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Brammer gearing-up at Thames Water

The issue

When Thames Water needed to replace an old gearbox on a picket fence thickener sludge tank at its White Walham sewage treatment works in Slough it called on Brammer to provide a highly efficient solution.



Brevini gearbox mounted onto bell housing

The old double reduction worm gearbox had a single v-belt running from the motor to the gearbox and was proving to be very inefficient – running at just 60% capacity. The V-belt was also being used as a torque limiter on the unit meaning that if the tank paddle jammed, the belt would slip and shred requiring time-intensive mechanical work.

As the unit is now obsolete and spares are no longer available to initiate a repair, Brammer recommended that it was in Thames Water's best interest to replace the old gearbox with a new modern unit rather than attempt an overhaul.

The solution

Taking lifetime costs into account Brammer identified, in conjunction with Brevini Gearboxes, a standard planetary gearbox with an incorporated torque limiter as the ideal solution.

Managing the process to install the new unit, the team at Brammer had to drain the tank and erect scaffolding inside to allow the old gearbox to be unbolted and uncoupled from underneath.

Bringing all the elements together, Brammer called on a local engineering firm to manufacture a bespoke ball housing to bolt in between the gearbox and the sludge tank. The housing encases a Renold pin coupling and SKF thrust bearing and stub shaft to hold the weight of the sludge tank paddle.

The result

The new gearbox is modern and highly efficient – increasing efficiency to 95%. The integral torque limiter now means that if the tank paddle jams the torque limiter will trip and will simply need resetting – providing time and cost savings for Thames Water as this negates the need for mechanical repairs.

The Brevini planetary gearbox can also be removed in the future without the need to drain the tank and pay for scaffolding inside.

Mitch Chambers of Brammer who was involved in the project, said: “The installation of the Brevini gearbox will extend product life, reduce the need for costly maintenance and provide real energy efficiency savings for Thames Water. We have also taken the opportunity to standardise all parts used which will reduce working capital in the long term.”

Simon Brades, M&E Engineer for Thames Water said: “Brammer brought everything together on this project to source what is proving to be a highly effective solution to the troublesome old gearbox.”



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Notes to Editors:

Brammer is the UK division of Europe's leading distributor of industrial, maintenance, repair and overhaul (MRO) products and services. With a turnover of £109 million and more than 800 employees, the company offers a range of over one million individual products via a nationwide network of 83 Sales and Service Centres.

Brammer's extensive product range covers bearings, mechanical power transmission products (including gearboxes and motors), pneumatics, hydraulics, seals, industrial automation as well as a complete range of tools, maintenance and health and safety products. The company is an authorised distributor for many of the world's leading brands including SKF, NSK, Renold, Gates, Flender, Siemens, SMC, Norgren, Rocol, Loctite and Schaeffler UK.

By combining technical expertise with excellence in supply-chain logistics, purchasing and the management of third-party providers, Brammer has a proven track record of saving its customers money within three critical business areas: reducing total acquisition costs, improving overall production efficiency, and reducing working capital.

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