Remote diagnostic services: a stitch in time

SKF's Remote Diagnostics Centre (RDC) manager, Zulfikar Umar, talks about the role played by SKF's Remote Diagnostic Services in assisting customers to realise the benefits of integrated data collection, diagnostics and reporting to establish world-class predictive maintenance (PdM) programmes with minimal capital investment.

A well-planned predictive maintenance (PdM) programme with its related and documented benefits of optimised asset performance, reliability and availability, is fundamental to a plant's operational efficiency and subsequent sustainability and profitability. SKF's Remote Diagnostic Services offer specialised integrated data collection, diagnostics and reporting solutions to assist customers in realising these benefits by establishing world-class PdM programmes with minimal capital investment.

"We have the necessary state-of-the-art technology and analytical expertise to unlock customers' PdM programmes to their full potential, whether they are in the early stages of programme implementation or are looking to derive more benefits from well-established programmes," says SKF RDC Manager, Zulfikar Umar. "As part of our value proposition, customers have direct access to SKF's analytical expertise, which includes SKF's professional machine condition data analysis, advanced analytical tools, leading-edge cloud-based technology, specialist knowledge and years of experience.

"SKF's powerful and professional diagnostic and analytical capabilities include the use of patented diagnostic algorithms to transform asset data into reliable, actionable intelligence. With real-time access to machine data, asset condition and SKF recommendations – anytime and anywhere – timely changes can be made to avoid catastrophic machine failure and unplanned downtime," Umar adds.

Recently, SKF's Remote Diagnostic Services were instrumental in assisting a Paper Mill customer based in the Western Cape to continue production while waiting for replacement bearings, thereby avoiding costly downtime. The customer noticed high vibration whilst changing one of its paper mill rolls following a bearing failure, and decided to contact SKF Authorised Distributor, West Cape Bearings, for assistance.

During a site inspection, SKF's Remote Diagnostic Centre Analyst, Jonathan van Rooyen, recommended a full inspection on all oil lubrication systems at the Paper Mill, upon which SKF would base a list of proposed interventions.

Van Rooyen explains: "When we inspected the oil flow line as well as the pipes for any leaks, we identified a serious lubrication fault. We recorded that the flow meter was showing

oil flow, but no oil was going to the bearing and this lack of lubrication had caused secondary bearing damage. By collecting vibration and temperature readings every few hours to monitor and trend the condition of the fault, we were able to assist our customer to continue with production until a new replacement roll and bearings arrived on site, thus optimising uptime and productivity levels."

The Paper Mill consequently requested West Cape Bearings that supply two remanufactured replacement bearings.

Establishing or enhancing a customer's PdM programme requires a few straightforward and cost-effective steps. Once the machine condition data has been collected, either via an automatic on-line system or a manual process using hand-held devices, certified SKF analysts based at the Remote Diagnostic Centre (RDC) in Jet Park, Johannesburg, apply the most advanced, cloud-based technology and proprietary SKF signal analysis techniques to interpret and report on the data.

Umar points out that because the service is cloud-based, installation is fast. "Operational availability can generally be achieved within days and critical software updates or functionality upgrades can be quickly and automatically uploaded." SKF's global cloud adheres to ISO/IEC 27001, an international standard commonly used in the IT industry for information security management system (ISMS) certification.

The next step is the generation of customised, easy-to-understand reports which Umar explains are forwarded via e-mail. Alternatively, customers can log into a secure SKF-hosted web server to view a summary of their machinery status, key performance indicators (KPIs) and actual vibration data plots. "However, if the situation is urgent, SKF experts will contact plant supervisors directly," he notes.

SKF recommendations embody decades of in-depth application knowledge and proven engineering solutions that combine expertise in bearings, seals, lubrication and condition monitoring technologies. SKF's flexible hardware and software solutions can be adapted to customers' specific needs and application challenges. In addition to standardising machine condition analysis practices, customers can share these solutions plant- or even enterprise-wide for informed business and technical decisions that will realise additional operation and maintenance savings.

An added advantage is that customers can avoid the costs of in-house experts and software maintenance. SKF's Remote Diagnostic Services solutions are ideal for facilities with shortages of skilled people trained in predictive maintenance techniques or for remote operations where service access is difficult.

SKF is currently responsible for monitoring and/or maintaining more than 700 000 assets world-wide across virtually all industries – from oil and gas, railways and off-shore wind farms to marine, metals and mining operations.

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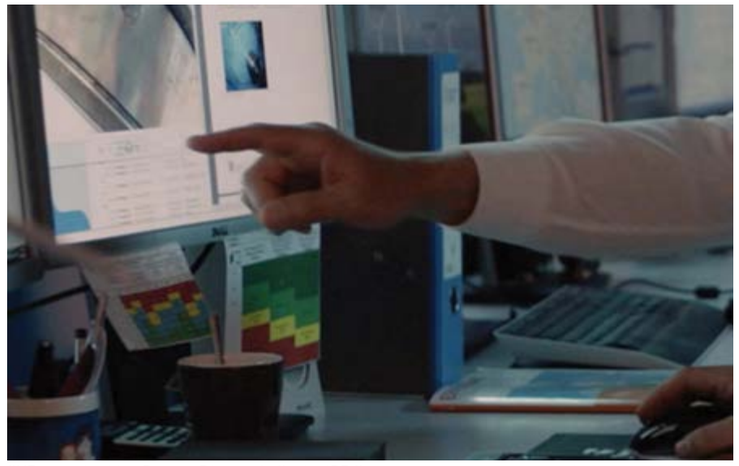

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