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STIR4STEEL

Friction stir welding for improving joinability of high-performance steels for automotive components to boost green road mobility

Deliverable D3.1 (D8)

Process parameter optimization for the selected material combination and joint design

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Publishable Summary

The present Deliverable 3.1 of the Stir4Steel project, developed in the frame of the RFCS program, summarizes the optimization of process parameters for refill friction stir spot welding of different material combinations in technology demonstrators Case I (battery trays for FEVs and multi-material shock towers) as well as Case II (B-pillar body structure).

Along the different sections of this Deliverable, a detailed description of the optimization process, which involves establishing a parameter window, evaluating joint properties, such as metallurgical, mechanical, and surface properties, and analyzing results obtained through the Design of Experiments (DoE) using statistical methods.