

Challenge

Background

A municipality was operating eight large vertical centrifugal pumps for potable water. The pumps were experiencing reliability issues causing costly shutdowns every 2 – 3 weeks. The customer was unable to pinpoint what was causing the issue. Further review of the seal showed signs of dry-running conditions.



Chesterton Connect Sensor installed on the pump.

Solution

Product

A **Chesterton Connect™ Sensor**, was installed on the **Chesterton® 442 Split Mechanical Seal** using one of the two available seal flush ports. The second flush port was used with a flush Plan 32. The aim of the test was to understand when, where, and what could potentially be causing issues in the pump's stuffing box.

Using data recorded through the **Chesterton Connect Sensor**, the specialist quickly found an unpredicted pressure drop creating a vacuum in the stuffing box. Correlating the recorded pressure, temperature, and vibration data showed the vacuum was happening during start/stop operating cycles.



Data interpretation.

Results

Improved Productivity

Thanks to the **Chesterton Connect Sensor**, the customer was able to identify the unexpected vacuum causing reliability issues, and further understand the frequency and duration of that vacuum within the equipment. The customer and the specialist were able to develop a solution to prevent these issues from occurring again saving them on average \$35,000 on pump repairs.

\$ = USD



Data check on Chesterton Connect App.