

PROJECT

NEODAMP

New Enhanced Acoustic Damping Composite Materials

Funding: European (Horizon 2020)

Duration: Jan 2016 - Dec 2018

Status: Complete

Total project cost: €350,013

EU contribution: €350,013



Call for proposal: H2020-CS2-CFP01-2014-01

[CORDIS RCN : 199333](#)

Objectives:

NEODAMP is marked in the ITD Airframe part B, oriented to highly integrated innovative structural components, for the Large Passenger Aircraft.

NEODAMP will develop new prepreg composite materials for structural purposes in the aircraft, able to support structural loads and other additional functions. The project is focused on acoustic damping and complemented with electrical conductivity studies while using techniques related to additional embedded and/or integrated functionality.

Composite materials will be chosen among those provided by a widely experienced manufacturer, to meet the future needs and requirements given by the topic manager. Activities are distributed along 36 months, and tasks are associated to 3 main topics: material development, screening and process ability.

In order to find the optimal material, a series of key characteristics will be selected, such as acoustic damping, structural and mechanical properties, HSE requirements, Fire, Smoke & Toxicity resistance for fuselage applications, resistance to environmental factors, automatic manufacturing and costs. The damping material will be improved and modified to adjust properties such as tacking or curing parameters.

All the cited features will be deeply studied through a test campaign, at coupon level using raw damping material and the embedded damping prepreg composite material. The wide variety of tests will include from damping behaviour and vibro-acoustic performance to lightning strike protection, including aging, common mechanical properties and physicochemical tests. Needed panels and embedded design will be done and manufactured by the partners.

Results of the cited works altogether will guide to the optimal design and manufacturing of trials, which will reach to material improvements also. The production of demonstrators will be oriented to automatic fuselage production by using automatic fibre placement techniques and always considering possible solutions for industrialization.

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)

Lead Organisation:

Fundacion Para La Investigacion, Desarrollo Y Aplicacion De Materiales Compuestos

Address:

Avda Rita Levi Montalcini (Tecnogetafe) 29
28906 Getafe

Spain

Organisation Website:

<http://www.fidamc.es>

EU Contribution: €198,425

Partner Organisations:

Hexcel Composites Ltd

Address:

Duxford
Cambridge
CB22 4QD
United Kingdom

EU Contribution: €151,588

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

Transport policies: Deployment planning/Financing/Market roll-out

Geo-spatial type: Other