Tube process chain: automated for complex components

TecPro Metall GmbH supplies components, assemblies and systems to the automotive and commercial vehicle industry as well as the machine and systems engineering sector. They specialize in tube processing. An inquiry from a customer in the automotive supply industry prompted the company to look into the possibility of an automated tube process chain. "The task was not manageable with the existing tube cutting machines," says Sales Director Dominik Jordan. "We needed a solution that would allow us to reduce cycle times through efficient production and minimize manual intervention. That is only possible with automation." The TecPro project team and representatives of the automotive supplier set out to find a solution. And they found it: The strategic partnership between TRUMPF and the specialist for tube bending and processing machines, transfluid® Maschinenbau GmbH, makes it possible to jointly offer TecPro an automated tube process chain.

TecPro Metall GmbH

www.tecpro-metall.de

TecPro Metall GmbH, based in Neuss, North Rhine-Westphalia, is a medium-sized company that supplies the automotive and commercial vehicle industry with components, assemblies and systems. Their customer base also includes companies from the mechanical and plant engineering sectors. TecPro specializes in tube processing. Since the beginning of 2019, the company has been part of the Neuenhauser Group, a corporate group that includes metalworking companies. Customers benefit from the specialized expertise of the individual companies and from the synergies created by the company network.

INDUSTRY
Metal processing with a focus on tube processing

NUMBER OF EMPLOYEES
63

SITE
Neuss (Germany)

TRUMPF PRODUCTS

- TruLaser Tube 5000 fiber
- TruLaser Tube 7000 fiber
- TruLaser Cell 8030

APPLICATIONS

- Laser cutting
- Laser tube processing

Challenges

Shortage of skilled workers, time and cost pressure: challenges that can only be overcome through automation. Holger Malzkorn, CEO of TecPro Metall GmbH and Sales Director Dominik Jordan are well aware of this. The tube process chain ensures a smooth process for a very special component request from an automotive supply customer that needs transverse tubes for trailer couplings. "We were already using a TruLaser Tube 5000 fiber and a TruLaser Tube 7000 fiber, and we otherwise work exclusively

with machines from TRUMPF," explains Jordan. It was therefore an obvious decision to reach out to our contacts in Ditzingen when searching for solutions. "Our customer's requirements for component accuracy are very high, and cycle times and costs play a major role in series production, especially in the automotive supply industry," says Jordan. "So we were looking for a solution that would allow us to manufacture the complex product quickly, efficiently and at the highest quality - with as little manual intervention as possible."



"TRUMPF and transfluid® cooperated closely. As a result, we were provided with advice, machines and start-up from a single source."

HOLGER MALZKORN
CEO, TECPRO METALL GMBH

Solutions

The existing TruLaser Tube 7000 fiber is the first link in the automated tube process chain. For the trailer coupling, it takes care of the pre-cut part for the transverse tubes and provides them with contours. "This system has already proven in practice that it is productive, highly accurate and reliable," says Jordan.

The pre-processed tubes are then transported to the transfluid® tube bending machine and automatically loaded by the robot. The CNC mandrel bending machine from transfluid® not only reliably complies with the required tolerances, it can also be set up quickly and easily using the tool changer. The final production step involves the TruLaser Cell 8030 3D laser cutting machine. Then the final processing takes place. The 3D laser system cuts out contours that cannot be inserted before bending because they would be deformed.

Programming the individual machines in the network is easy from start to finish. "We have experience with the TruLaser Tube 7000 fiber. It works great," says Jordan. And the TruLaser Cell 8030 is also impressive in this respect. "The self-explanatory programming saves a lot of time. Once the fixtures including the component have been uploaded, programming is practically a matter of course," emphasizes Jordan. An interface enables bending correction values to be automatically transferred from the transfluid® programming software 't project' to the TRUMPF programming software 'Programming Tube' and taken into account when calculating the cut.

Implementation

Both the TecPro project team led by Dominik Jordan and the automotive supplier, which was closely involved, are very satisfied with the pipe process chain and the planning and implementation of the project. "Our contacts at TRUMPF and transfluid® worked closely together on this project. The cooperation was based on a spirit of partnership and was a good fit for us, as we felt that we received

advice, the machines and start-up from a single source," says Malzkorn happily.







Forecast

At TecPro, the automated tube process chain not only enables the efficient production of the requested component. "Thanks to automation, we will soon be able to offer quality benefits and cost benefits to other customers as well. This puts us in a completely different league," Holger Malzkorn is convinced. He wants to further expand this competitive edge. "In the medium term, we are planning to expand our vertical integration with a 2D laser machine and possibly another welding system - both from TRUMPF, of course. This means that we will no longer be limited to providing individual components for customers, but can offer them a complete subassembly."

Find out more about our products



TruLaser Cell 8030

The TruLaser Cell 8030 sets the standard for 3D cutting of hot-formed components and can be configured to all requirements with flexibility. As a result of new developments and optimized details, it offers even greater production reliability, combined with arguably the highest productivity on the market. Options such as Smart Approach or Dynamic Level 3 increase cost-effectiveness.

Zum Produkt

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