



Customer Success Stories

We pioneer motion

Over 97,000 euros saved thanks to condition monitoring on a paper machine

A renowned Spanish cardboard manufacturer records four unplanned downtimes every year. This results in high financial losses. In order to avoid such downtimes in the presses of the wet section in the future, the plant operator relies on condition monitoring solutions from Schaeffler. The data analysis of the online system used revealed that the gearbox was ultimately responsible for the damage to the bearings.

Benefits

- Less unplanned downtime and consequential damage
- High customer satisfaction through accurate analyses
- Lower repair costs
- Lower costs for the procurement of spare parts

Customer

Cardboard manufacturer

Sector

Pulp and paper

Application

Press of the wet section,

Bearing

Solution

Condition Monitoring

What our customer does ...



Press in the wet section

Challenge

A high plant availability is a key factor for profitable business in paper mills. Unplanned shutdowns cause expensive losses due to production stoppages. In the plant in Northern Spain the customer experienced about four unplanned shutdowns each year. These were caused by unexpected bearing failures in the second press of the wet section. Although the customer had already contacted several companies for help in the past, it had not been possible to solve the problem so far. Thus, he contacted Schaeffler Iberia for support.

Customer

The customer is a cardboard manufacturer in Spain. Their annual production volume is 80,000 tons, his sales amount to 25 million euros. With their numerous plants they are one of the largest carton manufacturers in the country. Approximately 100 people are employed in one of their plants in the north of Spain.

What Schaeffler has to offer ...

Solution

Schaeffler Iberia recommended the customer to monitor its paper machine with the help of condition monitoring. First, Schaeffler monitored the bearing vibrations of the relevant press using an offline vibration measuring device. In the second step an online measuring system was installed on the paper machine.

This system monitored the bearings continuously for a duration of six weeks. The subsequent data analysis revealed that the gearbox had absorbed the axial loads of the machine what had caused bearing damage in the gearbox.

With this information the customer was able to take appropriate measures and solve the problem.

Advanced development

The solution was implemented at the time using the online monitoring system FAG DTECT X1. Today, Schaeffler would use the current ProLink CMS.



What's special

By monitoring the paper machine with the help of the condition monitoring solution for a short period the customer supported by Schaeffler could identify and solve a problem that slowed him for years. Customers, who decide to monitor their machines with an online system not only for a short term but on permanent basis, can even extend their availability. By the early alerting it is possible to schedule repairs in accordance with the maintenance plans and increase the plant availability in the long run.

Technical information for ProLink CMS

Data exchange with customer infrastructure, for example system visualizations and cloud service	via OPC/UA
Interface to maintenance planning systems such as SAP/PM and IBM Maximo	via OPC/UA
Cyclical transmission of the report or in case of alarm	Email
Exchange of measurement data	Via fieldbus. In planning: Profinet and CC-Link IE Field



Service experts discussing data diagnosis

Schaeffler ProLink CMS

Schaeffler ProLink CMS is used to monitor several production-critical machines. The vibration monitoring solution is particularly suitable for machines with variable operating conditions and harsh ambient conditions such as surface temperatures in excess of 70 °C. Measurement data are exchanged via the fieldbus.

What our customer saves ...

By avoiding the average four unplanned shut-downs per year, the cardboard manufacturer realizes significant savings.

Expenses of preventative maintenance

Replacement parts € 13.900

Costs due to production losses € 90.000

Total costs € 103,900

Costs with Schaeffler solution

Online system rent for 6 weeks and Schaeffler expert consultancy in the fields of installation and data analysis € 4,000

Replacement parts € 2,300

Total costs € 6,300

€ 97,600

annual savings

