

"More efficient, more sustainable, and smarter"

Laser World of Photonics in Munich is one of the most important laser trade shows in the world. For the trade show, Christian Schmitz, Chief Executive Officer of Laser Technology at TRUMPF, described what the trends in the industry are, and why lasers alone cannot meet the challenges of the future.

Mr. Schmitz, future trends will also be on display at Laser World of Photonics. Where is the laser's journey heading?

"Lasers will be used even more in consumer electronics – and especially in displays – and we will see more and more applications in the semiconductor industry. Quantum technology is just getting started - the prospect of solving previously unsolvable problems with quantum computers is spurring both scientists and companies on. The issue of sustainability is a technology driver that is already making itself felt today, for example, in electromobility, which is our most important growth sector in the automotive sector. Having said that, the demand for laser applications for fuel cell production is also likely to increase soon, because bipolar plates can hardly be processed efficiently without the laser."

So what role does electromobility play for TRUMPF?

"A big one. Because in e-car production, the laser plays not just a role, but the decisive role. It increases the production speed of electric motors, welds copper connections in the vehicles' high-performance electronics more reliably than ever, and ensures more power and range for the electric car battery. And especially for that last point, the battery, development is rapid. There are over 30 different laser applications in battery cell manufacturing. At Laser World of Photonics, for example, we will be presenting a solution that makes it easier to weld joints between battery cells. This leads to less electrical resistance and ultimately to a greater range for the e-car."

And how does TRUMPF compare to the competition?

"The fact that TRUMPF has been involved in electromobility from the very beginning is now paying off. We are on board with all the relevant automotive and battery manufacturers, and within the last year we have sold over a thousand laser systems that are used in the production of electric cars. Our order intake from electromobility was around 200 million euros in the last fiscal year and - without wanting to give too much away in the middle of the fiscal year - has risen again. Our sales are now higher than those for lasers used in the manufacture of conventional cars. This trend will continue, because the e-models already announced by manufacturers today require massive investments in this area. So the end of the line is still a long way off."

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Christian Schmitz, Chief Executive Officer of Laser Technology at TRUMPF

If you look ten years into the future: How will our lasers and systems have changed by then?

"Our machines and systems will be more efficient, more sustainable and smarter. The laser alone will not be enough; it will always require the triad of laser, optics and sensor technology, not to mention software. In addition, artificial intelligence can help production lines run faster. What's more, our lasers will be much easier to use. It's obvious that when a technology is rather new, they only offer it to the innovation leaders in an industry who are willing to go that route. But over time, you want to expand the customer base, and ease of use is then one of the decisive competitive factors. That's why it's so important for us to already do everything we can to constantly bring the most user-friendly solutions to market."

You mentioned artificial intelligence - what importance does TRUMPF place on artificial intelligence today and in the future?

"We didn't invent artificial intelligence, but we are among the first to use it with lasers - to improve the welding process, for example. In countries where labor costs are low, artificial intelligence has not yet played a role. But in countries with high labor costs, where the processing steps upstream and downstream of lasering should be as low as possible, we are seeing increasing interest from customers."

Thank you!

The interview was conducted by Manuel Thomä