Uniquely efficient condition monitoring for hydraulic roller presses

Combining the latest generation in bearing monitoring technology, SPM HD®, with sophisticated vibration analysis provides a complete, reliable and cost-efficient solution for hydraulic roller press monitoring.

The roller press is an important part of cement mill configuration and is typically rated highly critical. A potential malfunction directly affects cement throughput, causing extensive limitations or even a complete production stop, with considerable economic consequences due to production loss and long delivery times of costly spare parts.

For bearing monitoring on roller presses, the most complicating factor is the “noisy” environment creating interference with the desired signals. During normal operation, the grinding process gives rise to high vibration levels, making it very hard to obtain meaningful and reliable results with traditional vibration measurement. The low rotational speed (approx. 20 RPM) also contributes to making the monitoring of roller mills difficult. Under these conditions, traditional vibration measurement techniques alone do not yield clear answers. Using the patented and well-proven SPM HD® measuring technique, we provide the technical solution required to manage these problems.

The SPM solution

For the roller press, combining shock pulse measurement and vibration analysis is ideal. Installation is straightforward; shock pulse transducers on the planetary gearbox and main bearings detect bearing-related signals., while vibration transducers on the gearbox detect low-frequency signals caused by unbalance, loose gears, misalignment, soft foot etc. An RPM transducer on each of the rollers enables the use of high-precision order tracking.

Transducers with sealed connectors and cable protection conduits ensure a mechanically robust installation in dusty environments and high temperatures. Shock pulse and vibration signals are transferred from the transducers to an Intellinova online system unit nearby, in turn communicating with the Condmaster diagnostic software.
Early failure detection is crucial to maximizing equipment life and performance. With fifty years of experience, SPM Instrument has the technologies, equipment, and expertise to offer efficient and flexible condition monitoring solutions for all types of industry. Through a worldwide network of resources, we provide a complete line of measurement technologies and high-performance products for industrial condition monitoring.

**Advanced technologies in a powerful combination**

Ample forewarning and clear measuring results are key to successful roller press monitoring. The perfect companion to vibration analysis, the SPM HD method for shock pulse monitoring of rolling element bearings provides these and many other benefits. SPM HD is unrivalled in its ability to reliably measure in the 1-20,000 RPM range.

Coupled with our sophisticated vibration analysis and HD Order Tracking, SPM HD offers the most powerful condition monitoring solution available. Capable of detecting a wide range of machine faults, this combination of methods provides the real-time, actionable information needed to make preventive maintenance priorities for critical assets. Crystal clear measuring results, easily understood and evaluated, makes it possible to monitor the development of damages over many months.

**Performance, productivity, and peace of mind**

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