Pump Reliability Up-grade with AMPS™ Active Loading Technology

Specify Industry: Steel
AMPS™, SpiralTrac® Environmental Controller, ARC 858 and ARC S2
Case Study APAC0092

Challenge

Background

A high-head split-cased pump utilising gland packing at a steel mill faces significant challenges. Excessive leakage has led to frequent bearing issues. Despite the need for regular packing adjustments, safety regulations make this process difficult.

Moreover, the pump's efficiency has declined due to the presence of heavy sludge. The customer's primary goal is to enhance pump reliability.

The core problem lies in the pump's operation system, which fluctuates the flow rate from minimum to maximum every 20-30 minutes. This erratic operation pattern negatively impacts gland packing and contributes to internal erosion.

Pump successfully installed.

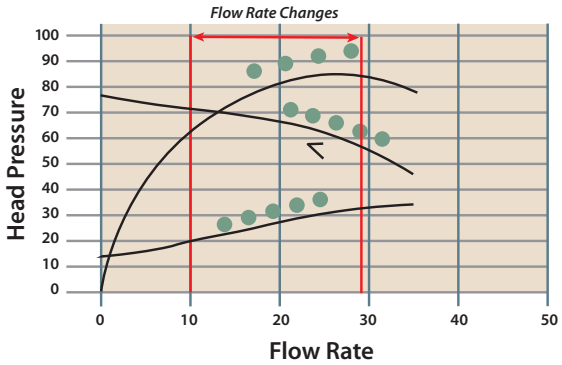
Solution

Product

GraphMax™ 22mm Packing, AMPS™ Active Loading Technology, SpiralTrac® Environmental Controller Ver-P and Chesterton® ARC 858, S2 Industrial Coatings in the maintenance process.

Coated and repaired the pump using Chesterton ARC 858 and S2 Industrial Coatings.
Integrated Chesterton Connect™ system for monitoring discharge recirculation pressure.
Implemented SpiralTrac® Environmental Controller to maintain consistent sealing pressure.
Installed Chesterton AMPS technology to help maintain a constant gland packing load despite variations in pump operation.

Equipment Pump Curve

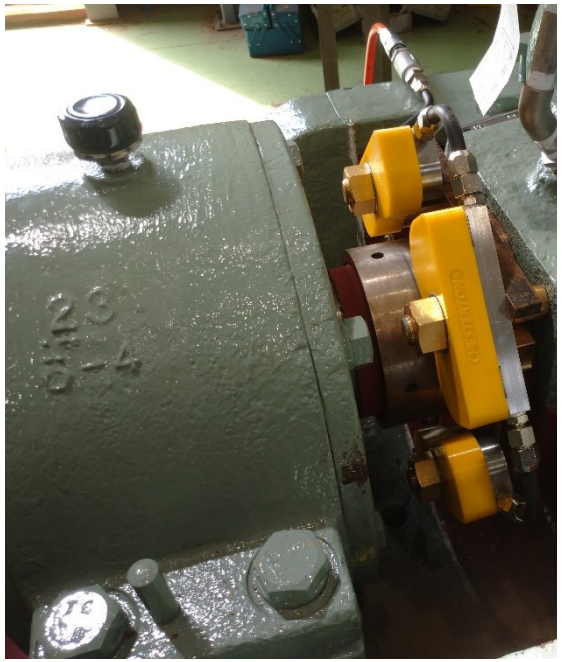


Display of the pump curve, illustrating significant variations in flow rates.

Results

Increase Reliability

Installed in February 2023, the system maintains an acceptable leakage rate, eliminating the need for any packing adjustments. There was an initial leakage issue within the first 1-2 weeks post-installation. However, after seven months, the leakage rate has remained consistently unchanged.



***AMPS™** technology has been effectively installed alongside the pump, enhancing functionality and control.*

A.W. Chesterton Company
860 Salem Street, Groveland, MA 01834 USA

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