Press Release

Industry 4.0 finds way into practice

Rexroth CNC solution IndraMotion MTX networks machine tools with the IT world

Networking of machine tools with the IT world: With the latest A 156 machining center, C.B. Ferrari uses self-produced apps for wireless operation and programming of the CNC system solution IndraMotion MTX.

**With the networkable CNC system solution IndraMotion MTX from Rexroth, the first manufacturers and end users of machine tools are already starting to implement Industry 4.0 concepts.** The spectrum ranges from new, wireless operating devices with tailored apps to the networking of entire production lines, resulting in increased availability, productivity and energy efficiency.

Industry 4.0 concepts are gradually finding their way into everyday operation among machine manufacturers and industrial end users. For this purpose, they link machine tools more closely with the IT world. To enable networking, Rexroth has opened the core of the IndraMotion MTX to wider access. Machine manufacturers can thereby independently create individual functions in high-level languages. In addition, the integrated OPC UA Webserver and other web technologies provide further opportunities to network machine tools horizontally and vertically.

The Italian manufacturer C.B Ferrari introduces a 5-axis machining center with the new A156 machine for machining of turbine blades at EMO 2015.
Press Release

Operation and programming of the A156 machine is done completely wirelessly via smart devices. The operating concept is based on multi-touch applications and an integrated 3D simulation function. With the Open Core Engineering platform, C.B. Ferrari developed specific apps for the control system. The IndraMotion MTX Advanced system solution guarantees an accuracy of 0.1 μm, processing speeds in the PLC of less than 0.5 milliseconds and CNC cycle times of up to 0.25 milliseconds.

Smart data increases productivity

Rexroth takes Industry 4.0 one step further with the Generic Data Server service package. It connects machine tools with the IT world via secure networks, and analyses the machine data for the users to improve the availability, productivity and energy efficiency of production lines. To do this, the Generic Data Server detects and monitors all relevant control, drive and sensor data using open communication interfaces such as OPC UA or sercos interface, and saves it in a Private Cloud. Using pre-defined methods for data analysis, the Generic Data Server guarantees conclusive Remote Condition Monitoring of the networked machines and thereby increases machine availability.

Analytical tools for the optimization of cycle times and energy consumption that are integrated into the Remote Process Monitoring indicate relationships between the NC line data and PLC signals, as well as the intelligent drives. On this basis, end users can improve their processing times and costs, ensure that the processing quality is documented and increase energy efficiency.

The Generic Data Server saves all fault messages in a logbook and allows causes and rates of faults to be traced for the entire life cycle of the machine tool. Users can thereby systematically recognize the causes of faults and reduce downtimes in the long-term. The modular service package includes installation of the entire hardware and sensor technology, the preparation of the Smart Data analysis as well as the Remote Condition Monitoring and Remote Process Monitoring by Rexroth specialists.
Press Release

Economical, precise, safe, and energy efficient: drive and control technology from Bosch Rexroth moves machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, Factory Automation, and Renewable Energies to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 33,700 associates generated sales revenue of approximately 5.6 billion euros in 2014. To learn more, please visit www.boschrexroth.com

The Bosch Group is a leading global supplier of technology and services. It employs roughly 360,000 associates worldwide (as per April 1, 2015). The company generated sales of 49 billion euros in 2014.* Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including its sales and service partners, Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. In 2014, Bosch applied for some 4,600 patents worldwide. The Bosch Group’s strategic objective is to create solutions for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is “Invented for life.” Additional information is available online at www.bosch.com, www.bosch-press.com and http://twitter.com/BoschPresse

*The sales figure disclosed for 2014 does not include the former joint ventures BSH Bosch und Siemens Hausgeräte GmbH (now BSH Hausgeräte GmbH) and ZF Lenksysteme GmbH (now Robert Bosch Automotive Steering GmbH), which have since been taken over completely.