

Press Release

Strengthening the connection between CFRP and mechanical inserts using AMPHOS Lasertechnology

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AMPHOS, technology leader in high average power ultrafast laser systems has participated improving the mechanical threshold of CFRP and mechanical insert connections used for example for mounting CFRP-components such as an engine hood to a car.

Researchers from Fraunhofer Institute for Laser Technology (ILT) showed that the connection between CFRP and mechanical inserts can be at least doubled. This was achieved by optimizing the inserts geometry and shaping the CFRP before the lamination. The structuring of the CFRP was realized using an ultrashort pulsed laser with a pulseduration below 1ps at repetitionrate of several hundred kilohertz and an average output power of 400W.

Examples for potential areas of application for CFRP inserts are the automotive and aviation industry where CFRP is often used because it is much lighter compared to other materials often even improving the mechanical stability. As a result the fuel consumption can be reduced due to less weight.

More details regarding the development and potential application possibilities can be found here:

<http://www.vdi-nachrichten.com/Technik-Wirtschaft/Laser-schafft-sichere-Verbindung>

AMPHOS products are the most powerful (400W and more) ultrafast lasers and amplifiers worldwide. Applications range from scientific research up to industrial applications in micromachining.



Foto: Fraunhofer ILT - Quelle: VDI Nachrichten
(<http://www.vdi-nachrichten.com/Technik-Wirtschaft/Laser-schafft-sichere-Verbindung>)

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