Greater productivity in industry thanks to digitalization

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Hannover Messe 2015: Hall 9, Booth D35

Digitalization has developed into a decisive lever for growth in practically every sector of industry. Because digitalization is the central key to greater productivity, efficiency and flexibility, it forms the focus of the Siemens presentation at the 2015 Hannover Messe. Over an exhibition area of 3,500 square meters, the Siemens booth D35 in Hall 9 will feature a wide range of solutions and products from its group-wide growth fields of electrification, automation and digitalization under the banner "On the way to Industrie 4.0 – Driving the Digital Enterprise".

Technologies and products for the industry from the comprehensive electrification, automation and digitalization portfolio

End-to-end automation for the manufacturing industry ("Digital Enterprise")

"Effortless Communication" simplifies administration of large machine and plant networks

Totally Integrated Power: an integrated approach for a future-oriented power supply

Speaking at the press conference prior to the fair, CEO of the Digital Factory Division Anton S. Huber said: "True gains in efficiency can only be achieved today by optimizing and networking systems and processes along the entire product and production life cycle. Digitalization opens up whole new scope for producing companies to develop and manufacture products and solutions quickly and efficiently. Anyone who consistently leverages these opportunities will benefit from a decisive competitive edge".

As well as the integration of renewable energies into the energy system, a variety of industrial solutions such as Totally Integrated Automation (TIA), Integrated Drive Systems (IDS), Industry Software and plant data services will all be featured in the Siemens presentation. Also located within the booth will be the "Digitalization Forum", where Siemens will be presenting concrete examples of digital technologies in application in the manufacturing and process industry as well as machine building.

Siemens offers a future-proof platform based on high-performing software technologies aimed in particular at customers from the manufacturing industries under the title of "Digital Enterprise", which will allow the extensive demands of Industrie 4.0 to be met over the coming years. "We already have the capability for full integration of the entire production and production lifecycle. This allows us to enhance the productivity and efficiency of our customers and so boost their business", explains Anton S. Huber. Siemens pays particular attention here to merging the virtual with the real world: "The digital factory is no longer just a vision. We are already making a significant contribution to its achievement today. Our Teamcenter software solution functions as a central data backbone. A decisive factor for improved production with greater efficiency and a shorter time to market is the complete digital representation of a company's entire value chain", said Anton S. Huber.

Sustainable solutions for the process industry

Siemens is also breaking new ground in the process industry. "Current market trends are moving in the direction of modularization, digital mapping of production steps and communication between the individual machines in the plant," said Peter Herweck, CEO of the Process Industries and Drives Division. "With our portfolio for the process industry, we offer sustainable solutions from design and engineering to maintenance and modernization."

At the stand's "Digitalization Forum," a hydraulic circuit demonstrates digital integration of a component in the existing plant. Planning and engineering with the software solution Comos in conjunction with the Simatic PCS 7 process control system enable data from engineering and automation to be pooled. Comos Walkinside visualizes the integration realistically in 3D.

A key step toward the digital plant is simplified administration in industrial networks. Siemens is presenting a current project on this topic at the Hannover Messe: "Effortless
Siemens is presenting new drive technology components in the field Integrated Drive Systems (iDS). Simotics reluctance motors offering maximum energy efficiency and dynamism, a new shaft height for the Simotics FD low-voltage motors, and the modular Simotics HV M high-voltage motors expand the extensive portfolio. Herweck notes: “Our customers from process industries now have to deal with a high degree of complexity, yet strive for maximum energy efficiency. With iDS, we offer a comprehensive, end-to-end range of integrated drive systems: Almost any Siemens drive component can be integrated seamlessly into any drive system, any automation environment and the plant’s entire lifecycle. As a result, we improve the entire workflow across all the steps in the value chain.” End-to-end networking of the drives with the control and production level enables intelligent, self-optimizing and autonomous production processes.

Future-oriented, cost-effective power supply

In order to master the growing complexity of energy systems resulting from greater integration of renewables, these systems have to become more agile and smarter in the coming years. That means industrial power grids will also become more digital. In other words, be equipped with more means of measurement, automation, control and regulation. As part of this digitalization, industrial enterprises face new challenges when it comes to increasing their plants’ efficiency, ensuring supply security and protecting increasingly complex plants and systems against overloading or short-circuits by means of state-of-the-art concepts. That requires intelligent hardware and software products such as monitoring systems and measurement equipment. End-to-end energy management at the campus is needed. Increasing local power generation, including at their own plants, means that the way industrial companies interact with power suppliers is changing. This calls for new planning and energy management concepts for grids and plants in order to ensure a robust, cost-optimized power supply. “With Totally Integrated Power (TIP), we offer an extensive package for a future-oriented, cost-effective power supply with intelligent and digital solutions from planning to operation,” says Ralf Christian, CEO of the Energy Management Division. Siemens has bundled its power distribution portfolio in TIP and specifically offers industrial enterprises end-to-end solutions that enable energy systems to be planned, controlled, protected and optimized cost-effectively. They comprise software and hardware products, systems and solutions for all voltage ranges – from high-voltage power supply to the low-voltage consumer – which can be integrated in industrial automation technology thanks to intelligent interfaces. As part of its protection concept, Siemens is also presenting in Hanover an enhanced version of the communication-capable compact circuit breaker from the 3VA series for low-voltage power distribution. Compact 3VA circuit breakers are the heart of electric power distribution and ensure fault-tolerant, highly available production processes. Extensive data is also available to engineering and can be integrated in all common planning and project management tools.

Under the motto “On the Way to Industry 4.0 – Driving the Digital Enterprise,” the Siemens stand in Hall 9, D35, offers an overview of the company’s extensive portfolio for industrial customers over an area of 3,500 square meters. Siemens is also showing visitors to Hanover many new products and solutions for the group’s growth segments of electrification, automation and digitalization. Siemens is tackling today’s industrial challenges under the core topics of “Future of Manufacturing” and “Sustainable Energy.” At the “Digitalization Forum,” visitors can discover actual application examples and learn how Siemens merges the digital with the real world.

About Siemens AG

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world’s largest producers of energy-efficient, resource-saving technologies, Siemens is No. 1 in offshore wind turbine construction, a leading supplier of combined cycle turbines for power generation, a major provider of power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. The company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2014, which ended on September 30, 2014, Siemens generated revenue from continuing operations of €71.9 billion and net income of €5.5 billion. At the end of September 2014, the company had around 357,000 employees worldwide. Further information is available on the Internet at www.siemens.com.