

Sealing Sludge Pumps with 442 and SpiralTrac™

The Challenge

Pumping stations in sewage collection systems are normally designed to handle raw sewage that is fed from underground. Sewage is fed into and stored in an underground pit, commonly known as a wet well. The well is equipped with electrical instrumentation to detect the level of sewage present. When the sewage level rises to a predetermined point, a pump will be started to lift the sewage upward through a pressurized pipe system called a sewer force main or rising main from where the sewage is discharged into a gravity manhole. Pumping stations are remotely operated and require reliable seal solutions that can be repaired on-site.



442 Split Seal

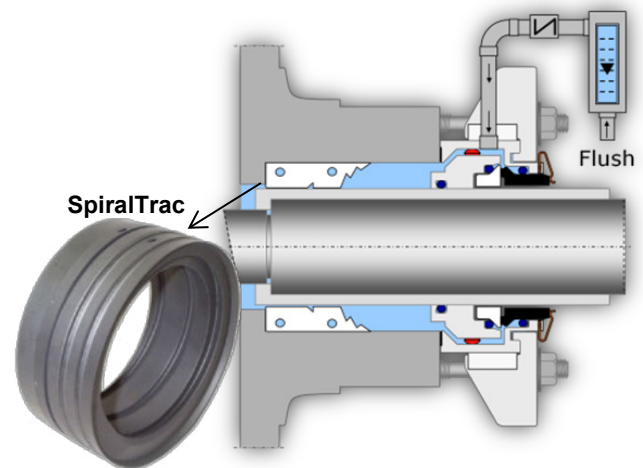
A large water and sewage services provider in North West England was faced with reliability issues on one of the pumping stations near Hollins Green. The seals installed on these pumps were standard cartridge seals that suffered from poor seal life. Moreover, it generally took up to 5 working days to replace failed seals.

The Chesterton Solution

Chesterton's local distributor performed pump casing modification and installed Chesterton 442 fully split cartridge seals, 130mm in Silicon Carbide versus Silicon Carbide faces, in conjunction with a Spiraltrac Bushing to replace old standard cartridge seals.

There are currently two seals installed at the Hollins Green pumping station, 1 sealing successfully for 16 months, the other 12 months. Installation of these seals was done in half a day.

Assuming 1400 hours average MTBF from previous sealing arrangement, 2 split seals would save 4 x 4.5 working days in labour, or £7,200 per year!*



Planned conversion of other 4 pumps to Chesterton 442 fully split cartridge seals would provide savings of £21,600 per year (based on same MTBF regime as previous un-split cartridge seals).

Why Use Chesterton 442 with SpiralTrac?

- No equipment disassembly, avoid pump teardown.
- Proven Performance with high pressure capability for a wide range of services
- Fits majority of equipment without any modifications
- Chesterton Split Seals with Spiraltrac have been in service worldwide, effectively sealing lift station pumps with sealing system life reaching 5+ years in thousands of the most difficult applications!

Application Details

Equipment	Warman 6/4 F-HH centrifugal pumps	Quantity	2
Medium	Sewage		
Pressure	18 barg	Speed	628 rpm
Seal	442 130mm SC/SC/EP with SpiralTrac		

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