Institut für Textiltechnik und Lehrstuhl für Textilmaschinenbau

RWTH AACHEN UNIVERSITY

Project title:	CoopLaserJoining
Partner:	Fraunhofer Institut für Lasertechnik ILT
	AMPHOS GmbH
	Sungwoo Hitech Co., Ltd.
	Seoul National Univ. of Science and Technology
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Mission Statement

The goal of CoopLaserJoining is to adapt and further develop two innovative joining processes for recycled fiber composite components and to achieve a significant increase in the productivity of the integrated laser processes by up to 50%. The first joining process is based on drilling and integration of force introduction elements already in the preform with subsequent consolidation, thus achieving a significant increase in the load limit. The second joining process bonds the two components by heating the CFRP matrix, with adhesion strength being increased by surface structuring. The chosen approach involves feeding two simultaneously operating robot-guided scanner optics from one beam source through an intelligent photonic circuit. In terms of process technology, CoopLaserJoining also aims to increase flexibility during processing, since the laser process provides freedom in regard to shape and position.

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Fraunhofer ILT

AMPHOS Member of the TRUMPF Group

SUNGWOO HITECH

SEOULTECH SEOUL NATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY