

SKF rope sheave units

Improve machine reliability with SKF rope sheave units

The high costs of rope sheave maintenance

Rope sheaves have always been a frequent cause of maintenance problems. If the sheaves are not running properly, the rope can slip, resulting in rope wear and paper tail tears. Worn ropes can break, requiring unscheduled shut downs. Lubricant leakage damages the paper, and the need to access hazardous locations for relubrication is risky for maintenance personnel.

Another less common but important issue is the danger of sheaves falling off their shafts, causing damage to the product, the felts, the rolls, or even worse, people.

Most mills have learned to accept these conditions as normal, and use preventive maintenance to minimize their possible impact. The sheaves are periodically removed and replaced with new or refurbished sheaves, or are simply equipped with new bearings. And still, failures occur during machine start-up – when rope sheave performance is critical.



SKF rope sheave units reduce maintenance costs

SKF offers a unique solution that makes rope sheaves virtually maintenance-free.

The units are based on SKF wheel hub units which perform well even under the harshest conditions. A special grease is also included. Both the unit and bearings are sealed for life, eliminating the need for grease nipples or lubrication ducts that could leak.

The units are zinc coated to resist corrosion. Finally, the addition of a patented security device locks the unit firmly in place and prevents it from falling off the shaft, even in the unlikely event of bearing failure.

Benefits

- Virtually maintenance-free
- Reduces rope wear
- Reduces chance of paper breaks
- Reduces risk of sheaves falling off
- Eliminates grease leakage

Typical application challenges

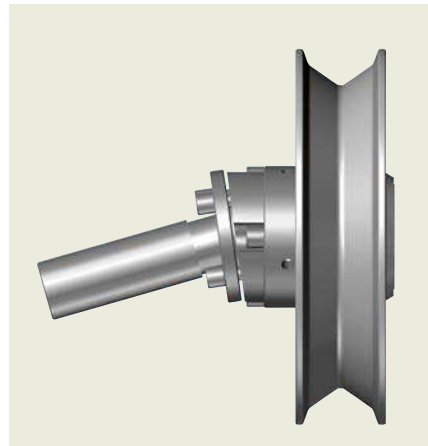
- Difficult-to-access locations
- Relubrication
- Contamination
- Humidity

Rope sheave replacements pay off with 195% ROI

A well-known board mill was facing 17 hours of unplanned stops per year because of rope sheave failures. Every year the maintenance crew needed to replace 30 sheaves, which took four man-hours per sheave. They would typically remove the sheaves, dismount the failed bearings and mount new ones. At €6 000 per production hour and €35 per labour hour, the mill was looking at significant maintenance costs each year.

The critical point was reached when one of the failed sheaves fell off a machine from a height of six metres. The mill contacted their local SKF Authorized Distributor for recommendations. Together with an SKF engineer, they investigated the unit to establish the cause of failure. The analysis clearly showed that the bearings had failed because of inadequate lubrication and corrosion damage.

By replacing the bad performers with rope sheaves from SKF, unplanned downtime was significantly reduced, enabling the mill to schedule planned stops for less urgent and routine maintenance. And, the work floor became a much safer place because of the unique locking facility of the sheaves.



Return on investment (ROI) figures over a 2-year period

Savings per machine by avoiding downtime and maintenance:	€265 500
Total SKF rope sheave units investment:	-€90 000
Total savings	€175 500
Total ROI	195%

All figures are rounded and based on customer's estimates of labour and production costs. Your particular cost savings results may vary.