

Nuremberg, June 12, 2018

Achema 2018, Hall 11, Booth C3

Siemens realizes digital transformation of the process industry with Digital Enterprise

- **Technical conditions in place for digital transformation of the process industry**
- **New and existing plants of any size capable of digitalization**
- **Digital twin for greater flexibility, efficiency, quality and shorter time to market**

The digital transformation of the process industry is in full swing. At the Achema 2018, Siemens will be exhibiting under the banner “Accelerate the digital transformation – from integrated engineering to integrated operations”. Featured over a total area of just under 1,300 square meters will be the Digital Enterprise solutions portfolio, which allows companies of the process industry to leverage the benefits of Industrie 4.0 already today. The portfolio encompasses integrated hardware, software and services for companies of all sizes and from all sectors of the process industry. “We are the first provider ever to offer an end-to-end data model along the entire plant life cycle, from integrated engineering and integrated operations through to data-based services. This model, the digital twin, enables users to achieve higher flexibility, a shorter time to market, greater efficiency and improved quality during running operation. With this achievement, we’ve already put the technical conditions in place to allow the implementation of Industrie 4.0. Using co-creation methods in association with our partners, we are concentrating the expertise needed to develop new, innovative products and services,” says Jürgen Brandes, CEO of the Process Industries and Drives Division.

Siemens will be demonstrating the benefits of digitalization for brownfield and greenfield plants at its Achema booth using a number of specific customer examples. One of these is a project undertaken by paint manufacturer Dulux using

the Siemens solution portfolio to implement its first “Digital Paint Plant”. Dulux was concerned to ensure production to a consistently high standard of quality with sufficient flexibility to address individual customer requirements. The digital solution it implemented permits batch size 1 production, meaning that the size of a single batch has come down from 5,000 to just 100 liters of paint.

At its Freiburg site, Pfizer has stepped up the automation and digitalization of its tablet and capsule production for the treatment of cancer sufferers and cardiac patients as well as for pain relief using Siemens solutions. The aim was to enable a rapid response to changing market requirements – while maintaining a consistently high standard of quality. Changes in volume used to require up to four months for the necessary adjustments to be made. Today, Pfizer is able to adapt to a new market in just minutes.

Whether brownfield or greenfield facilities: Siemens will be demonstrating at the Achema how companies of all different sizes and sectors can achieve a simple entry into the world of digital transformation. Depending on the degree of digitalization, users are able to implement either the full scope of the Digital Enterprise portfolio or simply pick individual digital applications. On the basis of its world leading automation and drives portfolio, with Digital Enterprise Siemens is making new technological concepts based on industrial standards accessible to all – for instance for modular plant construction, which offers extreme flexibility to suppliers and plant operators alike. A number of concrete applications and references showcased at the Achema demonstrate ways in which users can leverage the full potential of digitalization.

Also featured on the Siemens booth at the Achema will be pioneering approaches to achieving a whole new level of connectivity for scalable, open vertical and horizontal integration – for instance based on the Namur Open Architecture (NOA) standard or Sidrive IQ. NOA components make possible what is known as a second data channel, which enables a direct connection from the field level to the cloud solution. Sidrive IQ is a new digital platform for the capture and analysis of drive data using the cloud-based open and industry-wide IoT operating system MindSphere. Processes can be optimized to enhance plant performance using a number of different apps. A cloud-based app known as Valve Monitoring Maintenance, for instance, reduces the workload involved in maintaining valves in many different sectors of industry. Another app, Control Performance Analytics, uses a managed

services approach to control loop analysis using data directly captured from the process control system. In the field of cyber security too, Siemens is driving development forward, providing the industry with a broad portfolio of security products and services for plants and networks with its “Defense in Depth” concept.

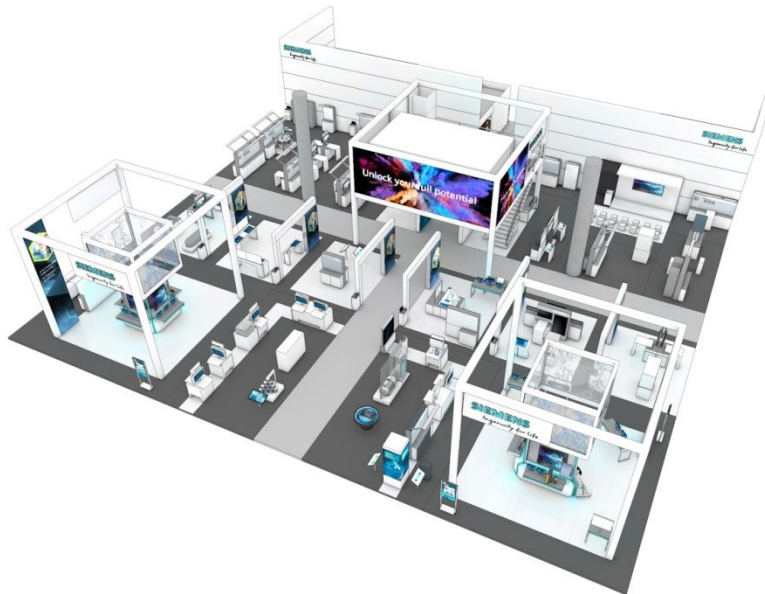
Another central element of this year’s trade fair presentation is the reThink Tank – the room of the future. Here, visitors will have the opportunity to discover the next level of process automation by going on a virtual interactive journey, flying as if in the cockpit of a spaceship with an avatar into the near future of process control technology through different levels and use cases.

In keeping with the reThink principle advocating continuous reappraisal of the status quo and the on-going optimization of process plants, Siemens will be presenting the most important driving forces for the process industry of the future. The approach taken by Siemens here is ground-breaking. “It’s only by recognizing and implementing opportunities quickly that customers can make optimum use of the digital transformation, making sure that they are equipped and future-proofed to cope with the demands of their specific markets. Our job is to support our customers here, not only by supplying our “digital expertise”, but also with comprehensive industry-related knowledge and specific solutions for each field of industry, and this applies to both new and legacy plants,” says Eckard Eberle, CEO of the Process Automation Business Unit (PD PA) and Director in charge of the Siemens booth at the Achema.

Also grabbing the limelight at the Siemens booth will be the two Highlight Cubes showcasing real applications from the chemical and pharmaceutical industries. The Chemical Cube features a completely virtual 3D model of a real separation column from the Siemens Process Automation World in Karlsruhe. The digital twin demonstrates the life cycle of different sections of the plant and illustrates the possibilities offered by automation and digitalization across every engineering and operational phase. The solutions developed for this application are focused firmly on the needs of the customer. Alongside plant reliability, a high level of availability and fast commissioning, efficient maintenance concepts also have a decisive role to play here. One solution for predictive and economical plant maintenance is based on the interactive use of Simatic PCS 7 and Comos MRO, and will be demonstrated at the booth using the example of a pump maintenance system. The maintenance concept is supplemented by Comos Walkinside for virtual 3D depiction of the plant and by

apps belonging to the Asset Performance Suite such as “Valve Monitoring”, “Pump Monitoring” or “Drive Train Analytics”.

The second of the Highlight Cubes focuses on issues relevant to the pharmaceutical industry such as quality assurance, regulatory compliance, reducing the time to market and improving productivity and flexibility. With its Pharma Cube, Siemens will be demonstrating to visitors how to create the necessary conditions to improve process understanding through extensive analysis. The exhibit will demonstrate the results achievable through cooperation with a development partner using the example of yeast cell fermentation. “Integration of the overall process into Manufacturing Execution Systems (MES), Profinet plug-and-play for the automated recognition of components and paperless manufacturing represent just a few examples of possible ways in which digitalization can transform the pharmaceutical industry and improve the economy of research and drug production right down to batch size 1,” explains Eberle.



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This press release and press pictures are available at www.siemens.com/press/PR2018060206PDEN

For further information on Siemens at Achema 2018, please see

www.siemens.com/achema and www.siemens.com/press/achema2018

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