

Challenge

A southeastern U.S. pulp facility wanted to convert all their rotating equipment from compression packing to mechanical seals to reduce water consumption in their facility and eliminate the leakage and collateral damage to their pumps and surrounding equipment. Abrasive solids in the process streams caused excessive sleeve wear and, in turn, caused more leakage, equipment, and housekeeping problems.

They decided to convert 3 pumps as well as an agitator to **Chesterton 442C Cartridge Split Seals** to address these issues.



Stock pump fitted with Chesterton 442C Split Seal.

Solution

This pulp facility installed various size **Chesterton 442C Cartridge Split Seals** in the pumps and agitator.

Chesterton SpiralTrac™ F/S Environmental Controller was installed on one pump that had significant solid problems to remove solids from the stuffing box, enhancing seal life and system reliability. Because a **SpiralTrac** split version was used, the plant could keep the stuffing box clear of contaminants without requiring pump disassembly. Flow meters were installed to accurately measure the amount of flush water needed. By using flowmeters, the plant could control and minimize the amount of flush water that entered their systems.



Chesterton 442C Cartridge Split Mechanical Seal.

Results

The **Chesterton 442C** installations reduced flush water consumption by 60% of the previous flush demand with compression packing.

On an annual basis – accounting for only the 3 pumps and agitator – the facility will save over 3 million gallons of water. Previously, this water would also have to be treated as wastewater bringing additional savings based on treatment costs.

Chesterton 442C Cartridge Split Seals do not wear the sleeve/shaft or leak as compression packing in normal operation; eliminating both sleeve/shaft replacement and enhancing bearing and equipment reliability.



Stock chest agitator fitted with Chesterton 442C Split Seal.

SpiralTrac™ is a trademark of EnviroSeal Engineering Products Limited.

Technical data reflects results of laboratory tests and is intended to indicate general characteristics only.

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