

Mr. Abraham is not amused

Since the beginning of last year, Cutting Point GmbH has operated a new TruLaser 5040 fiber with an 8 kW solid state laser. For co-founder Harald Abraham, himself a water jet and flame cutting specialist by trade, it's a bittersweet development.

We're sitting in the conference room of Cutting Point GmbH in Pleinfeld in northern Bavaria as the three co-founders laugh and joke around – it's perfectly clear that these men have been working together for decades and enjoy each other's company. Abraham is being teased mercilessly by his cofounders, Thomas Sattler and Andreas Schweiger, about the TruLaser 5040 fiber. Over the past two years, this 8kW solid state laser has taken production at Cutting Point to a whole new level. Given that Abraham's role within the three-company alliance is one of a specialist in thick sheet processing, it's easy to see why this fan of water jet cutting would view the introduction of the new TruLaser 5040 fiber with mixed feelings. After all, it does "poach" on the domain of thick sheet processing.

Blurred boundaries

When Abraham, Schweiger and Sattler came together to found Cutting Point in 2006, they already had their own companies. Today, Hans Abraham Metallbau GmbH and its 2011 subsidiary Brennpunkt Stahl GmbH offer the entire range of water jet, plasma, gas and flame cutting, while Schweiger of Andreas Schweiger GmbH & Co. KG Metallwarenfabrik specialized in the processing of thin sheets.

> **The machine can cut thin sheets very effectively, but it's great for thick sheets, too.**
>
> Thomas Sattler, Managing Director

Now, in order to cover the entire spectrum of sheet thicknesses, Cutting Point GmbH focuses on laser processing of medium sheets and bending of sheets of up to 4 meters in length. Sattler was appointed as managing director and under his

leadership Cutting Point has developed into a classic contract manufacturer in this area. This way, the three company owners have successfully divided up the different types of sheet metal processing within their company alliance. They often submit joint bids, or pass customers on to the most specialized of their three affiliated but independent companies. Thanks to this business arrangement, they are able to process thicknesses of between 0.5 and 200 millimeters regardless of the material. Now that they have acquired the TruLaser 5040 fiber, however, these clearly defined specializations in thick, medium and thin sheets are beginning to blur. "The machine can cut thin sheets very effectively, but it's great for thick sheets, too," says Sattler, while thick sheet specialist Abraham reluctantly adds: "I have to admit that if you have something like 8-millimeter copper, then the fiber far outperforms water jet cutting in terms of cutting speed. The same goes for aluminum and stainless steel."

Investing in leading technology

The decision to invest in the TruLaser 5040 fiber was taken for multiple reasons. "We already had two CO2 laser machines, and we didn't see the point in investing in a third," says Sattler. In the end, he admits with a grin, it was the stellar reputation of solid state laser technology that drew him in.

> **We had an order for 8 millimeter copper with a batch size of 500 that we simply couldn't have completed without the TruLaser 5040 fiber.**
>
> Thomas Sattler, Managing Director

"Aside from the high cutting speed, we also value the solid state laser's efficiency – which clearly outstrips that of the two CO2 lasers," says Schweiger. "More and more sheet metal manufacturers are coming to us to have their components cut on our machine, since the productivity benefits of the solid state laser completely redefine pricing." Sattler adds: "We had an order for 8 millimeter copper with a batch size of 500 that we simply couldn't have completed without the TruLaser 5040 fiber."

Efficient and precise

The TruLaser 5040 fiber is also efficient in its use of materials. Operations manager Bernd Kummerer is particularly taken with the CoolLine function: "CoolLine allows me to nest components much more tightly than before when I'm cutting thick sheet. Without CoolLine, when I'm cutting a 20 millimeter sheet I can have a 10 millimeter bridge and the material will still fray because the heat is too much. With CoolLine, I can apply a 3 millimeter bridge to the same sheet and cut it without issue," he says. CoolLine is a function that enables targeted workpiece cooling during processing. The cutting head is fitted with special nozzles that spray water mist onto the sheet in a perfect circle around the laser beam, and the evaporation energy of the water cools the material.



The TruLaser 5040 fiber has also exceeded all expectations when it comes to its operating convenience. During three days of training, operators were able to try out all the many programming options right away. (Picture: Thomas Abé)



A strong trio: Andreas Schweiger, Harald Abraham and Thomas Sattler (from left) have been working together for decades. (Picture: Thomas Abé)



CoolLine is a function that enables targeted workpiece cooling and thus to nest components much more tightly than before. (Picture: Thomas Abé)



Thomas Sattler: "The relationship of bore diameter to sheet thickness is fantastic, and we can mostly do away with the extra milling we had to do in the past." (Picture: Thomas Abé)

Sattler is also impressed by having the option of drilling small holes in steel sheets 20 millimeters thick: "The relationship of bore diameter to sheet thickness is fantastic, and we can mostly do away with the extra milling we had to do in the past." He has also been impressed by the BrightLine fiber, FlyLine and automatic nozzle changer functions. "Thanks to BrightLine fiber fusion cutting, we can achieve a high-quality edge when cutting stainless steel, even when the contours are tight. FlyLine allows us to process thin sheets faster than ever before. And, because we're always changing from thick to thin sheets, the automatic nozzle changer saves us additional processing time – and the 8 kW laser is lightning fast as it is," he says.

Flexibility at last

The TruLaser 5040 fiber has also exceeded all expectations when it comes to its operating convenience: position, plug and play. "We had three days of training here at our manufacturing facility, which allowed us to try out all the many programming options right away," says Kummerer. "The programming itself is the same as for other TRUMPF machines, but there are significantly more options to choose from because of the sheer scope of what the tool can do."

Cutting Point GmbH relocated to Pleinfeld in March 2016. The move to a new production facility roughly double the size of the previous location in Wendelstein is due in no small part to the new machine, as well as another recently acquired TruBend 5320 with 320 tons of press force. "With the TruLaser 5040 fiber and the accompanying 4 meter press brake, we have set ourselves up to be able to process an even wider range of parts," says Sattler, peering intently at Abraham. Abraham says nothing, winks and smiles; at the end of the day, all three want the same thing: happy customers, and the more the merrier.

Who:

C. P. Cutting Point GmbH, Pleinfeld. Founded 2006. 29 employees.

What:

Contract manufacturer for sheet metal components and complex components for the mechanical engineering, medical technology, electronics and automotive industries.

How:

TruLaser 5030 fiber, TruLaser 5040 fiber, TruLaser 3530, TruLaser 5030, TruBend 5320, TruBend 5050, Trumabend V85 and others.