

**More speed in the supply chain: The AI solution "Pacemaker" from thyssenkrupp**

With distributed production sites and global supplier relationships, complex supply chains have emerged in almost all industries. Even the slightest disruption or deviation in the material flow can lead to costly downtimes. thyssenkrupp Materials Processing Europe has developed "Pacemaker", an AI-based software that ensures a smooth material flow and lower resource consumption. The name "Pacemaker" describes the function of the software: among other things, the aim is to increase supply security, reduce inventories and thus increase production output. The algorithm is already being used by some suppliers in the automotive industry in the Portuguese industrial park Autoeuropa.

To ensure efficient production, both parts for the production lines must be delivered just-in-time and material jams must be avoided. "An important component of an ideally functioning supply chain is intelligent material management that can react flexibly to deviations and disruptions in production. Pacemaker helps us here as a forecasting tool," says António Novaís, Managing Director of Palmetal, the Portuguese site of thyssenkrupp Materials Processing Europe.

**Sustainable effects along the supply chain**

The AI-based software collects real-time production data from the car manufacturer, recognizes deviations from the plan from patterns and visualizes the data. Compared to the previous supply chain process, Pacemaker shows the customer's actual demand more than a day earlier and enables the customer to adjust the material flow at short notice. This was also confirmed by a study conducted by the Nova School of Science and Technology in Lisbon, which tested the performance and precision of Pacemaker's forecasts.

With Pacemaker, thyssenkrupp Materials Services also makes an important contribution to the more resource-efficient use of materials: Incorrect deliveries are reduced, inventory and storage costs as well as the number of transports are reduced. The savings in transport and coordination are 10 to 15 percent. Another plus point is that the algorithm can be used at any level of the supply chain as well as between several levels and does not require any adaptation of the IT systems on the customer side. Existing data from the customer is fed in. "With Pacemaker, we ensure that the material flow does not break off. In this way, we ensure that the right material arrives at the right time in the right quality, even from other suppliers," Novaís explains.

### **Systematic further development of the solution**

In order to further develop the solution systematically and for other customers, thyssenkrupp Materials Processing Europe in Germany is pushing ahead with the next expansion stage of Pacemaker. At thyssenkrupp Bilstein, a system partner to the automotive industry, the Pacemaker team is currently working on scaling the business model.

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### **Strategic expansion of supply chain activities**

The use of the software is another building block in the strategy of thyssenkrupp Materials Services. As part of the strategic development "Materials as a Service", the materials trader and service provider is consistently expanding its supply chain service business. "In the medium to long term, our goal is to manage more parts of our customers' value chain in addition to materials trading, so that they can concentrate fully on their core business," says Ilse Henne, Chief Transformation Officer of thyssenkrupp Materials Services. "Our clear goal is to better meet the needs of our customers."

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### **About thyssenkrupp Materials Services:**

With around 480 locations – 271 of them warehousing locations – in over 40 countries, thyssenkrupp Materials Services is the biggest mill-independent materials distributor & service provider in the western world. The wide-ranging capabilities offered by the materials experts enable customers to concentrate more on their individual core business and span two strategic areas: global materials distribution as a one-stop-shop – from steel, tubes and pipes, nonferrous metals and specialty materials to plastics and raw materials – and tailored services in the areas of materials management and supply chain management. An extensive omni-channel architecture offers 250,000 customers worldwide round-the-clock access to more than 150,000 products and services. A high-performance logistics system ensures that all deliveries are integrated smoothly into customer production processes on a just-in-time or just-in-sequence basis.

### **Media contact:**

Lars Bank  
thyssenkrupp Materials Services  
Head of External & Internal Communications Segment Materials Services  
Email: [lars.bank@thyssenkrupp-materials.com](mailto:lars.bank@thyssenkrupp-materials.com)  
Phone: +49 (201) 844-534416  
[www.thyssenkrupp-materials-services.com](http://www.thyssenkrupp-materials-services.com)  
[www.linkedin.com/company/thyssenkrupp-materials-services](https://www.linkedin.com/company/thyssenkrupp-materials-services)