CHESTERTON
Global Solutions, Local Service.

Boiler Water Valves Repaired

Chesterton Stationary Equipment Sealing Solutions

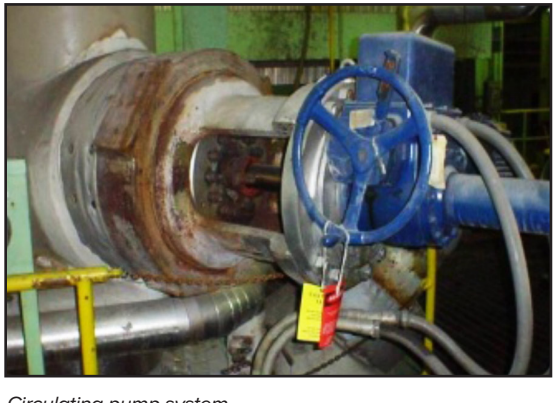
Power-Fossil
Chesterton 5300 & 1600
Case Study 009 SE

Challenge

Background

This large fossil power plant (1100 MW) experienced a catastrophic valve packing failure in 2003.

- A Chesterton Specialist found a stem cut to 0.089" under the OEM stem size
- Since there was no passive corrosion inhibitor in the competitor's packing, the stems and stuffing box bores had become pitted
- Correction attempts rendered critical tolerances beyond safe valve sealing



Circulating pump system.

Solution

Product

Install **Chesterton's Valve Sealing Solution**.

- (3) Sealing Rings of **Chesterton 5300 GTP** Die-Formed Graphite
- (2) End Rings of **Chesterton 1600** Inconel® Wire-Reinforced Graphite
- (1) **Chesterton 5100 Split Carbon Bushing** cut to proper length to fill the box

This solution offers major cost savings over replacing pitted valve stems and stuffing box sub-assemblies with OEM components.

Why Use Chesterton's Valve Sealing Solution?

- Passive corrosion inhibitor to prevent pitting
- Safe, proven leak-free service
- Chesterton 5300 for high pressure/ temperature service
- Chesterton 5100 Carbon Bushing for proper compression and load transfer over the entire 5-ring set

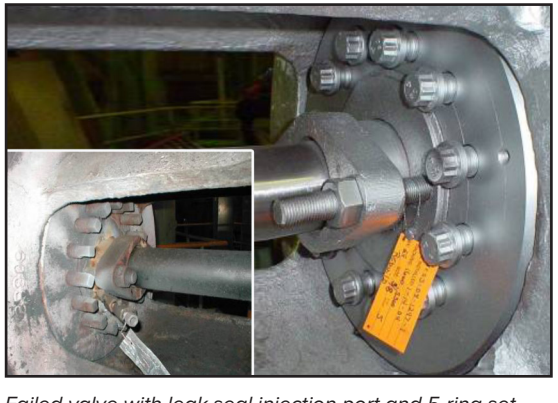
Results

Documented Net Savings: (based on reduced equipment repair): $102,190

After 5 years of service with Chesterton, none of the 24 valves have leaked, nor do they have pitted stems or stuffing box bores.

An action plan was put in place to repack all (24) 3100# Class Boiler Water Circ Valve's over the following 2 years and restore the valves critical OEM dimensions needed for safe long-term and leak-free service.

$=USD



Failed valve with leak seal injection port and 5-ring set installed.

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