# Tube process chain – automated solution for complex parts

TecPro Metall GmbH supplies the automotive and commercial vehicle industry and the mechanical and plant engineering sectors with parts, complete assemblies and systems. The primary focus is on tube processing. A request from a customer in the automotive supply industry prompted the company to explore the realm of automated tube process chains. "The job couldn't be done with our existing laser tube-cutting machines," explains Sales Manager Dominik Jordan. "We needed a solution that would reduce cycle times through efficient production and minimize the need for manual intervention. Automation was the only option." The TecPro project team and representatives of the automotive supplier set out in search of a solution. And they found what they were looking for in the form of a strategic partnership between TRUMPF and transfluid® Maschinenbau GmbH, the specialist in tube bending and processing machines - a partnership that offers 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 parts, assemblies and systems. The customer base also includes companies from the mechanical and plant engineering sectors. TecPro's focus is on tube processing. Since early 2019, the company has been part of the Neuenhauser Group, a conglomerate that includes metalworking firms. Customers benefit from the specialist expertise of the individual companies and from the synergies fostered by the company network.

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**INDUSTRY**
Metal processing with a focus on tube processing

**NUMBER OF EMPLOYEES**
63

**LOCATION**
Neuss (Germany)

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**TRUMPF PRODUCTS**

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

**APPLICATIONS**

- Laser cutting
- Laser tube processing

### Challenges

Shortage of skilled labour, time and cost pressure are challenges that can only be overcome through automation. Holger Malzkorn, Managing Director of TecPro Metall GmbH, and Sales Manager Dominik Jordan are well aware of this. The tube process chain ensures a seamless workflow for a unique part request from a customer in the automotive supply industry, specifically for transverse tubes used in trailer couplings. "We were already using a TruLaser Tube 5000 fiber and a TruLaser Tube 7000 fiber and also

work exclusively with TRUMPF machines," explains Jordan. It was therefore an obvious decision to ask our contact partners in Ditzingen when looking for solutions. "Our customer's requirements in terms of part accuracy are extremely high, and cycle times and costs play a major role in series production, particularly in the automotive supplier sector," says Jordan. "We were seeking a solution that would allow us to produce the complex product quickly, efficiently, and with the highest quality, minimizing the need for manual intervention."



"TRUMPF and transfluid® have maintained a close collaboration. As a result, we have been able to access consultancy services, machinery and commissioning assistance from a unified source."

**HOLGER MALZKORN**
MANAGING DIRECTOR, 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 cuts the transverse tubes to size and adds contours to them. "This system has already proven in practice that it is productive, extremely precise and reliable," says Jordan.

The pre-processed tubes are then transported to the transfluid® tube bending machine, where the robot loads them automatically. The CNC mandrel bending machine from transfluid® not only consistently meets the specified tolerances, but also offers the advantage of quick and easy setup through its tool changer. The final production step involves the TruLaser Cell 8030 3D laser cutting machine. This is where final processing takes place. The 3D laser system cuts out contours that cannot be added prior to bending because they would be deformed.

The programming of individual machines within the network is straightforward and seamless. "We have experience working with the TruLaser Tube 7000 fiber. Everything is going really well," says Jordan. The TruLaser Cell 8030 also proves to be convincing in this respect. "The self-explanatory programming saves a lot of time. After uploading the fixtures, including the part, programming virtually takes care of itself", explains Jordan. An interface facilitates the automatic transfer of bending correction values from the transfluid® programming system 't project' to TRUMPF's Programming Tube programming software. These values are then taken into account in the cut calculation process.

**Implementation**

Both the TecPro project team, led by Dominik Jordan, and the automotive supplier, which was closely involved, are extremely satisfied with the tube process chain and with the planning and implementation of the project. "Our contacts at TRUMPF and transfluid® worked very closely on this project. The collaboration took the form of a partnership, and it proved convenient for us, as we felt that we received advice, machines and start-up services from a single source," expresses Malzkorn with satisfaction.







**Forecast**

The automated tube process chain at TecPro offers more than just efficient production of the required part. "We will also be able to offer other customers quality and cost benefits in the future using automation. This puts us in a completely different league," explains Holger Malzkorn with conviction. He intends to consolidate this competitive edge. "In the medium term, we are planning to expand our vertical range of manufacture with a 2D laser machine and possibly another welding system – both supplied by TRUMPF, of course. We can then supply customers with a complete subassembly rather than just individual components."

**Find out more about our products**



### TruLaser Cell 8030

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

Zum Produkt

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