

APPLICATION EXAMPLES



Link to the
application examples

www.addi-data.com

ADDI-DATA[®]
PARTNER FÜR PRÄZISION 



TOOL MAKING AND MACHINE BUILDING INDUSTRY

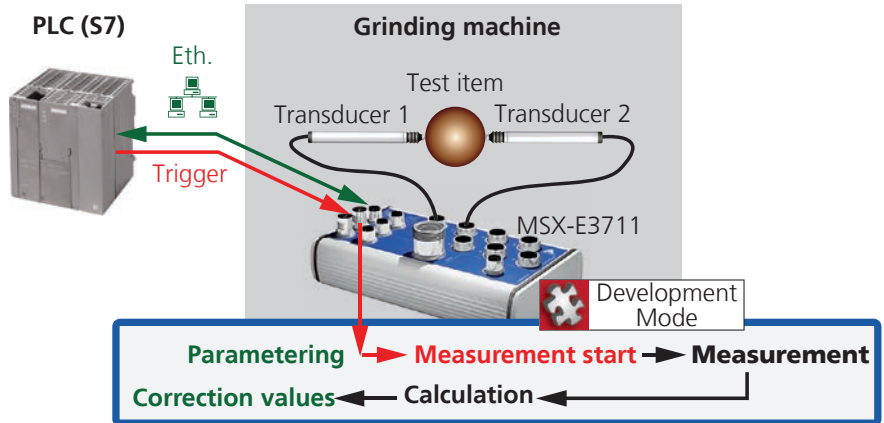
Inline quality control of balls for ball-bearings

Challenge

On a grinding machine, balls for ball-bearings are ground. They are to be measured directly on site and evaluated. Correction values for the production process are to be transferred directly to the PLC which controls the grinding machine. For this purpose a very robust measurement technology is required as the measurement is effected on the production site. The application controls whether the dimensions of the balls lie within predefined parameters or not. If not, the PLC is to initiate the necessary corrections

Solution

For this task the robust MSX-E3701 system is used with a development mode application, in which two sensors acquire and measure the balls. The measured values are



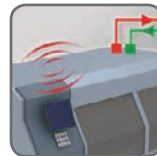
calculated and compared to the predefined parameters of the PLC, to check if the balls have the correct size or if it is necessary to regrind them. The result of the calculation and the measured values are transferred to the PLC, which can then readjust the grinding process. The capacity to calculate values onboard relieves the PLC, accelerates production cycles and improves the quality significantly.

Find all application examples at www.addi-data.com



Optimisation of the press process

Reducing rejects through cycle-dependent monitoring of the press depth



Active vibration damping

Real-time system for measuring vibration values and control of the actuators for vibration damping



Axis positioning for measurement devices

for the regulation of surface measurement devices for rotationally symmetric parts



Simple measurement device for gear wheels

Precise and error-free diameter detection of gear wheels



Position acquisition in a welding process

High precision acquisition in the very fast welding process of glass components



Regulation of the acquisition speed

Elimination of the « pseudo rejects » of a measurement machine



Control of rotary folding machines

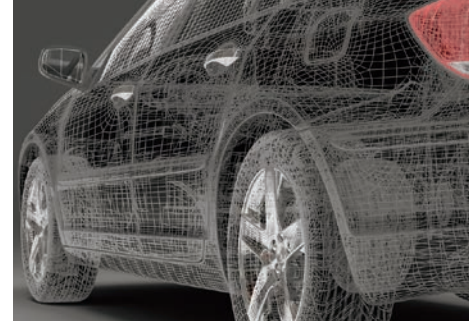
Precise tracking of secondary axes in relation to the main axis



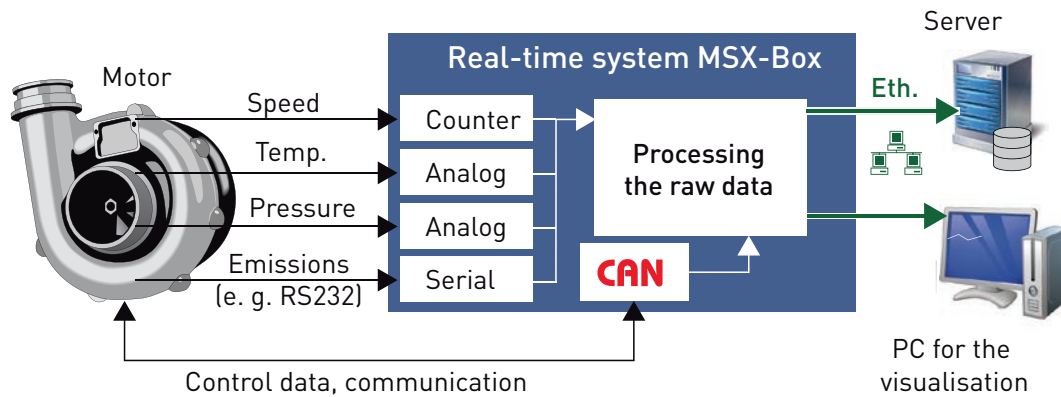
Test device for gear wheels for watches

Development of a measurement device for existing transducers

AUTOMOTIVE INDUSTRY



Measurement of the emission values, boost pressure and temperature for engine test benches



Challenge

An automotive manufacturer wants to build test benches for engines to measure, among other data, the temperature inside the engines, the emission values and the boost pressure. The data is to be acquired simultaneously and the measured raw values to be calculated and stored in a self-consistent data set. The data is stored on a centralised server and the visualisation is effected via a central control station.

Solution

For this task the MSX-Box, our real-time stand-alone system, was chosen as the engine test benches are located

at different places of the factory and a high amount of raw data is gathered. At each test bench there are 4 MSX boxes with analog and digital inputs, connected to each other as well as to the main server through Ethernet.

The calculation is done onboard in order to discharge the central server and to take full advantage of the MSX-Box capacity. The CAN messages and the data from the serial interfaces are combined with the other measurement values (temperature, boost pressure, etc.) using an interrupt routine and provided with a time stamp. On the centralised server, all the measurement data is collected. The data is visualised on a netbook.

Find all application examples at www.addi-data.com



Surface test

Consistent data for parameter corrections and precise rework of brake discs



ABS test bench

Test of the functional ability of an ABS control device



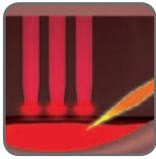
Measurement of a spherical roll

Detection of length and maximum diameter of a spherical roll

ADDI-DATA[®]
PARTNER FÜR PRÄZISION

www.addi-data.com

Find all application examples at www.addi-data.com



Temperature monitoring

Temperature monitoring in a steelwork



Temperature and humidity measurement

Intelligent monitoring in clean rooms, laboratories and calibration rooms



Monitoring of a tool's motor current

Avoid damage on tools, products and machines



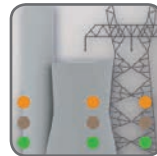
Gas tank supervision

Avoid damages caused by uncontrolled escaping gas



Measurement of railway tracks

Reduction of the wear and optimisation of the travelling speed



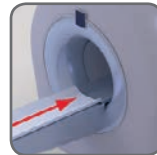
Measurement tasks in a coal power plant

Reduce energy loss and optimize energy production



Temperature regulation for the production of wafers

Pyrometer acquisition with programmable PC board



Exact positioning of a magnetic resonance tomograph (MRT)

Precise assignment of the scanned pictures through exact table positioning



Monitoring of wind power plants

Avoid the breakdown of wind turbines



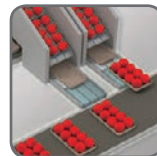
Measurement device for a submarine

Compact data logger registers temperature and reports exceeded limit values



Increase the yield of a photovoltaic plant

Intelligent monitoring and control of an industrial photovoltaic plant



Weighing and packaging machine

Weighing, sorting and packaging of apples



Made in Germany

30 years

Expertise in the industry



Customized solutions

ADDI-DATA GmbH
Airpark Business Center • Airport Boulevard B210
77836 Rheinmuenster • Germany
Phone: +49 7229 1847-0 • Fax: +49 7229 1847-222
info@addi-data.com • www.addi-data.com

ADDI-DATA®
PARTNER FÜR PRÄZISION