Brose collaborates with IPG Photonics on advanced laser-welding technology for automotive seat structures

Develops first direct weld measurement technology for seat rails to increase manufacturing efficiency // Global automotive supplier will invest $6 million by 2022 to develop and implement technology

In-line coherent imaging (ICI) technology will increase manufacturing efficiency, streamline validation and minimize waste.

Auburn Hills, MI (08. August 2019)
The Brose Group and IPG Photonics, the world leader in fiber lasers, today announce a project to collaborate on the development of the first direct weld measurement technology for automotive seat rails. In-line coherent imaging (ICI) technology will increase manufacturing efficiency, streamline validation and minimize waste. After piloting the state-of-the-art welding technology in its London, Ontario facility, Brose will integrate weld cells into several manufacturing facilities in the US and Europe, with production set to begin early 2020.

“Projects like this with leading technology providers allow Brose to incorporate the most advanced production processes, such as direct weld measurement, and help us continue advancing new breakthroughs in seat structures. This differentiator allows us to remain an industry leader while, ultimately, increasing our customer’s confidence and satisfaction with our products,” said Stefan Krug, Chief Operating Officer, Brose North America.

ICI is considered a sophisticated welding technology due to its ability to increase manufacturing efficiency through simplified validation. The process, also tracks seams to detect surface irregularities and ensure weld quality. It replaces an indirect measurement approach that requires a one-hour validation process that pauses production.

“Our patented, in-line welding monitoring tools provide the most comprehensive and direct measurement of key manufacturing characteristics including weld depth, part fit-up and seam position,” said Trevor Ness IPG Photonics SVP WW Sales & Marketing. “IPG is proud to put our laser depth monitoring technology to work with Brose to support producing the highest quality seat rails available to consumers.”

Brose plans to invest more than $6 million by 2022 to develop the technology. As part of this project, Brose and IPG Photonics will study and analyze ICI generated performance data including penetration measurements, surface irregularities, seam tracking and the technical availability of the equipment. This joint project will help inform further manufacturing efficiencies, consumer safety and performance enhancements to improve the overall quality of products reaching consumers in the marketplace.

Brose is a leader in mechatronics - the integration of mechanics, electrics, electronics and sensors - and a major manufacturer of seat structures to the global automotive industry. In 2018, the company produced more than 80 million seat rails globally and expects to manufacture more than 105 million annually by 2024.

About Brose North America

Brose has been a committed partner to the North American market since 1993. The mechatronics specialist now counts twelve locations across Canada, the United States and Mexico and employs approximately 6,000 people in the region. The entire range of Brose products is manufactured throughout the North American facilities, from window regulators and door modules to seat systems.

About IPG Photonics

IPG Photonics Corporation is the leader in high-power fiber lasers and amplifiers used primarily in materials processing and other diverse applications. The company’s mission is to make its fiber laser technology the tool of choice in mass production. IPG accomplishes this mission by delivering superior performance, reliability and usability at a lower total cost of ownership compared with other types of lasers and non-laser tools, allowing end users to increase productivity and decrease costs. A member of the S & P 500 (r)Index, IPG is headquartered in Oxford, Massachusetts and has more than 25 facilities worldwide. For more information, visit www.ipgphotonics.com