

automatica 2018, Hall A5, Booth 331

Implementing Industrie 4.0 today with Digital Enterprise solutions from Siemens

- **Booth slogan: “Digital Enterprise – Implement now!”**
- **The time for implementation has arrived: Digital Enterprise solutions for production enable machine builders and users to already benefit from Industrie 4.0**
- **Solutions for the integration of handling systems and robots into the digital integrated value chain**

At the automatica 2018, Siemens will be demonstrating how machine builders and users can already benefit from Industrie 4.0. Exhibiting under the banner “Digital Enterprise – Implement now!”, Siemens will be focusing on integrated, user-oriented solutions from the Digital Enterprise portfolio for enterprises of all sizes and branch of industry – along the entire value chain from product design and production planning, through the engineering process, to new data-based services. As a first-time exhibitor at automatica, Siemens will also be showcasing whole new possibilities for the integration of handling systems and robots through simulation, engineering and machine connectivity with its world leading portfolio of automation, drive technology and software. Automated engineering and the simulation of machines and product lines enable greater flexibility, shorter times to market, and improved efficiency and quality.

“Our Digital Enterprise portfolio dovetails perfectly with the automatica motto ‘Optimize your production,’ explained Ralf-Michael Franke, CEO of the Factory Automation Business Unit during the Siemens press conference at automatica. “The Siemens Digital Enterprise portfolio offers integrated software and hardware solutions which allow the whole value chain to be integrated and digitalized. This explains why engineers and users are already benefiting from Industrie 4.0 today.”

Dr. Wolfgang Heuring, CEO of the Motion Control Business Unit: “Robotics is one of the most dynamic growth areas in the manufacturing industry. The integration of robotics into production machines significantly increases the degree of automation. We make a distinction here between various levels of integration: Starting with integration via signal coupling with our Simatic units, through program integration of robots into a machine tool, to complete integration with complex path control using our Sinumerik units. More than any other business, Siemens therefore covers the complete spectrum of robotics integration.”

Armin Grünewald, Vice President Business Development Manufacturing Engineering Software: “It is essential that traditional industries, such as mechanical engineering, make use of new technologies from the field of robotics, and the associated automation, to drive digitalization forwards. This is the only way to ensure long-term competitiveness in the global market.”

An overview of the Siemens exhibition program for automatica 2018:

The featured solutions for digitalized manufacturing are bringing about increasing convergence of the virtual and real production worlds, opening up exciting new potential for improving productivity. The technologies on show for improving the efficiency and economy of production processes include solutions for virtual commissioning, the integration of robotics into machine building and intuitive robot programming in the engineering portal. Visitors will also learn how they can use the open IoT operating system MindSphere from Siemens and MindApps to implement cloud-based solutions such as totally new maintenance concepts to boost the productivity and availability of their plants and machines.

This integrated approach from the perspective of the product manufacturer will be illustrated at the show using the example of an industrial laptop from design through production to utilization of the data, encompassing product design, testing and simulation, moving on through production planning and engineering to production execution and finally services. Companies reap major benefits from this integrated approach, which allows them to step up collaboration from any location and at any time – for instance through the rapid, intuitive and secure detection, logging and

fixing of problems from within a virtual reality meeting. Immersion into the digital twin using a VR headset allows engineers to carry out a thorough technical check of plants or machines, saving time when it comes to physical commissioning.

Sinumerik Run MyRobot from Siemens provides a solution for linking robots to machine tools, ranging from simple connection or convenient integration through performing handling tasks to full system integration of the robot kinematics. While the CNC takes charge of robot path control, the robot can be integrated into the existing CAD/CAM-CNC process chain and IT infrastructure. The benefits for users include greater path control accuracy, more flexibility and also improved productivity in manufacturing.

Machine customization is becoming an ever more important aspect for machine users. To ensure efficient assembly despite a high degree of customization, production must be structured for flexibility. Major potential exists here specifically in the field of material handling. Automatic guided vehicle systems can play a significant role in implementing a flexible production strategy. Digital Enterprise solutions also benefit the machine building sector by enabling the end-to-end digitalization of every phase of a machine's life cycle – starting with concept design through engineering and commissioning to services.

A customer application example featured at the fair is an assembly machine for consumer electronics by Bozhon Precision Industry Technology. The machine was engineered and commissioned using a digital twin located in Germany, while the physical machine was being simultaneously built in China. Almost 80 percent of the machine's functional features were validated using virtual commissioning, resulting in faster, more efficient production and a shorter time to market.

Using a model of the Sinamics S210 servo drive system comprising a converter and specifically developed Simotics S-1FK2 servo motors as well as OCC (One Cable Connection), Siemens will be demonstrating solutions for robotics and handling automation. In conjunction with a servo motor, rapid sampling and smart control algorithms for the converter, a high-grade encoder system, and the combination of low rotor inertia and high overload capability, the featured drive system achieves outstanding dynamic performance and precision.

Siemens will also be showcasing a range of kinematic applications for the handling market using a model at the show. The “Simatic Safe Kinematics” software library makes it possible to safely monitor selected kinematic motions in space, for instance to protect machine operators at work. This is achieved by monitoring the speed of selected points, for example the tool center point, and freely configurable zones such as the working and protection areas.



Siemens will be exhibiting at the automatica 2018 with an array of integrated and user-oriented Digital Enterprise solutions designed to sharpen the competitive edge of both end users and machine builders. Exhibiting under the banner “Digital Enterprise – Implement now!”, Siemens will be focusing on ways in which industrial enterprises of all sizes can benefit from the digital transformation.

This press release and a press picture are available at

www.siemens.com/press/PR2018060227DFEN

For further information, refer to www.siemens.com/automatica

Contact for journalists

Katharina Lamsa

Phone: +49 911 895-7945; E-mail: katharina.lamsa@siemens.com

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