

WELDSEALER PROCESS

RESEARCH LOCATION

DLR Center for Lightweight Production
Technology, Augsburg

PROJECT

Across the Projects LuFo6.1 HoTStufF and
CleanSky2 MFFD

COMPLETION OF THE DEMONSTRATOR

2021

MATERIAL

CF PPS

OBJECTIVES

- Manufacturing of a form-fitting and
cohesive connection
- Use of similar matrix materials
- Pre- and post-processing for welding

USE CASES

Sealed joint-off CF PPS-laminate at single
overlap (right) and with integrated stiffening
structure (left)

The WeldSealer end effector essentially consists
of a laminate preheater, a unit for additive
polymer application, a pressure tool for material
shaping and consolidation and the material
storage.

The process requires robotic handling for
processing large and curved structures, as well
as solid component fixturing. The WeldSealer is
used to seal joints, to create defined component
edges and to modify surfaces. This enables the
defined closing of laminate weld seams, but
also the preparation of semi-finished products



for subsequent welding. In addition, the process
increases the joint strength and spread widths
are significantly reduced.

Contact

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More information

[Fast Lane and HoTStufF: Thermoplastic Rear
Pressure Bulkhead \(Cooperation with Pre-
mium Aerotec GmbH\)](#)

YouTube video

[Ultrasonic Welding Facility and WeldSealer
Device](#)