

Nuremberg, October 9, 2018

SPS IPC Drives 2018, Hall 11

Siemens to showcase sector-specific solutions and future technologies for Industrie 4.0

- **Integrated Digital Enterprise portfolio for machine and plant builders as well as end customers**
- **Concrete digitalization use cases from chemical, pharmaceutical, aerospace, battery, food and beverage industries**
- **Siemens backs future technologies such as artificial intelligence and edge computing**
- **New features for MindSphere from visualization to data analysis**

At the “SPS IPC Drives” 2018, Siemens will be presenting a range of sector-specific solutions and future technologies to enable the digital transformation of today’s discrete and process industries. The central focus of the over 4,000 square meter Siemens booth will be on new products, solutions and services from the company’s Digital Enterprise portfolio designed to enable the merger between the physical and digital worlds. The solutions on show will allow not only machine and plant builders but also end customers of any size – working in areas as diverse as the chemical, aerospace, battery, food and beverage industries – to boost the flexibility, efficiency, quality, security and speed of their operations. To get to grips with the rising complexity of production processes and leverage the many associated benefits, Siemens is continuously expanding and strengthening its portfolio with the integration of groundbreaking future technologies, from artificial intelligence to edge computing.

As this year’s trade fair slogan “Digital Enterprise – Implement now!” intimates, the technical conditions are already in place for Industrie 4.0 in the form of end-to-end solutions along the entire value chain. Driving these developments are an ever-increasing degree of customization and the resulting rapid transformation of

markets. A wide range of innovations and an array of concrete applications and customer examples from fields including additive manufacturing and robot integration will be on show to demonstrate how the digital transformation can be successfully achieved in practice for companies of every size and from every sector of industry. These will also include the opportunities and scope opened up by artificial intelligence. Siemens will also be showcasing Industrial Edge, a distributed data processing concept operating at the machine and production process level as the ideal supplement to cloud computing with MindSphere. Edge applications offer user benefits such as the analysis of machine data for the predictive prevention of machine downtimes, ultimately resulting in improved plant productivity.

Implementation of the Digital Enterprise in machine building

A machine used for the quality inspection of bottles will be illustrating ways in which the Digital Enterprise can be implemented in the machine building sector. The Digital Enterprise enables the seamless integration of industrial software and automation – using a shared data model. This holistic approach will be demonstrated along the entire value chain from the perspective of the machine builder: from the machine concept and simulation through engineering, commissioning and operation to services. Using digital twins of the product, the production process and performance, users benefit from shorter engineering and production times, from flexible, fully automated manufacturing concepts and efficient processes. At the same time, this technology provides the assurance of high quality and adherence to strict security standards. And in turn, connection to MindSphere enables the continuous acquisition and analysis of machine data. This not only ensures increased machine productivity in running operation, but also enables the gathered data to be fed back into the digital machine model, so enabling further optimization. On the basis of the gathered data, machine builders are also able to develop new services and business models such as “pay per use” concepts.

Modular production creates more flexibility

For sectors such as the pharmaceutical or fine chemical industries to remain competitive, their ability to respond rapidly to changing market demands is growing ever more important. Modular production plants which are made up of flexibly combinable modules and equipped with MTPs (Module Type Packages) are one way of addressing this need. The use of standardized interfaces and protocols

enables these “smart” machines and subsystems to be simply integrated into a complete plant – allowing production to be rapidly stepped up by the integration of additional modules. Just how this works in practice will be demonstrated at the booth using the example of a centrifugal separator from the company GEA which has been equipped with a dedicated controller and MTPs, enabling its simple integration into a higher-level control system.

New features for MindSphere

Siemens will also be showcasing a range of new features for its cloud-based IoT operating system MindSphere – from visualization through data analysis to edge computing functions. This year’s MindSphere Lounge will also be showcasing the wide-ranging application possibilities offered by the IoT operating system to improve factors such as efficiency and productivity. For the first time, customers and partners will be jointly presenting new applications and successful use cases taken from practice across wide-ranging different sectors of industry.

Services for the digital transformation

Digital Services (Digital Industry Services) play a key role when it comes to customized, individual implementation of the Digital Enterprise. Siemens provides broad-based support for users here with everything from consulting on to implementation and data analysis with all the associated customer benefits such as lowering downtimes by up to 45 percent and energy consumption by up to 60 percent.

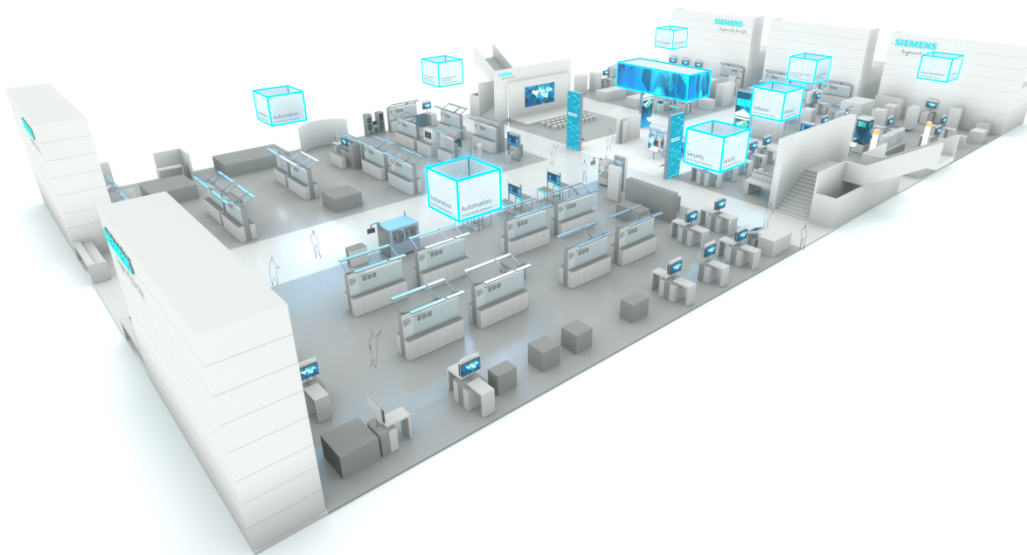
Electrical power distribution in digital environments

The smooth interaction of hardware and software with systematic data management is vital to create the efficient electrical power distribution digital enterprises require. At the trade fair, Siemens will be showcasing the integration of medium and low voltage power distribution into cloud-based environments based on concrete applications such as substations, industrial plants, data centers, office buildings and distributed real estate assets. Providing the technical basis are communication-capable switchboards, protection, switching and measuring devices, which gather the relevant energy data, integrate it into holistic energy efficiency concepts and make it available in MindSphere or other cloud platforms. This not only results in a significant increase in energy efficiency and plant availability, but also helps optimize

operational and maintenance workflows and simplifies the entire value creation process.

Event notification:

On November 27, 2018 at 1.00 p.m., the traditional Siemens Press Conference will be held at the SPS IPC Drives with Klaus Helmrich, Member of the Managing Board of Siemens AG, in the St. Petersburg Room (NCC East, Level 2).



At the “SPS IPC Drives” 2018, Siemens will be showcasing sector-specific applications and future technologies for the digital transformation of the discrete and process industries.

This press release and a press picture are available at

www.siemens.com/press/PR2018100010DFEN

More information on Siemens at the SPS IPC Drives 2018 is available at

<http://www.siemens.com/sps-ipc-drives> and www.siemens.com/press/sps2018

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for 170 years. The company is active around the globe, focusing on the areas of electrification, automation and digitization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is a leading supplier of efficient power generation and power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. The company with its listed subsidiary Siemens Healthineers AG 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 2017, which ended on September 30, 2017, Siemens generated revenue of €83.0 billion and net income of €6.2 billion. At the end of September 2017, Siemens had around 377,000 employees worldwide. Further information is available on the Internet at www.siemens.com.