



ENVIRONMENTAL TECHNOLOGY

AESSEAL® cures reliability issues at US wastewater facility

Damage to seals on the pumps at a large wastewater treatment plant in North Carolina was requiring regular and costly seal changes.

The pumps are located in the main works building at the bottom of an underground tank, and are one of the primary pieces of equipment in use as the wastewater enters the facility. The system in use was a single split seal SiC/SiC Viton, Plan 32 flush on stuffing box. The problem was the constant abrasion caused by the sand, silt, and particulate settling in the tank, and the damage caused by fine solids getting into the seal. This meant that seal changes were necessary about once a year on three pumps, an operation made more complicated by the fact that the installation of split seals required highly experienced staff.

AESSEAL's solution was to install a CDSA™ 2.500" Dual seal with TC/TC/TC/Car faces and Viton o-rings, with a 10 Litre SW2™ water management system with filter, installed on a Fairbanks Morse/Pentair 4523-C hard metal pump.

This allows a dual seal to run clean filtered water in a pressure-controlled tank. Barrier fluid eliminates the ingress of fine silt and sand, and ensures face integrity during operation. This has in turn resulted in much improved reliability. In contrast with the previous MTBF of just 12 months, the AESSEAL® system has been running problem-free for over 5.5 years since its installation in April 2017.

"That's a long time without incident," said the plant's maintenance manager. This also adds up to savings of \$1100 on seal replacements, not counting six hours of labour costs. The use of the SW2™ tank system, running water in a closed loop as opposed to the open stuffing box flush, has also reduced the plant's requirement for water in its main building, where supply pressure had been severely limited when multiple pumps were running Plan 32.

The reliability of the AESSEAL® pumps is a major contributor to the smooth and efficient operation of the plant. They are a critical element in a facility which takes in 48 million gallons of wastewater each day, and which provides drinking water to a large metropolitan area as well as to local bottling companies like Coca-Cola®.

'That's a long-time without incident'

Industry:	Water & Waste
Product:	CDSA™ and SW2™
Application:	Wastewater pumps
MTBF Increase:	467% (and counting)
Savings:	>\$1,100
Reference N.O:	TD3074240



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