PRESS RELEASE

MESSER Cutting Systems

OPC UA OPEN INTERFACE:
JOOP'S SUCCESS STORY CONTINUES TOWARDS INDUSTRY 4.0.

Veenendaal, 2024.04.19

In 2020, JOOP and Messer Cutting Systems began their exciting journey towards Industry 4.0. Since then, a lot has changed at the Dutch steel processor: A completely new automation system, consisting of a fibre laser and a plasma cutting system with bevel technology and drilling unit, as well as a material handling system, now ensures the component manufacturer's extensive range of services. The central element is the OmniFab Software Suite, which connects the various Messer systems and equipment via interfaces and integrates them into the business processes in a process-orientated manner.

In the same period, JOOP has extended its production technology with machining (5-axis), enlarged its bending capabilities (up to 8m wide and 1250T pressure) and has a highly certified welding department with welding robot (NEN 1090-3 / ISO 3834-2).

With the automation and digitalization of crucial production and business processes, JOOP has reached an important milestone on the road to digital transformation. And the company remains "on course" to become a fully automated component supplier. An OPC UA interface (Open Platform Communications Unified Architecture) has just been successfully implemented. In the following interview with Bart Kroesbergen, Managing Director at the steel component supplier in Veenendaal, the Netherlands, he explains what this means and the benefits for JOOP.

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Messer Cutting Systems:

Mr. Kroesbergen, thanks to the OmniFab integration, the company already uses Messer machine information in real time. In addition, the OPC UA interface implementation project has just been successfully realized. What was it all about?

Bart Kroesbergen:

Messer Cutting Systems provided us with open and generic interfaces for the machines, which we can access freely and process the information in our own IT system. The integration of the Messer Cutting Systems machines was extremely smooth: all machines were successively equipped with new advanced control software. Within a week, 6 machines were updated to provide machine information.

Messer Cutting Systems:

Why is this necessary?

Bart Kroesbergen:

We use a SCADA system (Supervisory Control and Data Acquisition) to monitor and control all of our production systems across multiple production technologies and production sites and to collect and record data of all these processes. Data transfer is much easier with the OPC UA standard. It is already deeply integrated, standardised and implemented in many industries. Machines can be easily integrated into the overarching system via the OPC UA standard. This gives us a better overview of the entire production process. It allows us to use all of the production data in the different production steps to fully analyze the production steps, timing, costs and improvement possibilities. In fact, we gain a sort of production "BIG DATA".

Messer Cutting Systems:

Could you please give a little bit more details?

Bart Kroesbergen:

Production is now largely automated and controlled exclusively from a control room. This means we always have an up-to-date overview of which jobs need to be cut, what is currently happening in the machines, which jobs have been cut and can be cleared away and how the production of individual pieces evolved. Via OPC UA, Messer Cutting Systems has given us e.g., the machine status cutting job and other information is provided, which we then merge and analyze in our SCADA system.

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Messer Cutting Systems:

So, what is the advantage of OPC UA for Joop van Zanten?

Bart Kroesbergen:

It enables secure, reliable, and manufacturer-independent communication across different levels of our manufacturing facility. This is a decisive advantage for us, as it allows us to seamlessly integrate our systems from different manufacturers and production processes. It gives us insight into the costs, timing and quality of an individual product and at the end of our production process the data is combined to give full insight into a product assembly which we deliver as component to our customers. We now have all our processes and data collection automated. Thanks to standardized data models, future systems can also be easily integrated into our existing network. In addition, high security standards ensure secure data exchange and protection against unauthorized access.

Messer Cutting Systems:

How did collaboration go?

Bart Kroesbergen:

Messer Cutting Systems and JOOP have had a trusting partnership since our first joint automation project. The teams on both sides are always highly motivated to make the task a success together. That's how it was this time with the interface integration project. We planned in advance exactly what information from our machine park is needed and adapted it to our needs. For example, all tools had to be supported. Messer Cutting Systems adapted and implemented the requirements excellently. Within a week, all machines were then installed with new software - according to a very precise plan, so that ongoing production was not disrupted.

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Messer Cutting Systems:

Bart, your goal is to completely automate production. What are the next steps?

Bart Kroesbergen:

Next, we have to tackle material handling, which is not so easy due to the weight of some parts. On the Messer machines we make products from 2mm up to 300mm thickness and from a size of 5cm x 5cm up to 14m long and 3m wide. Because of this full range of product weights and sizes we still move a lot by hand. We must find a way to handle these products or at least most of these products. Together with Messer and other partners, we want to fully automate production.

See here the video of the interview with Bart Kroesbergen. (https://youtu.be/YasFcODOM-c)

Pic:

“With OPC UA we gain a sort of production “BIG DATA”, Bart Kroesbergen, Managing Director Joop van Zanten.

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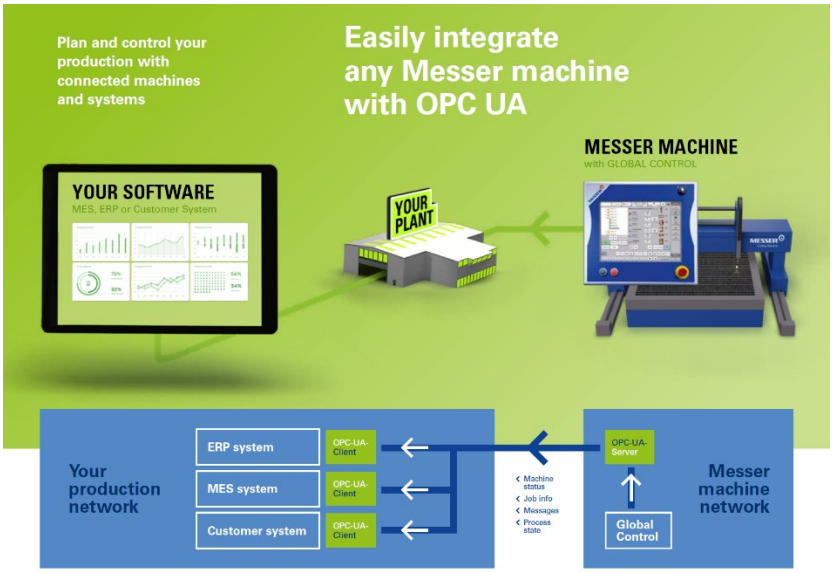

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WHAT WE STAND FOR

CREATING SOLUTIONS BEYOND MACHINES

Messer Cutting Systems is a global supplier of cutting-edge technology for the metalworking industry. With over 900 employees worldwide in over 50 countries, we maintain a constant dialogue with our customers to achieve sustainable user-oriented innovation.

Our portfolio embraces the themes PRODUCT, DIGITAL, SERVICES, AUTOMATION and KNOW-HOW. We will live up to our claim “Creating Solutions Beyond Machines” not just with the most modern cutting systems and solutions for oxyfuel technology.

Appropriate services and training, our own software applications as well

THE MESSER EXPERIENCE

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Cutting Systems

as the integration of solutions from our technology partners, e. g. in the field of automation, complete the machine to give forward looking total solutions.

Our Know-how combined with our customer-oriented attitude and actions make us the world-wide partner of choice for innovative total solutions on all aspects of cutting systems for 125 years.

KONTAKT

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JOOP VAN ZANTEN STAALSERVICE

The family business, founded in 1966, is a full-range supplier of laser, plasma and oxy-fuel cutting of steel, including finishing operations such as press braking, straightening, blasting and welding. At the One-Stop Shop, customers receive the entire steel package from a single source. A balanced relationship between price and quality, flexibility and fast delivery characterise the company.

Joop van Zanten has recently moved to De Batterijen industrial estate in Veenendaal, with 10,000 m² of floor space and a modern hall layout. More than forty experts work here on the high-quality

semi-finished products. For the shipbuilding, crane, mechanical engineering, infrastructure, construction and transport sectors, an extensive stock of certified first choice sheet material, mainly from Western European rolling mills, is kept on hand. With state-of-the-art machinery and control systems combined with specialisation and expertise, the company produces simple as well as high-quality and complex products quickly and effectively.

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