

Press Release

Laserline at EuroBrake 2024: Focus on cladding with 30 kW diode laser and double-sided coating of brake discs

New cladding nozzles as another trade show highlight

At this year's EuroBrake, Laserline will be presenting highly efficient laser solutions for the environmentally friendly and economical series cladding of brake discs. In addition to cladding using 30 kW diode lasers, the focus will be on double-sided cladding and further improvements in process efficiency. The diode laser specialist will also be presenting new cladding nozzles for optimizing coating processes.

Mülheim-Kärlich, May 15th 2024 – Laserline will be presenting energy-efficient laser applications for the environmentally friendly series coating of brake discs at EuroBrake (June 17 - 19, 2024, Rheingoldhalle Mainz, booth 15). The main focus will be on cladding with a 30 kW diode laser, which enables shorter process runtimes for brake disc cladding thanks to its higher power class, as well as double-sided brake disc cladding. This process variant allows both sides of the workpiece to be processed simultaneously, which heats it up more evenly and reduces the likelihood of deformation. Another trade show highlight are the newly developed cladding optics and nozzles, which optimize the production process: Twin-Clad, for example, has two customized spots, which has a positive effect on process stability. The Con-Clad models, on the other hand, allow surface conditioning to be carried out before the actual coating process.

A presentation by Dr.-Ing. Thomas Molitor, Manager of Sales General Manufacturing Laserline, on the topic of "Optimizing Production Efficiency through High-Power Diode Lasers" on 19 June between 8:30 and 10:20 a.m. in the Gutenberg-Hall 1 will round off the trade show. Interested parties have the opportunity to learn all about the benefits of coating using high-power diode lasers for process efficiency.

Diode laser-based Cladding:

The laser cladding of brake discs is realized with the help of high-power diode lasers and combines long-term corrosion and abrasion protection. Neither the conventional gray cast iron material nor the brake disc production process needs to be adapted for this. Instead, the coating is applied to the finished brake disc in less than a minute in a final production step.

This economical and fast process is achieved using high-speed processes, which hardly put any thermal stress on the workpiece and produce very thin yet resistant coatings. This is usually a carbide coating, which is applied in less than 20 seconds per layer by moving the disc under the laser beam and powder nozzle at feed rates of up to 400 m/min. As with any laser coating, this creates a highly stable fusion-metallurgical bond between the base

and coating material - the high process speed also allows very high laser power to be applied without risking component deformation. As a result, very robust coatings can be achieved with a thickness of as little as approx. 100 µm.

About Laserline:

Laserline GmbH, based in Mülheim-Kärlich near Koblenz, was founded in 1997. As a leading international manufacturer of diode lasers for industrial material processing, the company has become the embodiment of this innovative technology and can look back on more than 25 years of company history. More than 7,500 high-power diode lasers from Laserline are currently in use around the world, demonstrating their performance in a wide variety of processes and applications. Laserline currently employs around 400 people and has international subsidiaries in the USA, Mexico, Brazil, Japan, China, South Korea, and India as well as representatives in Europe (France, Great Britain, Italy) and in the Asia-Pacific region (Australia, Taiwan, Singapore). The company is focused on sustainable growth. With the construction of an extensive building complex on the company premises in Mülheim-Kärlich, the spatial conditions for the future expansion of development and production have already been created. Further information at <https://www.laserline.com/en-int/>

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