SIEMENS

Background information

Hanover, April 23, 2018

Hannover Messe 2018, Hall 9, Booth D35

Digital Enterprise Suite: Digitalization is transforming the process industry

"Demonstrating digitalization - the chemical industry" showcase at the Siemens booth at the Hannover Messe 2018



Shorter times to market, higher data quality and plant transparency, real-time documentation updates: Thanks to end-to-end digitalization, companies in the process industry can sustainably increase their efficiency and productivity in both the engineering phase and during operation. The digital transformation of the process industry is in full swing. Siemens offers the necessary solution portfolio of integrated hardware and software, enabling companies of all sizes to implement digitalization. In view of the scope and the disruptive nature of digitalization, many questions need to be clarified in advance. This is why Siemens offers a neutral, comprehensive consultation service and works with its customers to develop a specially coordinated strategy for digitalization. Siemens will be demonstrating the

numerous benefits of digitalization throughout the entire lifecycle of a plant based on visitors' requirements, exploring these in greater detail using individual application scenarios.

In line with this year's motto "Digital Enterprise – Implement now!", visitors to the Siemens booth D35 in hall 9 will experience how its customer, DULUX, is already successfully using the Siemens digital solutions portfolio in the first digital paint plant. Plant operators such as DULUX can use the virtual image of the actual plant, referred to as a Digital Twin, to simulate, test, and optimize their processes prior to commissioning as well as to help increase efficiency and productivity during operation. Standardized modules are becoming more and more important as a result of increasing competitive pressure. Siemens supports the planning and documentation of these modules with its central control management tool Comos. Simit can be used to carry out simple loop checks and even simulate and test process engineering sequences. This makes it possible to implement virtual commissioning for each individual module, up to an entire subsystem, before the actual commissioning takes place. Thanks to the MTP (Module Type Package) interface, the modules are physically connected to a subsystem via plug-and-play. The Simatic PCS 7 process control system is used to coordinate the control, operation, and monitoring of the subsystem.

The comprehensive Siemens portfolio of solutions for the process industry enables the seamless vertical integration of all components, from the field level to the management system and on up to the cloud. Visitors can experience horizontal integration across the entire lifecycle of the plant ("From Integrated Engineering to Integrated Operation") in detail, based on the model of a separation column.

Another major benefit of digitalization is the possibility of utilizing what is referred to as paperless production. For example, this allows all production data to be recorded and documented electronically and connects automation to production IT (ERP level). Siemens has developed the appropriate solution for this in the form of Simatic IT eBR. Visitors will also be able to see how Siemens has simplified the digitalization of brownfield plants in conjunction with its strategic partner Bentley Systems. A walk-through 3D visualization of the plant is created using Context Capture and Comos Walkinside; this can then be used for optimum planning of modernizations or preparing for maintenance work.

The Siemens range of solutions for digital companies can be used to record and evaluate data generated during operation. This is demonstrated to our visitors by means of a live link to Process Automation World in Karlsruhe, Germany. Thanks to a connection to the cloud-based, open IoT operating system MindSphere, detailed data analysis can determine the condition of machines and plants. Demand-oriented service and maintenance work can then be carried out based on this information, which allows greater flexibility and productivity compared to rigid maintenance intervals. Siemens' data-driven services also make it possible to optimize maintenance groups and entire plants based on applications such as Asset Performance Management and Drive Train Analytics. Siemens enables digitalization at the field level with Sidrive IQ, the new digital platform for drive systems that analyzes extensive drive data and facilitates seamless condition monitoring as well as predictive maintenance.

Further information on Siemens at the Hannover Messe 2018 is available at www.siemens.com/presse/hm18 and www.siemens.de/hannovermesse

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