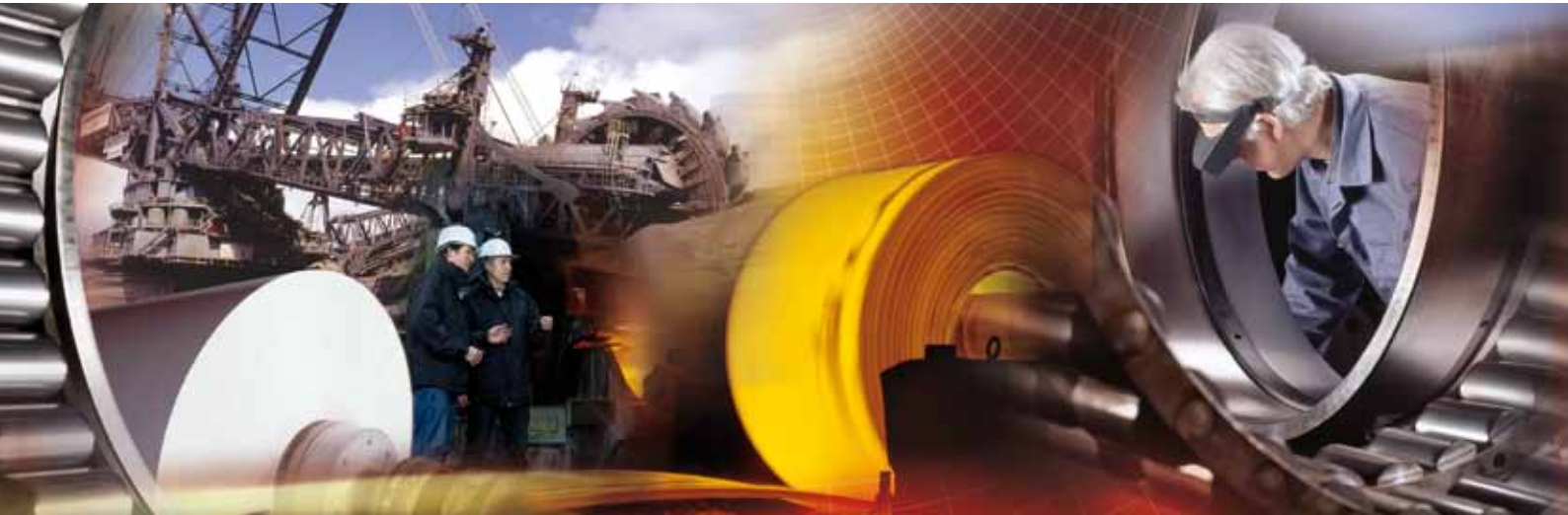


Smart Performance Program



Cost Reduction Through Condition-Based-Maintenance

Industry: Pulp and Paper

Customer: Industrie Cartarie Tronchetti, El Burgo De Ebro (Spain)

Industrie Cartarie Tronchetti (ICT) is a paper company with manufacturing sites in Italy, Spain and Poland. With seven plants, ICT has achieved sales around 400 million Euro in 2007-2008 and an annual growth of 18 percent. The plant in Spain started operating in October 2005 and manufactures tissue with an annual total production capacity of 70,000 tons.

Challenge for Schaeffler

Due to the high technical requirements of a paper plant ICT wanted to introduce condition-based maintenance on its Spanish site. Thus, the company was looking for a partner who could fulfill this demanding task. This partner was supposed to offer maintenance services, products and bearings as well as providing professional training, as ICT also wanted to gain own knowledge in the field of condition-based maintenance.




Technical Information about the Plant

Equipment:	Andritz machine
Product:	Tissue paper
Capacity:	70,000 tons/ year

Schaeffler Solution

Schaeffler offered ICT a customized package consisting of the following four points:

- Monitoring and control of critical machine conditions
- Root cause analysis for critical machines
- Training program for maintenance staff
- Service support on site

In March 2007, Schaeffler started with the monitoring of 73 machines. Most of the monitoring was done offline using an FAG Detector III. On some special applications also the online condition monitoring system FAG DTECT X1 as well as thermography measurements were applied. Additionally, the staff received individual trainings in the field of vibration diagnosis on site.

Customer Benefit

Through the introduction of condition-based maintenance it was possible to detect several alignment failures and vibration problems on fans, pumps and the forming rolling unit in good times. In case of a later detection these damages would have caused expensive machine shutdowns. Thanks to the customized trainings the internal maintenance team of ICT has gained important maintenance knowledge that enables the company to assess machine conditions also themselves in future.

Due to the change to condition-based maintenance all in all the following benefits could be realized:

Yearly savings in maintenance:	€ 250,000
Yearly production growth:	10 %

What's special

The maintenance of ICT has significantly improved since Schaeffler Iberia has started introducing condition monitoring and has provided customized trainings. The customer is that satisfied with the result of the cooperation that he has already extended the contract to further 80 machines. Currently he is considering to enlarge the contract to all machines.

Technical Information about the Solution

FAG Detector III functions used:

- Monitoring functions:
 - ISO 10816
 - Condition of gears
 - Condition of rolling bearings
- In-depth diagnosis based on the signals and frequency spectra
- Free PC software
- Measuring routes
- Automatic measuring point identification by means of RFID technology
- Static and dynamic balancing on site

