Instant digitalization

MERZ GmbH is proud of its high vertical range of manufacture. MERZ attains this primarily through its in-house sheet metal processing operation. The company not only supplies the complex inner workings of mobile power distribution, testing, connection and supply technology, but also the housing for them. Some 110 employees process somewhere between 10 and 15 tonnes of thin sheet every day across three shifts. In 2015, when production consistently reached its limit in terms of capacity and organization, Tim Ungerer recognized the urgent need for extensive automation and digitalization measures. He sought assistance from TRUMPF for his plans. Aside from investing in new machinery and implementing a fully automated STOPA store, the introduction of the Oseon production control system is intended to provide an additional boost to the production process.

MERZ GmbH

www.merz-elektro.de/

In 1946, Gustav Merz founds MERZ Schaltgeräte- und Apparatebaufabrik in Gaildorf, Germany. Over the years, the company has become a leading manufacturer of mobile power distribution, testing, connection and supply technology as well as switchgear. Since 2005, MERZ has been part of the global PCE Group, which is based in Austria. Together with its two subsidiaries Merz Schaltgeräte GmbH & Co KG and Moser Systemelektrik GmbH, MERZ has established a strong market presence with its extensive product portfolio. MERZ attains its high vertical range of manufacture primarily through its in-house sheet metal processing operation.

INDUSTRY

Mobile power distributors, testing technology, sheet metal technology, switchgear, connection technology

NUMBER OF EMPLOYEES

160

LOCATION

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

Things have to move fast in MERZ's sheet metal processing operation. In addition to colleagues from various departments within the company, Tim Ungerer and his team also serve external customers for whom MERZ operates as a job shop. "Of course, everyone wants their order to be processed first. Lots of our products are part of a larger construction project. We can be faced with fines if we don't deliver on time," Ungerer explains. With a previous daily work volume of three tonnes of thin sheet and a high parts variance with quantities varying from 1 to 1,000, the production line is often very busy. "A lot of things were done on demand. Transparency? No chance! It not only stressed out the staff, but also annoyed me intensely," Ungerer says in retrospect. "We had to make a fundamental decision in order to be able to work more efficiently in the future. "The shareholders of MERZ GmbH decide to prepare the production line for the future. New machines and a fully automated STOPA store were first on the agenda. However, the introduction of TRUMPF's Oseon production control system proved to be a real game changer.



"Mobile access to all information about the material flow makes everyday life easier for all employees."

TIM UNGERER

HEAD OF PRODUCT MANAGEMENT SHEET METAL TECHNOLOGY, MERZ GMBH

Solutions

Following thorough research and analysis conducted by TRUMPF, MERZ GmbH made its initial investment in state-of-the-art, fully automated machines. These machines are arranged within the production hall to facilitate their connection to fully automatic STOPA high bay storage racks. The synergy between machines and storage has been a source of inspiration for Tim Ungerer from the very outset: "We had no automation to speak of until then. The high bay storage racks finally provide the flexibility we require," Ungerer confirms. This allows him to halve the workforce needed for loading and unloading machines, reallocating labor resources to other areas. Productivity shows a noticeable increase, and throughput times are reduced. "I wanted to extend the organized and efficient material flows from the high bay storage rack to the entire production area. And that was always going to involve the use of software", explains Ungerer. He has chosen to implement TRUMPF's complete Oseon production control system.

Every process step is controlled by Oseon, from work preparation and production planning to the automated programming of jobs using TruTops Boost and digital notifications when a job is completed. At every workstation, employees record each stage of work from initiation to completion using tablets and a dedicated app. "This mobile access to information streamlines their daily work routines. "And the benefit for me is that I can check the status of an order and its estimated completion time with a simple button press," Ungerer notes happily.

Within a very short time, the automation offered by the high storage racks blends seamlessly with the benefits of floor-level production control. "We have expanded our capacities from the previous three tonnes of thin sheet per day to 10 to 15 tonnes per day," Ungerer explains. "That's a substantial increase," remarks Ungerer. In addition to enhancing processes and transparency, Oseon also unveils opportunities for optimization through comprehensive data capture across all workstations. "The bending stations were a bottleneck in our system," Ungerer reports. "Oseon has enabled us to manage the bending pools." All bending jobs are consolidated there, enabling Ungerer to allocate order queues to each bending machine over a period of several weeks. "As a result, this work step has become far more predictable and efficient," he adds contentedly.

Implementation

"I wanted to introduce the software as quickly as possible," says Tim Ungerer. "It only worked because my team was fully committed to the project right from the start," Ungerer explains. Implementing such a comprehensive transformation required dedication from everyone involved. "It involved changing every single process, and we had to completely rethink everything," Ungerer recalls. "But after six months of gritting our teeth, the rate of success grew exponentially with each passing week. That motivated everyone."

Ungerer acknowledges that the dedication of TRUMPF's software and process specialists played a pivotal role in the project's success: "They stood by us throughout, making adjustments and optimizations until everything was exactly right." Tim Ungerer understands better than anyone that this process is ongoing, with continuous improvements to be made and no true end point. "I still have a parking spot reserved for TRUMPF engineers," he says with a smile. "But at this point, my employees have adapted to the new processes and programs quite effectively. They are delighted that many tasks have become more straightforward and everything is now more manageable."







Forecast

Tim Ungerer is already looking ahead, with a focus on implementing automated guided vehicle systems, eliminating buffer storage and continuously reviewing and optimizing his machinery. "The perfect production facility should always be receptive to innovation, and I'm prepared to embrace it with a partner like TRUMPF."

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