



ENVIRONMENTAL TECHNOLOGY

## Upgrade increases MTBF by more than 3,500%

A global food and beverage manufacturer was experiencing a mean time between failure (MTBF) of just two months on a vertical mixer processing starch at its starch and sweetener processing plant in Poland.

The mixer was sealed using gland packing, which was leaking and causing seal failure. Costs to the company were high – almost £5,000 a year in packing replacement and maintenance, in addition to the cost of lost production. The vertical mixer also operated under high pressure, generating vibration. This, combined with the pressure of the packing, led to premature wearing of the shaft. AESSEAL® took into account the 800rpm rotation speed, the maximum radial movement of almost 1mm and the vibration, when designing a solution.

The gland packing was replaced with a cartridge double mechanical seal specifically designed for mixers, where radial shaft movement caused by vibration is common. The inboard seal faces are made from tungsten carbide, with outboard faces made from tungsten carbide and carbon. Tungsten carbide is highly resistant and can accept radial movement up to 1.5mm.

LabTecta® bearing protectors, which are more effective at excluding moisture and other contaminants, were also installed. The new seal and support system eliminated the problems of leakage/wear and were still working problem free six years later. The company saved £3,450 within the first year on packing replacement and maintenance costs and achieved a return on investment within four months. Total savings to date are £27,450 (and counting).



## ‘Reliability increased from 2 months to 6 years’

Industry:	Food & Beverage
Product:	CDM™ and LabTecta®
Application:	Starch mixing
MTBF Increase:	3,500% (and counting)
Savings:	£27,450 (+ more in lost production)
Reference N.O:	CH01452



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