Press Release

Artificial intelligence in production on the rise

Covestro further expands digitalization processes

- Machine learning: pilot project brings new insights
- Predictive monitoring of production plants possible
- Major project for digital engineering and operation enters next phase

Covestro is already actively exploiting the benefits of digital transformation and consistently driving digital innovation. Important progress has now been made in two areas: A pilot project has provided new findings for the predictive, intelligent maintenance of systems and is now continued at the production site in Caojing, China. Also, the global project for digitalizing and integrating the system landscape in production, "Optimized System Integration" (OSI2020) for short, is entering the next project phase. This will make production processes even more cost- and energy-efficient in the future. Further digitalization of the production facilities will make planning, operation and maintenance much easier.

"The collection and analysis of data has become increasingly important in recent years. The expansion of our intelligent and integrated data management increases plant availability and makes production processes more efficient," says Dr. Klaus Schäfer, Chief Technology Officer (CTO) of Covestro and responsible for Production and Technology. "This is a major step forward in the digitalization of our global operations."

Machine learning enables predictive maintenance

The materials manufacturer is therefore systematically tapping the potential of digitizing production processes. The so-called "predictive maintenance" of systems, for example, becomes even more reliable in combination with machine learning and artificial intelligence. This is shown by a pilot project of the polymer company. The temperature and vibration sensors installed in a large engine of the production plant transmit their collected data on the condition of the engine...
during operation to software. This enabled the team to predict possible engine failure eight months in advance. "Machine Learning and Artificial Intelligence provide a real improvement in the overall operation. We are convinced that this technology will prevail in all production plants in the future," summarizes Jane Arnold, Head of Global Process Control Technology. "The aim is to be able to intervene precisely in the production processes on the basis of a clear presentation of all information and thus continuously optimize them," Arnold continues. To this end, Covestro comprehensively analyses data from ongoing production and maintenance in order to be able to assess the behavior of machines and materials in advance and make appropriate recommendations. The system learns automatically.

**Green light for Digital Twins**

A central component in the digitalization of production processes at Covestro is the global project "Optimized System Integration" (OSI2020). Launched in 2017 with 12 sub-projects, the Board has now given the go-ahead for the second phase of the project. The roll-out of the already developed portal for integrated engineering and operation of production facilities at all major locations is planned. The Integrated Plant and Engineering Platform (IPEP) creates a virtual data model and a digital twin of each production plant. "The entire technical documentation of each plant is brought together in digital form in this type of database. This will benefit all production employees. IPEP will enable us to work even more securely and efficiently in the future and to access all data quickly and easily," explains Stephan Krebber, Program Director Digital Production & Technology. Covestro sees great potential in the intelligent linking of plant and process data, on the basis of which further applications could be developed.

**About Covestro:**

With 2018 sales of EUR 14.6 billion, Covestro is among the world’s largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 16,800 people (calculated as full-time equivalents) at the end of 2018.

*This press release is available for download from the Covestro press server at www.covestro.com. Photos are available there for download as well. Please acknowledge the source of any pictures used.*
**Note to editors:**

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