

Coriolis helps GF to improve its filling times

GF is reporting reduced filling times, improved accuracy and repeatability, and tighter filling tolerances on its filling machines since installing the latest Micro Motion FMT filling mass transmitter, from Emerson Process Management.

Based in Parma, Italy, GF designs and manufactures high-tech filling equipment and control systems for the pharmaceutical, medical and food industries – typically for the precision measurement of injectables, infusions, ophthalmic preparations, syrups and detergent solutions.

“Emerson’s Micro Motion Coriolis technology is accurate, reliable and user-friendly, adding value for our end user customers,” comments Marco Serventi, sales manager with GF.



Previously, GF had been using filling systems based on time-pressure instruments, as well as piston-syringe and peristaltic (roller type) pumps, designed for the pharmaceutical industry, he explains.

Apart from improving the speed and accuracy of its machines, and enabling

users to change media without replacing the instrumentation, GF wanted to ensure in-line sterilisation without disassembling the machine.

Serventi says GF met these objectives by using the FMT filling mass transmitter with Micro Motion Elite and H-Series flowmeters.

Specifically, GF has improved system response time and reduced batch cycle times by taking advantage of integrated valve control from the transmitter, rather than the traditional pulse output, set up through a PLC.

In addition, the rangeability of the Coriolis flowmeter allows different media to be dispensed, without changing any mechanical components. For example, filling can be in the range from 0.5g, all the way up to 5Kg.

Split bearings slash costs for Wessex Water engineers

Split-to-the-shaft design and improved sealing of Revolve’s SRB bearings have resulted in massively reduced maintenance on orbital aeration tanks at a Wessex Water treatment plant.

The bearings allow easy maintenance, without having to remove the shafts of long horizontal rotors that agitate sewage and introduce oxygen to the treatment process. Previously, a crane was required to remove the solid support bearings, at a cost running to thousands of pounds per day.

In brief, each of the aeration tanks has several horizontal rotors that agitate the sewage, which, in the past, were supported by two solid bearings with internal seals. However, during periods of heavy rain, sludge can rise to a point where the bearing units become submerged, compromising the bearing seals and leading to premature failure.

Revolve was asked to help, and hence the solution based on its split roller bearings. These were specified with housings and supports designed to be interchangeable with the existing bearing units, where possible, or to incorporate adaptor plates.

The housings were also equipped with high-performance split rubber lip seals, with garter springs and retaining plates, to guard against water ingress. Finally, the bearings were equipped with remote grease points.

“Thanks to a very effective sealing system, our bearings are capable of surviving far longer than traditional bearings, with no more maintenance than standard regreasing required,” comments Revolve sales director Adrian Menzies.



Chopper pumps take no prisoners in Peterborough

Huntingdon-based solids pumping and mixing specialist P&M Pumps has helped plant engineers at HMP Peterborough prison to eliminate problems with continually blocking pumps.

P&M’s Vaughan chopper pumps were considered for the site back in 2004, but rejected at the time, essentially on cost grounds.

However, since then the prison population has increased to around 900 and last December (2011), the engineering services firm contracted to maintain the pumps, sewers and pipework systems on the site called P&M for assistance.

Frequent blockages of the installation were resulting in the existing submersible pumps being lifted every week for cleaning and maintenance – with suction tankers often called in to remove effluent.

It was proving an expensive business, so P&M Pumps brought its trailer-mounted pump set to site and engineers tested it with items known regularly to be causing blockages – such as gloves, towels and even fleece jackets.

As a result, two Vaughan SE4L 7.5kW submersible chopper pumps were adapted to fit straight down onto the existing guide rail mount system in the female wing wet well to ensure an easy retrofit, with minimal disruption.

Two more similar pumps are now due for installation into the male wing wet well.

