Part 2 of the story

How do you sustainably combine the production systems of two successful, but quite different, metal construction companies? This was the question company founder Thomas Loh and managing director Matthias Kroll wrestled with, finding answers from the Smart Factory consulting experts.

LoKa Metallverarbeitung GmbH

www.loka-metallverarbeitung.de

LoKa manufactures assemblies and housings for certain sectors, such as machine and tool construction as well as for the packaging, aerospace and food industries. Sheet metal, stainless steel, steel and aluminium with thicknesses of up to ten millimetres are processed. On the other hand, processes at LK Mechanik are more intricate: the company is a market leader in the development and production of highly precise workpiece and tool carrier magazines for industrial and medical technological applications.

INDUSTRY	NUMBER OF EMPLOYEES	LOCATION
Mechanical engineering	55	Hüttenberg / Heuchelheim, Germany

TRUMPF PRODUCTS

- TruLaser 5030 fiber
- TruBend 5130
- TruBend 5170
- TruLaser Tube 7000
- Smart Factory Consulting

Challenge

On the credit side, we have two metal-processing companies with a total of 55 employees, a site with 18,500 square meters and a company founder with courage and vision. The dream of a new modern production hall is on the debit side of the balance. This is where, in future, the products from both companies are to be manufactured in perfectly coordinated processes – smart, efficient and sustainable. All technologies, production strategies and processes from both companies had to be scrutinised for this purpose. Where are hidden potential and synergies? Where should existing capacities be developed or automation introduced? Is it worth launching new, as yet non-existing technologies and what are the requirements to do so? Which existing machines can also be used in future and where would it be wise

to invest in new ones?



"Working with professionals saved us a lot of diversions and distractions. In addition, the analyses and perspectives of the Smart Factory team gave us completely new insights and approaches which will be useful for us in future as well."

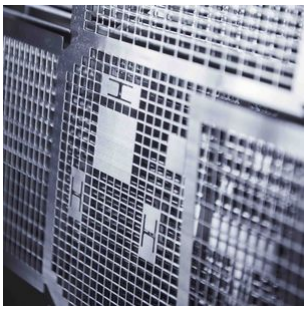
TOMAS LOH
COMPANY FOUNDER OF LOKA METALLVERARBEITUNG GMBH

Solution

Factory design is a new Smart Factory Consulting service from TRUMPF with the aim of advising and supporting customers with the comprehensive development of their production. It is irrelevant whether it is a completely new production facility or a reconfiguration of an existing one. The factory designers do not just take TRUMPF products into consideration during their planning, but look beyond their own backyard as well. The experts' analyses plainly indicated where capacities were still available in the production. It became clear that the automation options in the LoKa portfolio were not as comprehensive as initially assumed. Kroll adds: "Thanks to TRUMPF reference customers, we could see for ourselves that a lot can be done with automation processes. However, our production includes many special and single parts, making it slightly more complicated for us. Product analyses indicated this to the factory design team as well, and it was a subject of extensive and controversial debate. The fact that it was never a question of replacing or purchasing as many machines as possible shows what generally characterised the consultation process. It was about finding the right solutions for us."

Implementation

When it became clear which existing machines LoKa and LK would integrate in the new production line, which new systems would be procured and which new technologies would be introduced, the team turned to the design of the production hall. Managing director Mathias Kroll says, "The factory design team from TRUMPF sketched the previously developed ideal material flow. Along with our staff, they moved scale models around the hall plan until everyone was happy with the workflow." Around 20 percent of all the measures included in the ideal version are implemented in the first development stage. This meant, for example, that the company selected two partially automated laser cutting machines from TRUMPF and decided to launch a completely new technology. The solutions which the consulting team developed for future separate steel and stainless steel processing were far-reaching as well. Strictly separate chambers were created for welding and grinding. Two separate assembly areas and cleanrooms were added. The following factors were important to LoKa's management: an optimum material flow, perfect machine utilisation and that the additional expenditure created by retrofitting and cleaning was kept within reasonable limits. In addition, LoKa benefited from the fact that the machines and resources of both production lines were already being used in the first development stage.







Forecast

As soon as the machines are set up in their new home and the processes are established and stable, Loh and Kroll want to introduce the automated TruTops Boost programming. The process of consolidating the previously separate ERP systems of LoKa and LK is already under way. There is still much to be done. But both are sure that with the help of the factory design consultants, they have laid the important cornerstone for all the steps ahead on their journey to a Smart Factory.

Man and machine working together

Construction work on the new parent plant in Hüttenberg began in January 2022. The move took place, just 6 months later, in August 2022, and was split into three phases. The processes stabilized quickly thanks to some excellent advance planning by the Smart Factory consultants. Tomas Loh notes that the envisaged synergy effects are already evident: "The significant advantage of merging the two companies is our ability to integrate superior manufacturing technologies into the product. LK Mechanik has been a strong competitor in the laser welding sector for many years. We are currently endeavouring to apply this expertise to existing LoKa products, and the feedback from our customers has been extremely positive."

The overall production process has gained transparency, he adds: "We now have the capability to track the location and production status of each order. "We have made significant improvements in this area," he remarks. Before the planned implementation of automated programming with TruTops Boost, the integration of the previously separate ERP systems at LoKa and LK Mechanik must be finalized. Loh emphasizes, "It is crucial for us to ensure that everyone understands the added value and collaborates effectively."

Simultaneously, LK Mechanik is actively advancing its digitalization efforts to achieve further process optimization. "There is still much to be done", explains Tomas Loh. "But we are sure that, with the help of the factory design consultants, we have laid the important cornerstone for our journey to becoming a smart factory."

Find out more about the products



TruBend Series 5000

The TruBend Series 5000 is TRUMPF's most successful bending machine worldwide. Using the press brake, your production will be unrivalled – from programming, to setup, to the actual bending.

Zum Produkt



Smart Factory Consulting

Where and to what extent does networked production currently benefit you most? Our consulting services start precisely at this point. Our portfolio has the right solution for each step. Together we discover what exactly is most worthwhile for you at the present time.

Zum Produkt

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