



Application

With an increased demand for gold and other high value minerals worldwide, operators of hard rock mine sites demand increased reliability and availability and lower cost per ton produced. Crushing systems such as SAG Mills, AG Mills, Ball Mills, Gyratory and Cone Crushers are extensively used throughout the hard rock mining industry. In these systems, seal leaks leading to water ingress are intermittent and are therefore hard to detect.

Problem

A large Australian gold mine was experiencing problems with detection of seal failures on their large SAG Mill at the mine. The seal failures resulted in large amounts of water and process ore being ingressed into the lubrication system. Such seal leaks contributed to bearings being damaged by the water in the oil and resulted in the entire oil volume to be changed.

Solution

The mine installed 2 x Pall WS03 Water Sensors into the main lube oil return lines prior to the main lube tank. Each monitor was connected via the WS03's in-built 4-20mA signals to the mine's DCS System to alert operators in real time of seal failures.

Results

- Seal failures were able to be detected in real time enabling the mine to implement corrective actions immediately rather than wait for oil samples reports from laboratories to be returned.

Detecting SAG Mill Seal Failures



Pall WS03 Water Sensors installed on SAG Mill Lube Oil Return Lines

*** New installations should utilize Pall's latest generation WS08 Water Sensor as pictured below.**



Pall WS08 Water Sensor

Contact us at www.pall.com/mining