

PROJECT

D-JOINTS

Design of innovative composite hybrid joints with electromagnetic compatibility

Funding: European (Horizon 2020)

Duration: May 2020 - Dec 2022

Status: Ongoing

Total project cost: €473,541

EU contribution: €473,541



[CORDIS RCN : 228441](#)

Objectives:

D-JOINTS will explore new innovative composite-metal joints with enhanced lightning strike protection. The design of these joints will be achieved through a dedicated sizing tool. Key design parameters will be identified and coded in the tool. A material properties database will provide the needed material information for the design of each joint. Finally, the new joints will be integrated in a composite nose part. The manufactured demonstrators will be tested for lightning strike protection.

The project objectives are:

- Model the mechanical and electrical performance of reference joints
- Improve the reference joints electromagnetic performance
- Develop a sizing tool for dissimilar joints
- Manufacture and test the CNP with the new dissimilar joints integrated in the structure

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Other programmes: JTI-CS2-2019-CFP10-AIR-02-79 Development of FEM fastener parametric/adaptable sizing tool including EMC impact, and manufacturing and EMC/LSP testing of demonstrators

Lead Organisation:

Twi Limited

Address:

Granta Park Great Abington
Cambridge
CB1 6AL
United Kingdom

EU Contribution: €249,575

Partner Organisations:

Brunel University

Address:

Kingston Lane

UXBRIDGE
UB83PH
United Kingdom

EU Contribution: €100,125

Cranfield University

Address:

College Road
CRANFIELD - BEDFORDSHIRE
MK43 0AL
United Kingdom

Organisation Website:

<http://www.cranfield.ac.uk>

EU Contribution: €123,841

Technologies:

Composite materials
Composite materials for structural purposes in the aircraft

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other