

Split Polymer Labyrinth Seal Solves Huge Leakage Problem

Challenge

Background

A flood remediation station was refurbishing all of their large water pumps to improve the reliability of the pumping station.

The initial seals installed were oversized and leaking excessive amounts of lubricant from the bearing housing. The machines were too large to dismantle. The customer wanted a simple split bearing seal that would help to eliminate shaft wear typically experienced with lip seals.

The shafts were refurbished and in good condition.

Solution

Product

Chesterton® Split Polymer Labyrinth Seals (PLS) were installed on both ends of the bearing housing.

The Split PLS were simple to install, taking less than 30 minutes to prepare the shaft, install each seal, and test.

This design incorporates an automatic shutoff device, which prevents water and particulates from contaminating the bearing housing when the pump is shut down.

Seal sizes utilized were 9.500" and 8.750".

Results

Reduced Lubricant Leakage

The Split PLS have been in operation for over a year without any leaks!

Seals are split radially in only one cross-section, which reduces potential leak paths.

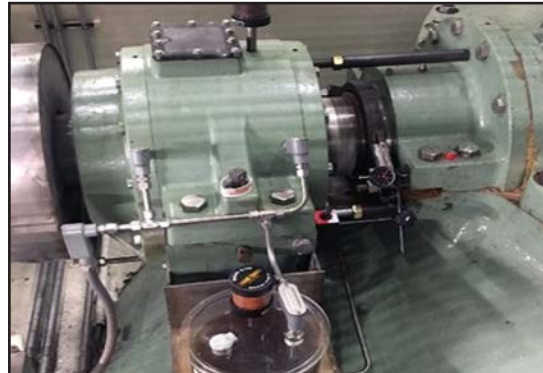
Polymer flexibility allows for easy installation by twisting the stator and rotor.

Shutoff device prevents any bearing housing contamination.

No equipment disassembly required.



Refurbishing water remediation pump.



Bearing housing.



Split Polymer Labyrinth Seal installed.