Kaplan Runner Blade Upgrade

Rotating Equipment Sealing Solutions

Hydropower
Chesterton Kaplan Runner Blade Trunnion Split Seal, AWC800
Case Study 031 RE

Challenge

Background

A hydropower plant using Kaplan turbines noticed that their runner blades were not working at optimum efficiency due to leakage of the blade runner seals.

Root Cause

Failing OEM rubber stacked v-rings had to be replaced every few years leading to lost downtime and unplanned maintenance.

Customer needed to get back online in the quickest possible timeframe.

Solution

Service

Chesterton's SpeedSeal facility manufactured all seals within days and had them onsite to meet the customer's maintenance schedule.

Product

Use two **Chesterton Kaplan Runner Blade Trunnion Split Seal** back-to-back, creating a positive seal both internally and externally.

Material

Durable **AWC800** thermoset urethane material provides excellent wear and hydrolysis resistance for outstanding performance in this applications.

Results

Improved Performance & Reliability

- Helped the customer get the equipment up and running quickly, saving valuable time and money.
- Zero leakage for over 4 years, eliminating the environmental and safety concerns as well as associated costs.
- Blade runners are working at optimum efficiency.

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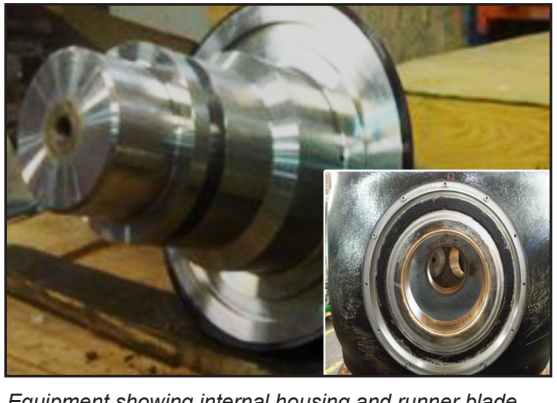
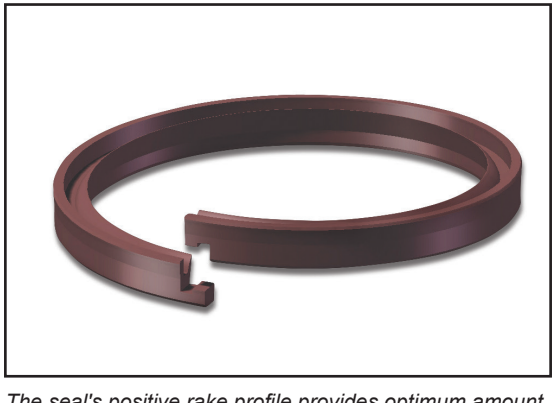
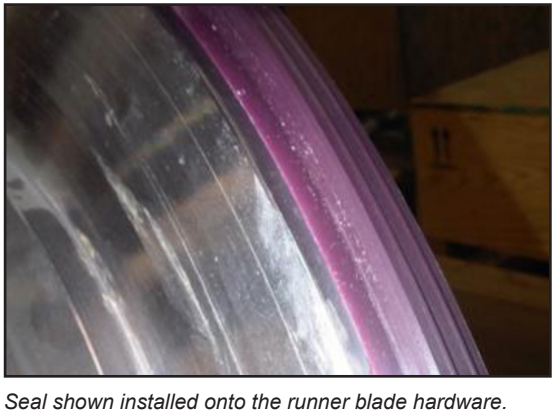


Equipment showing internal housing and runner blade.



The seal's positive rake profile provides optimum amount of radial loading and wipes contaminants away from mating surface.



Seal shown installed onto the runner blade hardware.

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