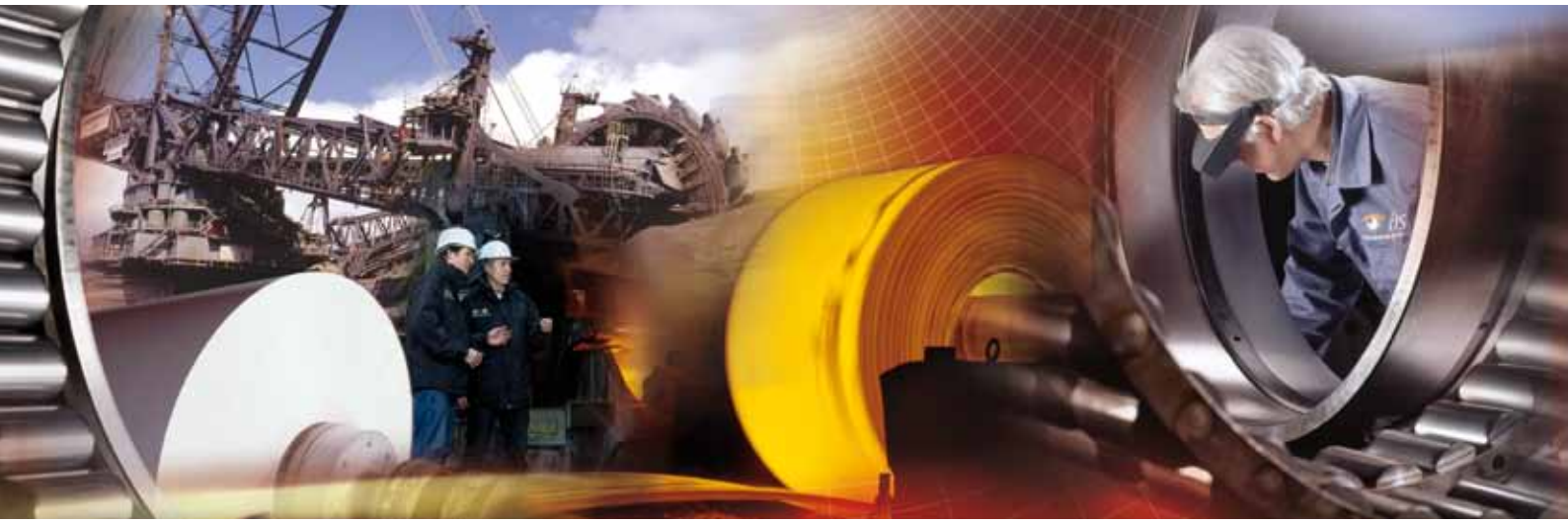
FAG Industrial Services

Smart Performance Program



FAG Detector III Ensures Extruder Availability and Saves Cost

Industry: Plastics Processing Industry

Customer: Kautex Textron GmbH & Co. KG, Leer/ East Friesland (Germany)

With a core competence in extrusion blow molding Kautex belongs to the leading international plastic processing companies today. Regarding blown technical parts, for example air ducts and water tanks as well as especially car plastic fuel tanks, the company takes the market-leading position. The Kautex plant in Leer is one of the biggest employers in East Friesland belonging to 25 production sites worldwide. The factory in Leer was especially built for the production of the VW Passat fuel tank system and produces exclusively for the automotive industry. Among the most important customers are Volkswagen and Opel as well as other Kautex factories both at home and abroad. With 250 employees the production factory achieved a turnover of around 75 million euro in 2008.

Challenge for Schaeffler

Extruders are an important element in the production of plastic packaging process. The core of each extruder is the gearbox technique, which is often exposed to high drive torques and thus to extreme long-term loadings. Shutdowns of an extruder cause not only expensive downtime. They can also lead to production shortages. In the past Kautex used only a stethoscope for machine monitoring. To better safeguard the machine's availability, the company was looking for a more reliable control method.

KAUTEX
A Textron Company

Technical Information about the Extruder

Power range:	3 KW – 500 KW
Installation size:	IEC 100 – IEC 280
Protection class:	Standard IP 23 S
Cooling mode:	Standard ICo6
Heating class:	F rather H

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Schaeffler Solution

FAG Industrial Services (F'IS) presented the FAG Detector III to the customer. This handy offline measuring device allows an easy machine control. The automatic measuring point detection functionality also contributes to this aim. With the aid of RFID technology, the device allows a reliable identification of specific machines or measuring points. Kautex uses this functionality for automatic machine detection. During the measurement the reader, which is integrated in the FAG Detector III, identifies the selected machine correctly. A customer-specific two-day product training was conducted at the customer's plant in which the customer's staff learned how to use the new measuring device. During this training also tailored configurations for the extruder were set up and the basics of data analysis were explained. In future the employees will perform measurements themselves on a regular basis. In case of irregularities they can send the data records for deeper analysis to the experienced F'IS experts. Afterwards the maintenance department of Kautex receives a diagnosis report with further recommendations for action.

Customer Benefit

Every shutdown causes Kautex costs of 1,000 euro. In the past about six machine shutdowns occurred each year. This involved costs of 6,000 euro. With the help of the FAG Detector III these shutdowns are supposed to be reduced to only one per year. Moreover, allows the increased knowledge about the machine's condition an extension of the machines' operating time. Until now the motors of the extruder gearboxes were changed once a year. This caused costs of 15,000 euro. By an extension of the maintenance period Kautex intends to do this scheduled exchange only every 18 month in future.
Through both activities following saving potentials can be realized:

	Unplanned shutdowns	Maintenance costs
Yearly cost in the past	**€ 6,000**	**€ 15,000**
Yearly cost today	**€ 1,000**	**€ 7,500**
Yearly savings	**€ 5,000**	**€ 7,500**
Total yearly savings		**€ 12,500**

What's special

The independent measuring reports prove that quality demands are fulfilled. Therefore, the customer can also use them as confirmation for quality management.

Technical Information about the Solution

FAG Detector III functions used by the customer

- Monitoring functions:
  - ISO 10816
  - Frequency selective condition monitoring of rolling bearings
  - Gearbox condition
  - Rolling bearing condition
- Measuring routes
- In-depth diagnosis on the basis of time signals and frequency spectra
- E-mail service
- Free PC software

Contact details for worldwide contact persons as well as further ***Smart Performance Solutions*** can be found on our homepage

www.smartperformanceprogram.com

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