Swiftly digitalized

At MERZ GmbH, those responsible are proud of the company's high vertical range of manufacture. The in-house sheet metal processing is a major contributor to this. In addition to the complicated inner workings of mobile electricity distributors, testing-, connection-, and supply technology, as well as switching devices, MERZ also supplies the housings for them. Around 110 employees process around 10 to 15 tons of thin sheet daily in a 3-shift operation. As production repeatedly reaches its limits in terms of both capacity and organization in 2015, Tim Ungerer realizes that comprehensive automation and digitalization measures are absolutely necessary. He gets support from TRUMPF for the planning. In addition to a rejuvenation of the machinery and a fully automated STOPA store, the Oseon production control system is intended to boost production.

MERZ GmbH

www.merz-elektro.de/

In 1946, Gustav Merz founded the MERZ Switching Device and Apparatus Construction factory in Gaildorf. Over the years the company has developed into a leading manufacturer of mobile electricity distributors, testing-, connection- and supply technology as well as switching devices. Since 2005 MERZ has belonged to the globally operating PCE Group headquartered in Austria. Together with the two sister companies Merz Schaltgeräte GmbH & Co. KG and Moser Systemelektrik GmbH, MERZ has positioned itself on the market with a diverse product range. MERZ achieves its high vertical range of manufacture not least through its in-house sheet metal processing.

INDUSTRY	NUMBER OF EMPLOYEES	SITE
Mobile electricity distributors, testing technology, sheet metal technology, switching devices, connection technology	160	Gaildorf (Germany)

TRUMPF PRODUCTS

- TruBend Center 7020
- TruMatic 5000
- TruMatic 6000
- STOPA Store
- TruLaser 3030
- TruLaser 5030 L68
- TruBend Cell 7000
- TruBend Cell 5000
- TruBend 7036
- TruBend 5085
- Trubend 5130
- TruBend 5230

APPLICATIONS

- Laser cutting
- Bending

Challenges

Speed is of the essence for sheet metal production at MERZ. In addition to numerous colleagues from different sectors of the company, Tim Ungerer and his team also serve many external customers who know MERZ as a reliable job shop. "Of course, everyone wants their order processed first. Many of our products are part of larger construction projects. If we don't deliver on time, we face penalties," explains Ungerer. With a previous daily work volume of three tons of thin sheet per day and a high part variance with quantities ranging from one to 1,000, production is often very busy. "A lot of processing took place on short notice. Transparency? Not a chance. That not only stressed the employees, it also really annoyed me," recalls Ungerer, adding: "We had to make a fundamental decision in order to continue to work efficiently in the future. The shareholders of MERZ GmbH decide to prepare the production for the future. New machines and a fully automated STOPA store get things started. However, the introduction of the Oseon production control system from TRUMPF proves to be a real game changer.



"The mobile access to all information about the material flow makes daily work easier for all employees."

TIM UNGERER

HEAD OF PRODUCT MANAGEMENT FOR SHEET METAL TECHNOLOGY, MERZ GMBH

Solutions

After extensive investigations and analyses by TRUMPF, MERZ GmbH initially invests in modern, fully automated machines. They are set up in the production hall in such a way that they can subsequently be connected to fully automated STOPA high bay storage racks. Tim Ungerer was impressed by the interaction between machines and stores from the start: “We didn’t have any automation worth mentioning before. The high bay storage racks finally give us the flexibility we need.” Ungerer is able to halve the number of employees who load and unload machines, allowing him to use the workforce elsewhere. Productivity increases noticeably and throughput times decrease. “I also wanted the orderly and efficient material flows from the high bay storage racks to be present on the floor as well. And there is no way to do this without software,” explains Ungerer. He decides on a comprehensive Oseon production control package from TRUMPF.

Each process step is controlled by Oseon - from work preparation and production planning to the automated programming of orders with the TruTops Boost software, and ultimately to a digital message that an order has been completed. Every workstation is equipped with tablets und each work step, from beginning to end, is registered by employees via an app. "The mobile access to all information makes their day-to-day work easier. And I have the advantage of knowing where an order is at the drop of a hat and when is it completed," says Ungerer, delighted.

Within a very short time, the automation by means of the high bay storage racks and the advantages of production control on the shop floor align. “We have increased our capacity from three tons of thin sheet per day to ten to 15 tons. That is a ballpark number," explains Ungerer. In addition to more efficient processes and transparency, Oseon also demonstrates optimization potential through extensive data collection at all workstations. “The bending stations were a bottleneck for us,” reports Ungerer. "With Oseon we now have the option of managing bending pools." All bend orders are collected there and I can assign each bender entire order queues over several weeks. “That makes this work step much more predictable and efficient,” he says happily.

Implementation

"I wanted to introduce the software as quickly as possible," says Tim Ungere, adding: “This only worked because my employees were supportive of the project from the start.” Because such a comprehensive change demanded a lot from everyone. "All processes changed. We had to rethink everything," recalls Ungerer. “But after six months of gritting my teeth, the success curve increased exponentially from week to week. That motivated everyone."

The commitment of the TRUMPF software and process specialists was another success factor, says Ungerer: “They supported us throughout the entire time and made adjustments and optimizations until everything was right.” Nobody knows better than Tim Ungerer that this process is dynamic and therefore there is always a next move and the process is never finished. “I still have a parking space for the TRUMPF specialists,” he says with a smile. “But in the meantime my employees are getting along well with the new processes and programs and are happy that things have become easier and everything is more manageable.”







Forecast

Tim Ungerer is already thinking about the next steps: automated guided vehicle systems, the elimination of buffer storage, and the continuous review and optimization of the machinery are at the top of his agenda. “The ideal production must always be open to new ideas, and with a partner like TRUMPF I am ready to take the leap.”

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