavity pumps with a centrifugal tri-hammer macerator fitted in the suction line. Factory assembled and tested, the package includes an integral control panel, and comes completely plumbed and wired for quick and easy installation.

The system has met ICI's stringent health and safety requirements, works unattended, and has been entirely trouble-free since installation. The tri-hammer macerator's mechanical seal operates in an isolated oil bath extension to the process liquid, ensuring extremely long life. Operation is shared evenly between the two pumps, through sequential starting, to reduce wear and avoid problems arising from non use of a standby.

Twice yearly checks are enough to ensure that the level monitors which control the pumping cycle are working properly. The GRP housing, incorporating a heater and integral base, protects the system from the elements.

In addition to cost savings on maintenance, the new system uses 15% less electricity. It is driven by a single 4kW motor, compared with the two motors required previously.

One of the benefits offered by progressing cavity pumps is that head is independent of speed. They can therefore be operated at a far lower speed than before - 400rpm compared with 960rpm - thereby reducing wear, while maintaining high head capability. The pumps' increased throughput has also resulted in shorter operating periods, leading to further energy savings and extended service life.

Lostock site clerk of works Steve Hough says: "Mono has produced a system that has met our key requirements, primarily that it should be safe, maintenance free and cost effective to run".



400 rpm

4kW motor

Pump Speed:

Prime Mover:



Mono Pumps Ltd Martin Street, Audenshaw Manchester, M34 5JA England T. +44 (0)161 339 9000 E. info@mono-pumps.com www.mono-pumps.com



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