SCHAEFFLER

Schaeffler Global Technology Solutions

Automotive

Continental AG, Germany

Online Monitoring Ensures Availability of Production Machine

Continental is a leading supplier to the automobile industry and a provider of brake systems, systems and components for drives and chassis, instrumentation, infotainment solutions, vehicle electronics, tires, and technical elastomer products. The company, which has over 170 000 employees, achieved sales of approximately 32,7 billion euros in 2012. Continental's Powertrain Division integrates innovative system solutions for all aspects of the drive train.

Challenge for Schaeffler

The plant in Roding produces diesel and gasoline pumps for renowned automobile manufacturers. Every component in these injection systems is subject to high quality requirements with regard to dimensions and surface texture, and components are machined using a „centerless" grinding machine. Malfunction-free operation is an important prerequisite here. Even the slightest damage to the bearings of the grinding and regulating roller can lead to compromises in quality and possibly to unplanned downtimes. To prevent expensive downtimes, the Roding plant turned to Schaeffler.

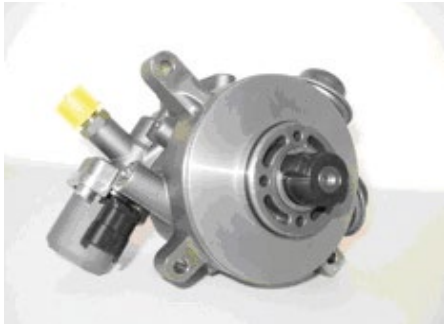
Schaeffler Solution

After thorough consultation with the Schaeffler experts, Continental in Roding chose the FAG DTECT X1 s online monitoring system. In addition to the rolling bearings of the centerless grinding machine's grinding and regulating rollers, the general vibration condition of the machine is monitored. The data recorded by the FAG DTECT X1 s are automatically forwarded to a central computer. These data are then analyzed by trained personnel at Continental and the experts at Schaeffler.

Continental

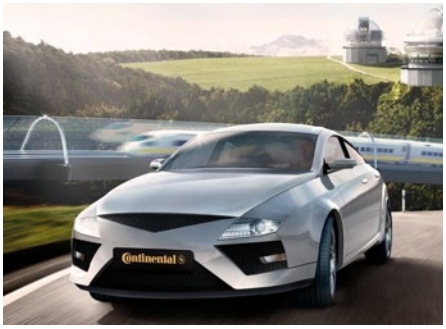
Technical Information about the Plant
Machine type:
Centerless grinding machine
Machining:
Through-feed and plunge grinding

LuK INA FAG



High-pressure pumps and common rail pumps are subjected to high quality requirements

FAG DTECT X1 s online monitoring system



High-pressure and common rail pumps from Continental are highly valued by customers

Customer Benefit

The complete and permanent monitoring means that information about the machine and its components is available at all times. Detecting bearing damage at an early stage allows a quick and precise failure identification and rectification. Unplanned machine downtimes – and therefore the resulting costs – can thus be prevented. Thanks to the training provided, the employees at the Roding plant also have important knowledge in the field of condition monitoring at their disposal. In the event of damage occurring, the correct measures can be directly implemented.

What‘s special

Because even the smallest changes in the bearings‘ raceways can affect the process and lead to compromises in quality, damage must be detected in good time. Schaeffler considered this in a holistic manner as part of the monitoring concept and developed a customised solution. The early alarm makes it possible to safe-guard the high standard of quality and to increase the machine availability in the long term.

Technical Information about the Solution
Monitoring system:
8-channel FAG DTECT X1 s with external multiplexer
Sensors:
8 ICP accelerometers
Housing:
IP66
Communication:
Com-Server
Additional signals:
• Validation signal • Speed signal

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