

Wastewater Plant Dramatically Reduces Seal Installation Time with Split Seals

Wastewater
Chesterton 442C Cartridge Split Seal
Case Study 035 Rotating Equipment

Challenge

Background

Wastewater plants often have large equipment to move the fluids needed for normal operation. Repairing this large equipment is very costly and time consuming. A wastewater treatment plant that Chesterton works with in Ohio is a prime example. They have large end suction pumps using cartridge seals that need to be replaced every two years or less. It takes the maintenance crew approx. 8–10 hours to disassemble the pump, replace the cartridge seal, and reinstall the pump.



ITT 12 x 12 x 15 NSY End Suction Pump

Solution

Service

When presented with the advantages of the **Chesterton 442C Cartridge Split Seal** and the ease of installation and use, the customer decided to replace a cartridge seal on one of the pumps in the plant. A **442C** seal 4.50" with RSC/RSC faces and FEPM O-Rings was installed by the plant maintenance crew and took about 1–2 hours to complete. The seal has now been running without issues for over 5 months. Some of the prior cartridge seals lasted only 4–5 months!



442C Seal 114 mm (4.50") was installed in less than two hours

Results

Based on this initial success, the plant is planning to convert all of their cartridge seals over to **442C** split seals. There are an estimated 15 pumps that will undergo the transition.

The plant can expect an average yearly savings of approximately \$3,000 for each split seal based on extended reliability and greatly reduced installation time. If all 15 pumps are converted, the plant can expect to save another \$45,000 year.



Plant expects significant savings per year.