

Connected machines: thyssenkrupp Materials Services expands use of digital platform toii

- IIoT platform in use at more than 30 locations
- Figures confirm potential of digital networking
- toii as part of the strategic realignment "Materials as a Service"

In 2017, thyssenkrupp Materials Services began to digitally connect its machinery network, using their self-developed IIoT platform toii. Now that the product has successfully proven its value, thyssenkrupp plans to make the potential of digital networking available to other industrial companies in the future. "From the beginning, we built toii not as a project, but as a product," says Axel Berger, Head of Digital Transformation at Materials Services. "toii has a modular structure, so it is highly scalable and suitable for use by other companies dealing with the challenges of Industry 4.0"

Automated processes thanks to digital platform

The name toii refers to two things: on the one hand it turns around the abbreviation IIoT (Industrial Internet of Things), on the other hand the name is pronounced like the word toy, calling to mind fun things. In that regard, toii makes it easy to connect machines of different generations and also allows connections between machines and IT systems - across locations worldwide. The goal is to make the production processes transparent, thus increasing quality and performance and at the same time automating more and more processes.

Figures confirm potential

More than 30 thyssenkrupp locations are now working with toii - including companies from Materials Services, Components Technology and Steel Europe. Nearly 300 machines have been integrated into the system, including numerous slitting and cut-to-length lines, slitting lines for steel slabs, packaging lines, band saws, measuring systems and high-bay warehouses. In addition, there are numerous cranes, forklifts, wheel loaders and other vehicles in the network. In total, toii encompasses thousands of "Things" from the individual machine control panels to sensors to the manual measuring devices. The advantages are reflected in

concrete figures. For example, a single plant in the production of slit strip and sheet can expect an increase in annual production of up to 10,000 tons. In other areas, production line downtimes have been reduced by up to 10 percent.

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Component for strategic realignment "Materials as a Service"

Although Materials Services developed toii especially for its own requirements, the platform can be easily integrated into the processes of other companies. "Now that we have brought digital change to our facilities, the next step is to offer toii to our customers and other industrial companies," said Klaus Keysberg, CEO of Materials Services. The digital platform is a further component in the strategic development of the business area. With the "Materials as a Service" approach, the largest materials dealer in the western world not only guarantees access to global supply markets but also passes on its knowledge to its customers. Materials Services is systematically expanding its service portfolio in addition to its core materials trading business.

About thyssenkrupp Materials Services:

thyssenkrupp Materials Services is the largest materials distributor & service provider in the western world with around 480 locations in more than 40 countries, including 271 warehouses. The versatile range of services offered by the materials experts enables customers to concentrate even more on their individual core businesses. Materials Services focuses on two strategic areas: Global materials trading as a one-stop-shop - from steel and stainless steel, tubes and nonferrous metals through special materials to plastics and raw materials - as well as customer-specific service business in the areas of materials management and supply chain management. A comprehensive omnichannel architecture gives 250,000 customers worldwide access to more than 150,000 products and services around the clock. High-performance logistics ensure that all desired services, whether "just-in-time" or "just-in-sequence", are smoothly integrated into the customer's manufacturing process.

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