

Challenge

Background

The customer's two package boiler feed pumps were installed with packing in 1982 and changed to mechanical seals with cooling systems five years later with no appreciable improvements. The pumping temperature is 126°C (260°F) for this application with a 35 psi suction and 65 psi discharge pressure. The pumps would fail on average every four months or sooner, costing \$50,000 in work orders annually for the two pumps they have.



Original seal system with external cooling.

Solution

Product

Hydropads are mechanical seal face features that work to modify the fluid film directly. Placed on the outside diameter of the rotating seal face, Chesterton's advanced hydropad geometry helps lower face operating temperatures while also sweeping and self cleaning themselves of small scale and debris often found in boiler and high pressure hot water systems. **Chesterton® 1810 Hydropad 1.750"** with Quench and Drain Bushing option were installed in both pumps.



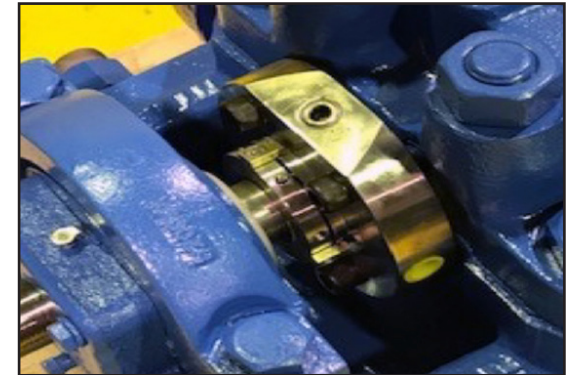
1810 Hydropad 1.750" seal face technology.

Results

Increased Reliability

Installation on one pump increased run time to over one year and counting with minimal issues. "They run like a top now, and without any external cooling" has been the feedback from the customer.

The seals have paid for themselves in maintenance savings in under four months in both pumps. Reheat savings have not been determined, but are expected to add more savings for the customer.



Reliable sealing with no environmental controls.