Peak joy!

BBW Lasertechnik GmbH, based in Prutting near Rosenheim, is characterized by innovative laser processing. State-of-the-art precision work for highly specialized industries is produced on over 10,000 square meters and with around 50 laser systems. What began with stent cutting has developed into battery module production for e-mobility, complex manufacturing for the aerospace industry, semiconductor electronics and other sectors. Andreas Bürger, Managing Director at BBW, explains: "The parameter window of the welding processes for housing production and cell contacting of batteries is small, as the cells are very sensitive. Different laser sources and processing methods are required for different cell types." In order to meet the challenges of multi-laser processing and always offer its customers customized solutions, BBW only uses the latest laser technology in-house. But that's not all: the company is currently conducting research in cooperation with colleges and universities on topics such as beam shaping.

BBW Lasertechnik GmbH

https://www.bbw-lasertechnik.de/

Founded in 1997, the family-run company BBW Lasertechnik GmbH is a leading specialist in innovative laser processing. Hans Bürger, company founder and now CO-Managing Director at BBW, runs the company together with his son Andreas. His wife Maria and daughter Kristina also work at the company, with the latter now in charge of HR and marketing at BBW. In order to be able to constantly provide new ideas for its customers and because of the seemingly insatiable curiosity of residents, BBW has its own development department and metallurgical program. The company supplies complex industries such as aerospace, e-mobility, medical technology, pharmaceuticals and biotechnology. As a result of this steady growth, the Bavarian contract manufacturer has also increased its production area to over 10,000 square meters.

INDUSTRY	NUMBER OF EMPLOYEES	SITE
Laser processing for e-mobility, aerospace, semiconductor electronics, medical technology, mechanical engineering, etc.	200	Prutting (Bavaria)

TRUMPF PRODUCTS

- TruFiber 2000
- TruDisk 2kW – 6 kW
- TruMicro 5050 Femto Edition
- TruLaser Cell 3000
- TruLaser Cell 7020 / 7040
- TruLaser Robot 5020 (TruLaser Weld 5000)

APPLICATIONS

- Laser welding
- Laser precision cutting
- Laser drilling
- Microprocessing

Challenges

The laser industry is changing: if you want to stand out from the competition today, it is no longer enough to weld customized parts in large quantities. Instead, BBW wants to cater to the individual needs of its customers and develop processes, particularly in smaller industries, that help to overcome the limits of laser technology. Because demanding orders require precise welding processes. But even laser technology reaches its limit at some point. Andreas Bürger points out: "We work in very demanding sectors, from battery technology and medical technology to electronics in the semiconductor sector and aerospace. That's why we need customized solutions to win over our customers."

"We want to offer our customers something new even before they ask us for it."

ANDREAS BÜRGER
CEO OF BBW LASERTECHNIK

Solutions

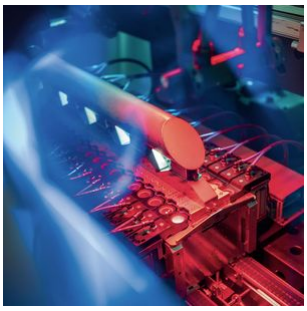
Seit 2005 setzt BBW auf die Laser von TRUMPF. Hans Bürger, Co-CEO Director of BBW and father of Andreas Bürger, explains: "No matter what we had in mind, TRUMPF was always with us. With flexible and innovative solutions. At the same time, laser technology has continued to develop rapidly." Since then, BBW has regularly invested in the latest laser systems on the market and is constantly expanding its portfolio. BBW buys the laser sources from TRUMPF and designs the required systems itself in the company's own development department, depending on requirements and customer projects.

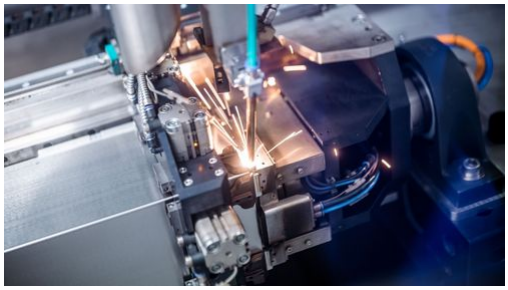
Implementation

BBW has a metallurgical laboratory to ensure that the components are produced as faultlessly as possible. At the start of each project, employees also carry out a detailed feasibility study and analyze

initial tests in their own laboratory. BBW often directly takes over several process steps in laser processing and even post-processing through to the production of entire assemblies. "And when the current technology puts limitations on what we want to achieve, we start researching," says Andreas Bürger.

In an international research project with the Central Innovation Program for SMEs (ZIM), they worked on improving the welding of mixed aluminum-copper joints. The result? Their joining process largely prevents the metals from mixing in the seam to form undesirable intermetallic phases, i.e. alloys. Their own development project "Weldshape" was dedicated to welding hot cracks in aluminum alloy AW6060, which is very susceptible to such weaknesses. The solution process is based on dynamic beam shaping on a self-built laser system with a 16kW singlemode laser and high-performance scanner. This is because BBW is so advanced in terms of laser technology that beam shaping is also becoming a thing of the past for them.





Looking ahead

With their impressive development projects, BBW is doing important work in the field of beam shaping. The laser material processor's fifty laser systems therefore also include beam shaping equipment. The development team is currently researching how the technology can be used profitably for these versatile solutions. The aim is to use beam forming as a problem solver for many materials in future and also to produce more stable weld pools.

Find out more about our products

TruLaser Cell 3000

The TruLaser Cell 3000 is a compact and highly precise 5-axis laser machine for two- and three-dimensional welding and cutting. The 3D laser machine is also suitable for laser metal deposition, is easy to automate and is suitable for both prototype and series production.

Zum Produkt

TruLaser Cell 7040

The TruLaser Cell 7040 laser system is suitable for processing two- or three-dimensional components or tubes. You can change flexibly between cutting, welding and laser metal deposition.

Zum Produkt

Date: 2024-08-19