

SKF Maxilube optimises Moroccan mill

A complete Maxilube lubrication system from SKF has enhanced personnel safety, increased machine reliability, boosted uptime and delivered substantial time and cost savings for a leading paper mill in Morocco.

Before the SKF intervention, a paper mill in Morocco had little control over the lubrication of bearings on one of its paper machines. Extremely restricted safety procedures prohibited any approach to the running machine. The customer's only solution therefore was to grease the bearings on the wet end when the machine was standing still during scheduled stoppages. As lubrication could only be performed on the bearings every 35 to 60 days, lubrication was insufficient and, when the machine's running time increased, this caused the bearings to overheat and ultimately fail prematurely.

The customer subsequently requested SKF to supply and install a lubrication system on the wet end of the paper machine. Following numerous meetings and discussions with the SKF Morocco team, the customer chose the Maxilube monitored dual line solution. As the installation had to take place during the planned machine downtime, when all maintenance operations were carried out, SKF only had a five-day window in which to install the entire lubrication system and was the only supplier who was willing to accept this tight deadline.

When the customer postponed the project for approximately four years, SKF faced new challenges. The customer contacted SKF in August 2023, requesting that the team again commence work on the lubrication solution. The complete lubrication system had to be installed before the

end of October 2023 to take advantage of the scheduled five-day machine shutdown. Challenge accepted!

Thanks to the support from SKF's Muurame factory as well as the efforts of all the commercial colleagues at Customer Service, SKF managed to get the equipment three days prior to the start of the customer's technical shutdown, which greatly assisted the team with the necessary preparation work.

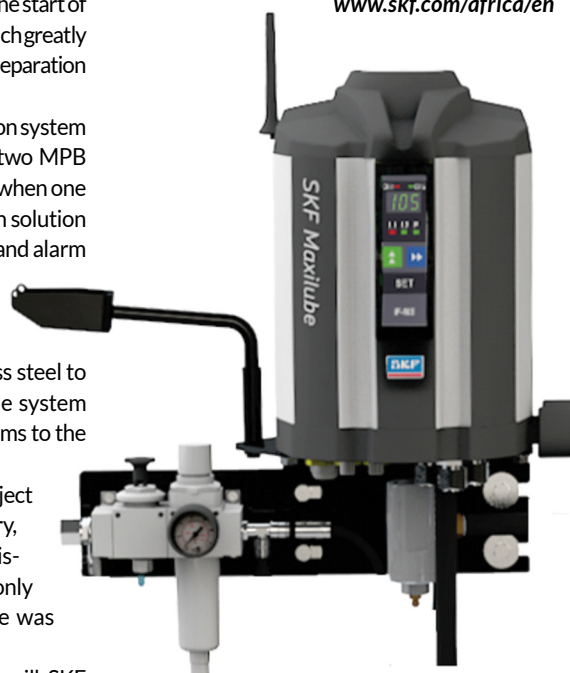
The monitored Maxilube lubrication system is connected to a Dualset unit with two MPB pumps for automatic drum changing when one of the drums is empty. The lubrication solution includes SGA distributors with cycle and alarm sensors installed on the distributors to monitor the efficiency of lubrication operations. All components are manufactured from AISI 316 stainless steel to ensure lasting reliability. The flexible system also has the potential to connect alarms to the customer's DCS going forward.

The SKF team completed the project within ten days of equipment delivery, assembly and testing to final commissioning and hand over. This included only five days during which the machine was shut down.

According to the Moroccan paper mill, SKF achieved the best score of all the other projects that were running on the machine at the same

time. Extremely satisfied with the SKF Morocco team's efficiency and professionalism, the customer immediately requested a proposal from SKF for a Flowline oil recirculation system for 110 bearings, to potentially replace an existing system.

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SKF's Maxilube dual line lubrication solution was chosen for a paper mill in Morocco.

High performance additives for industrial transmissions

The BMG team works closely with key players in diverse sectors to enhance production efficiencies, minimise downtime and extend the service life of power transmission systems and industrial equipment.

"A recent development has been the addition of high-performance additive, Cera Tec, which has exceptional resistance to high temperature and pressure," says Carlo Beukes, BMG's Business Development Manager for the Agricultural, Automotive and Lubrication divisions, BMG. "This is proving to be highly effective in protecting gears in industrial transmissions in many sectors, including sugar mills, mining, chemical plants, manufacturing and general engineering," he adds.

Cera Tec – developed by Liqui Moly, a global leader in additives, motor transmissions and hydraulic oils – is a micro-ceramic solid lubricant suspension based on hexagonal boron nitride (BN) in selected base oils. This product reduces friction and protects the engine and transmission against wear, thus extending the service

life of assemblies. Cera Tec also improves reliability of industrial equipment, lowers engine and transmission noise, minimises maintenance requirements and reduces downtime. Other benefits include energy savings, reduced risk of contamination, lower pollutant emissions and more efficient operating costs. "The graphite-like structure of resilient ceramic particles, with high mechanical and thermal stability, fill in the roughness in the metal of oil lubricated engines, transmissions, pumps and compressors, thereby preventing direct metal-on-metal contact. An active chemical uses the existing friction energy to ensure a smooth-running effect that reduces fuel consumption in gasoline and diesel engines. The < 0.5 µm particle size guarantees optimum filter flow properties and protects against depositing of solid lubricant particles. Cera Tec is miscible with all industrial oils," explains Beukes. According to BMG specialists, local operators face continued difficulties with transmissions, for example, with the gearing in conveyor systems. Problems occur

largely in applications where dust accumulates in the transmission, increasing friction between the gears and other components, which accelerates wear. Another troublesome factor is the high ambient temperature, which increases the temperature of the oil in the transmission.

Experts have proven that with the inclusion of Cera Tec additives in transmission oil, the temperature of the transmission oil decreases by up to 15 °C. This solution offers better protection for machines, and reduces the risk of malfunctions and lowers maintenance costs. Lubrication cools internal components and protects metal from corrosion, which reduces wear of the system. Through BMG's wide range of energy efficient products, which include synthetic oils, lubricants and bespoke lubrication systems along with technical support from a competent team, the company can ensure efficient maintenance, extended life of components and energy savings at any plant.

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