



CETMA

for AEROSPACE



Integrated and innovative services for Aerospace
Our areas of expertise

MATERIALS

Selection
Formulation
Design and optimization

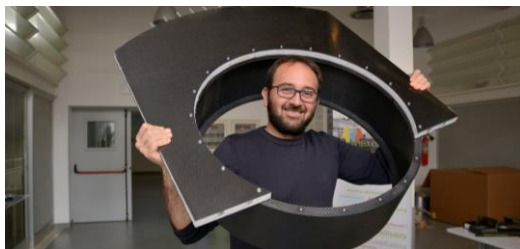
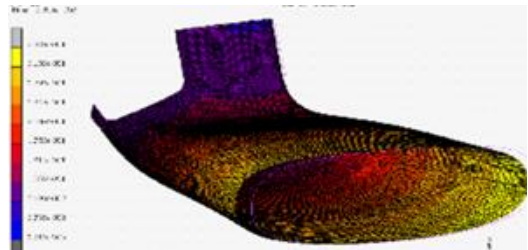


TECHNOLOGIES

Induction welding
Compression moulding
RTM

MODELING & SIMULATION

Thermo-mechanical simulation
Static simulation
Dynamic/impact simulation

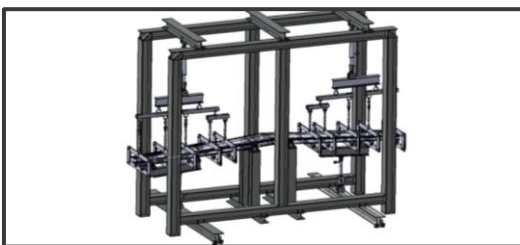


PROTOTYPING

Component design
Prototype manufacturing
Prototype validation

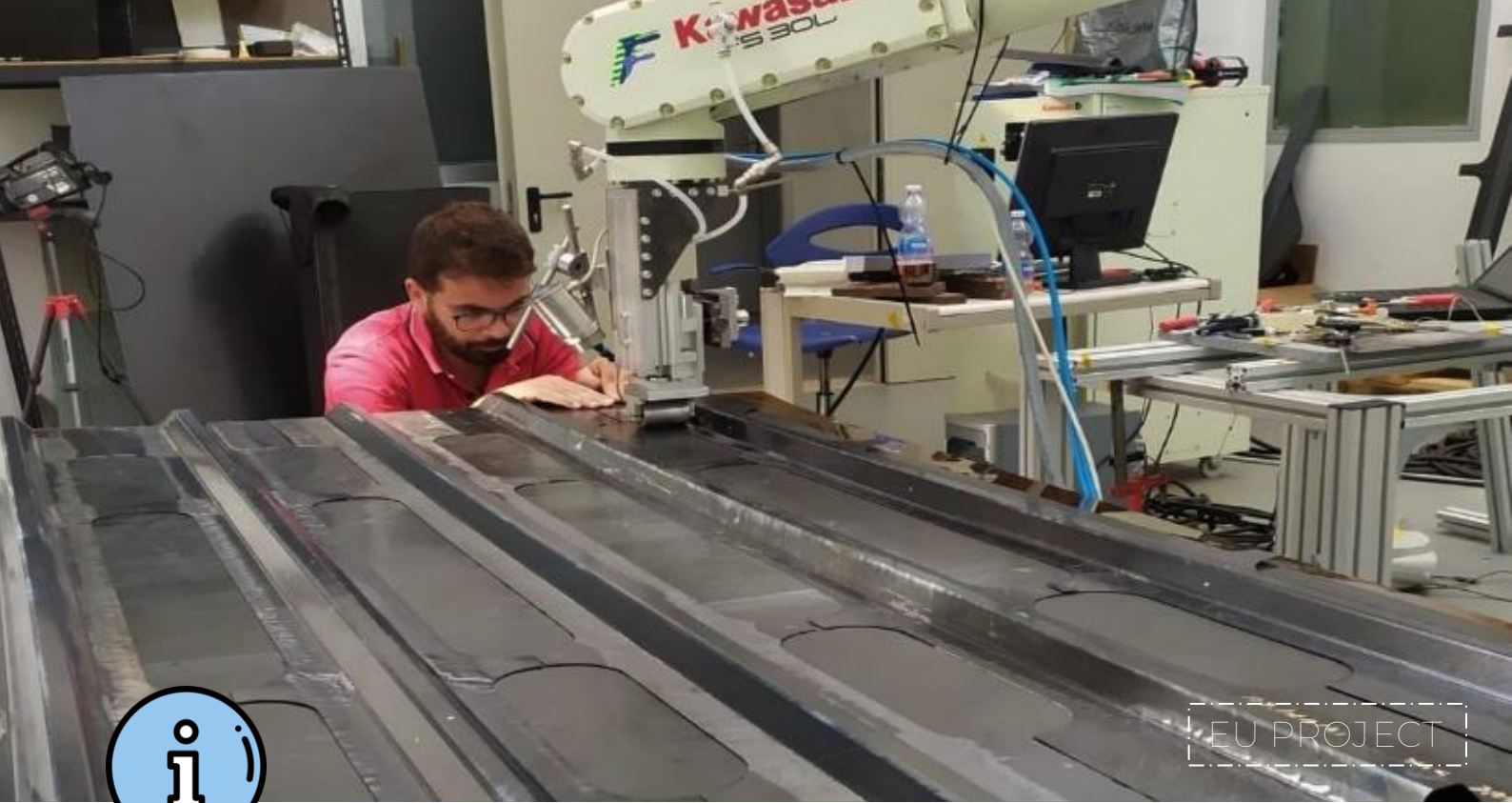
CIRCULARITY

Recycled carbon fiber
Composite recycling processes
DFR of material and components



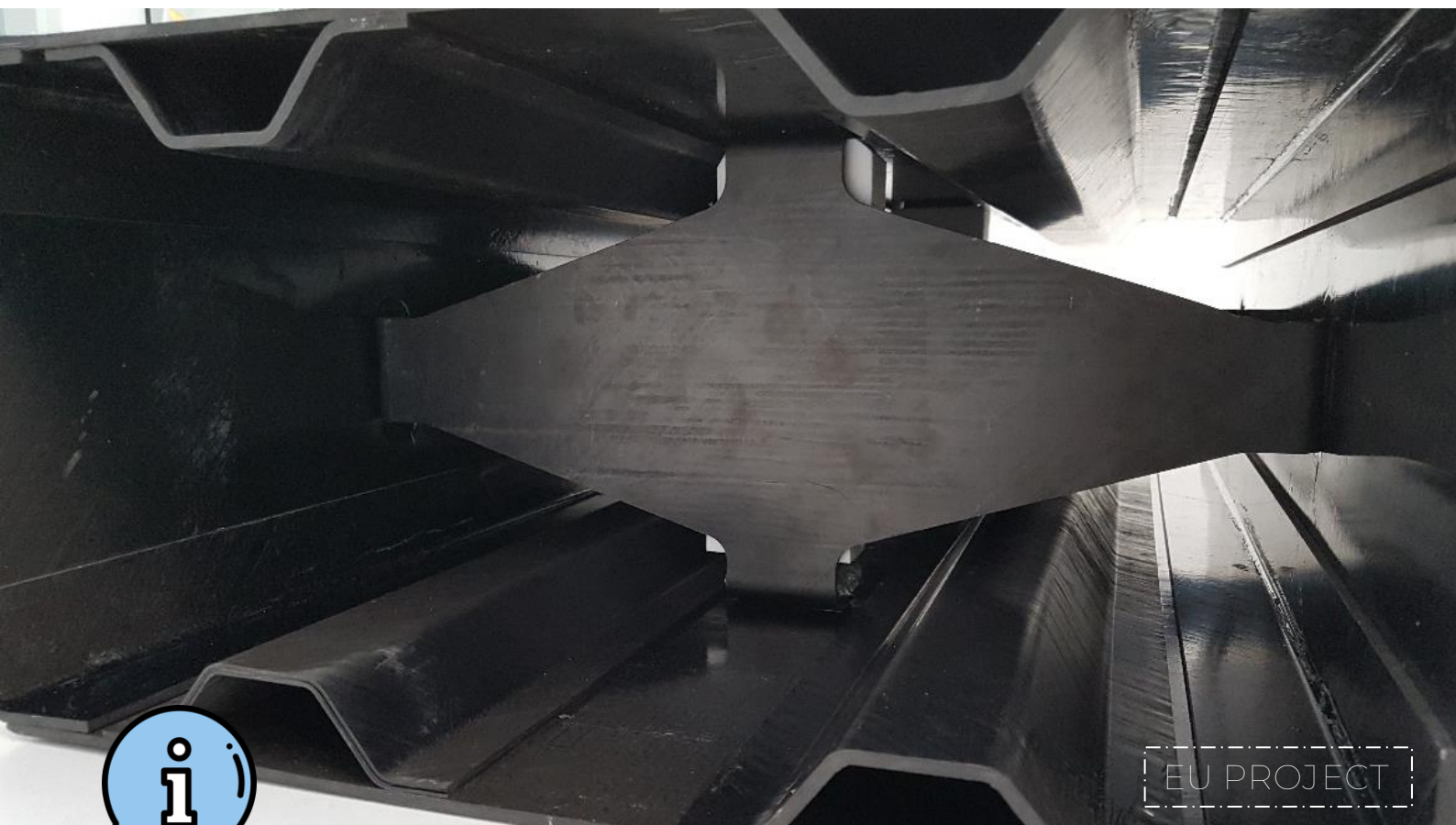
TESTING

NDT
Material characterisation
Full scale testing



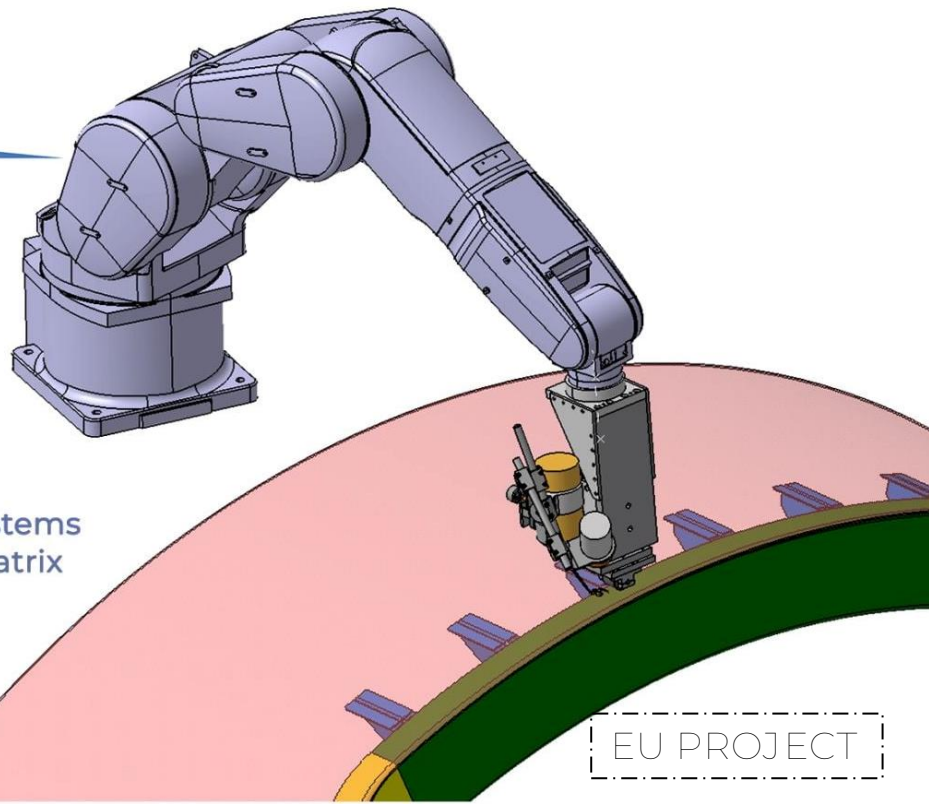
NHYTE - Horizon 2020

Green integrated aero-structures made by a new recyclable hybrid thermoplastic composite



KEELBEMAN

Cost effective and high-performance manufacturing techniques to produce a thermoplastic composite Keel-beam demonstrator



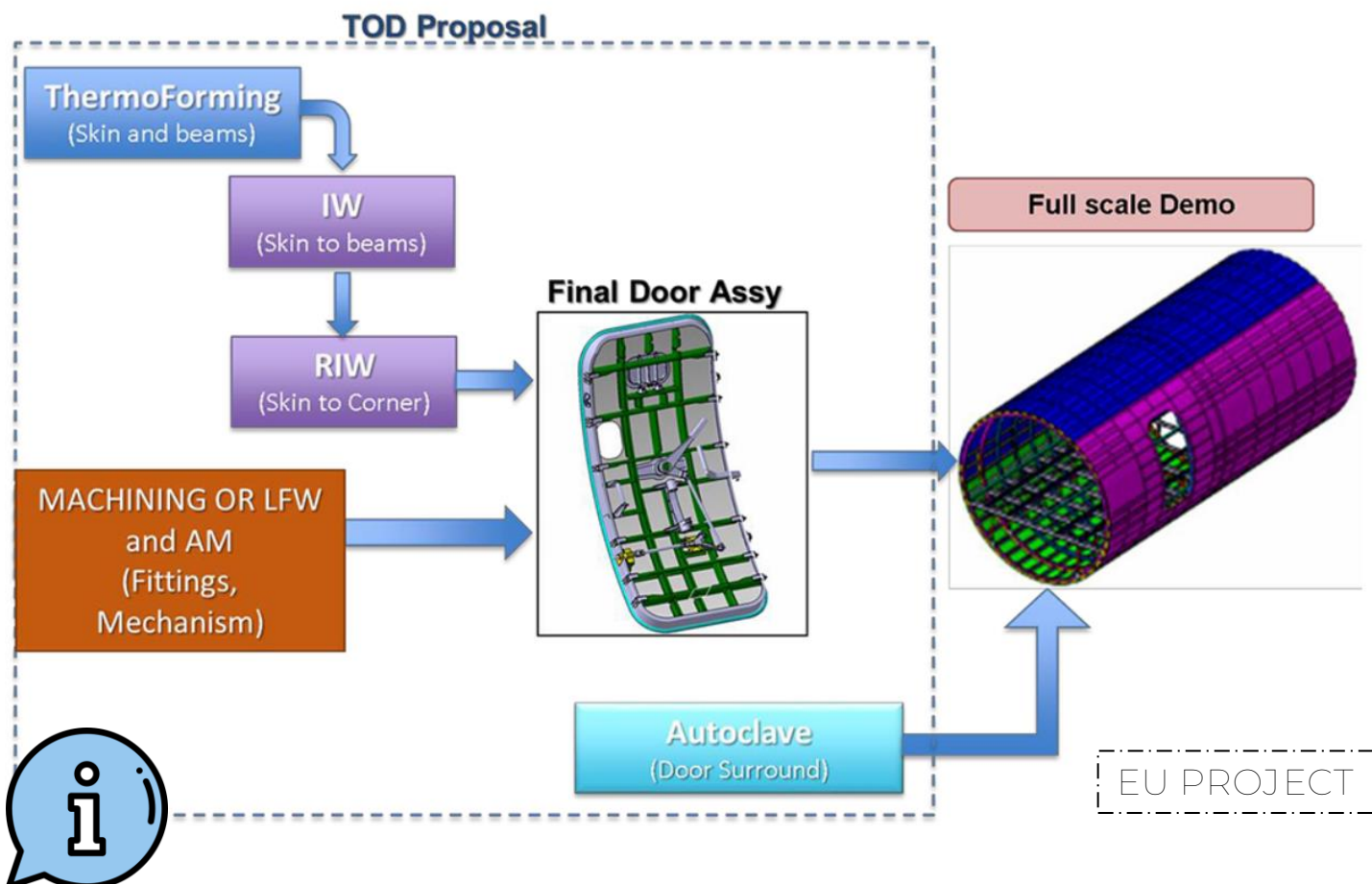
DEvelopment of innovative Welding systems for structural joints of Thermoplastic matrix based COMPosites



EU PROJECT

DEWTECOMP Clean Sky 2

Induction welding system for a highly integrated Door Surround Structure, and stiffened panels



TOD Clean Sky 2

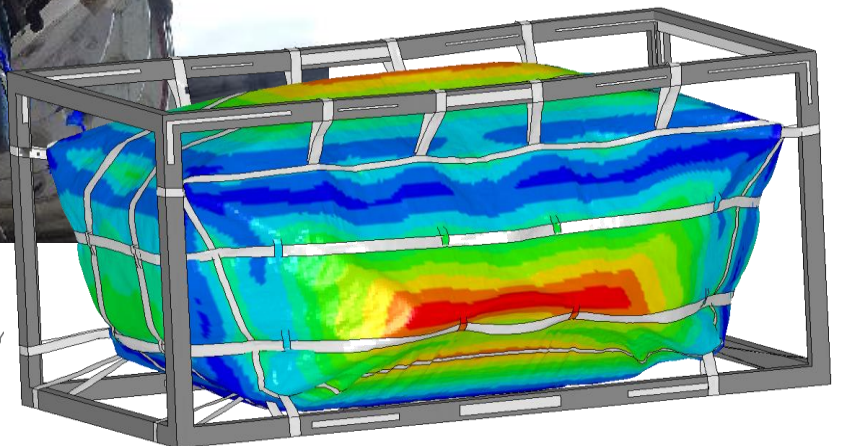
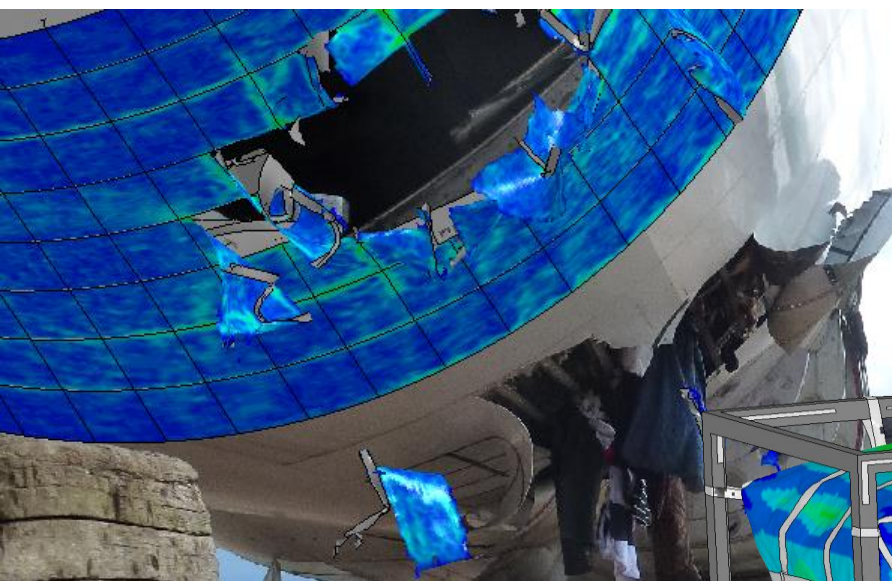
Manufacturing process of thermoplastic door components



EU PROJECT

TRINITI Clean Sky 2

Design and production of an innovative pressure vessel for aircraft, manufactured by thermoplastic composite material



EU PROJECT

Flybag 1-2 projects: Composite materials characterization and numerical simulations to analyze all blast events and their effects on the structures, supporting the design of the blast resistant devices



AERNnova



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AERNNOVA

Development of Continuous Compression Molding process and manufacturing of straight stringer 8 mt long

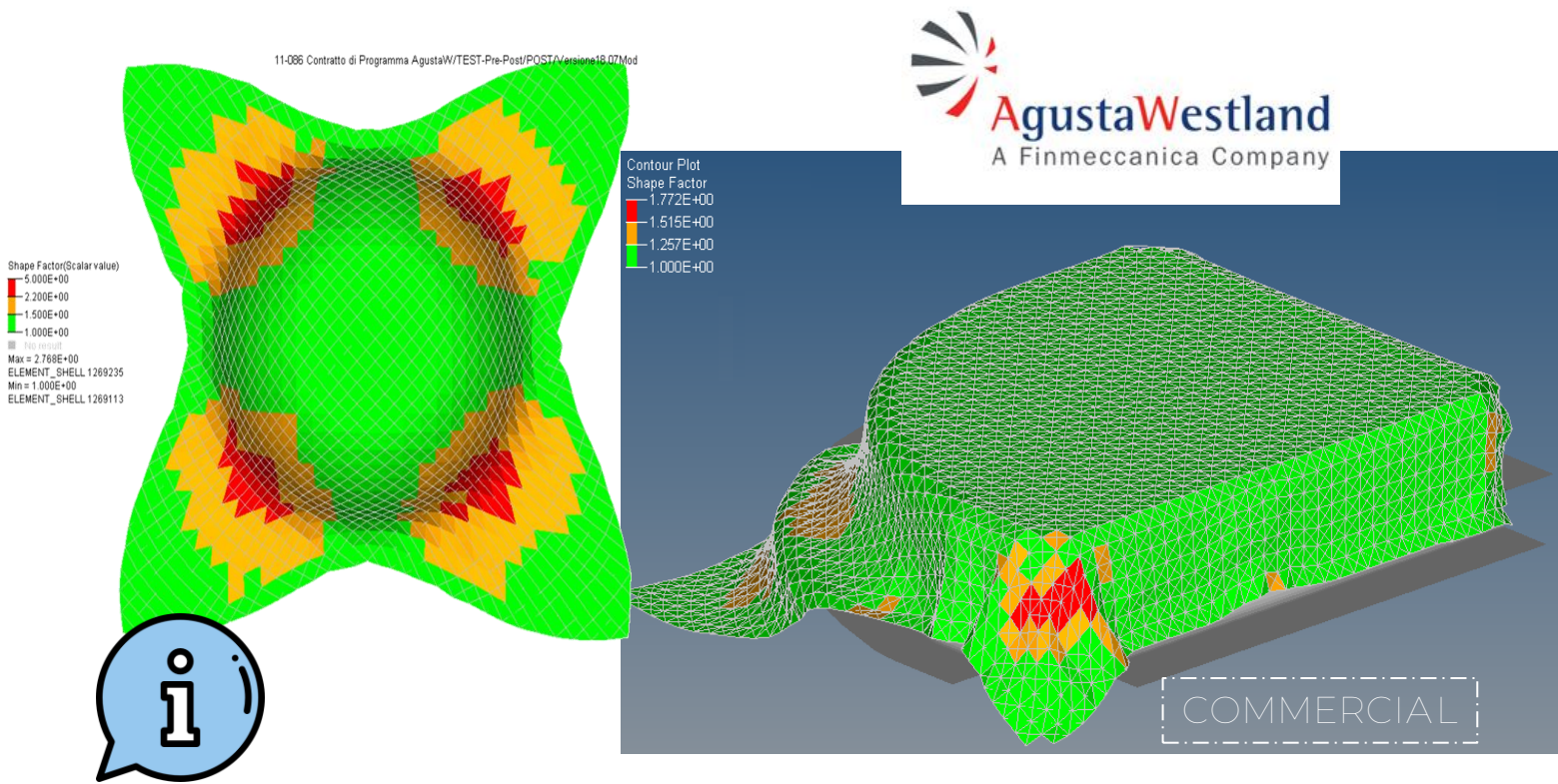


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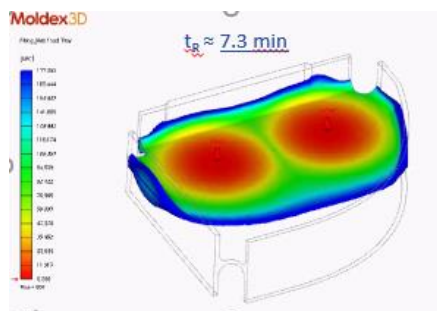
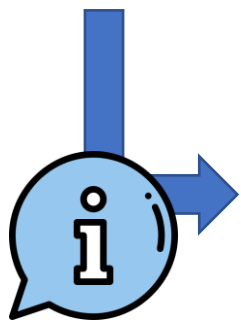
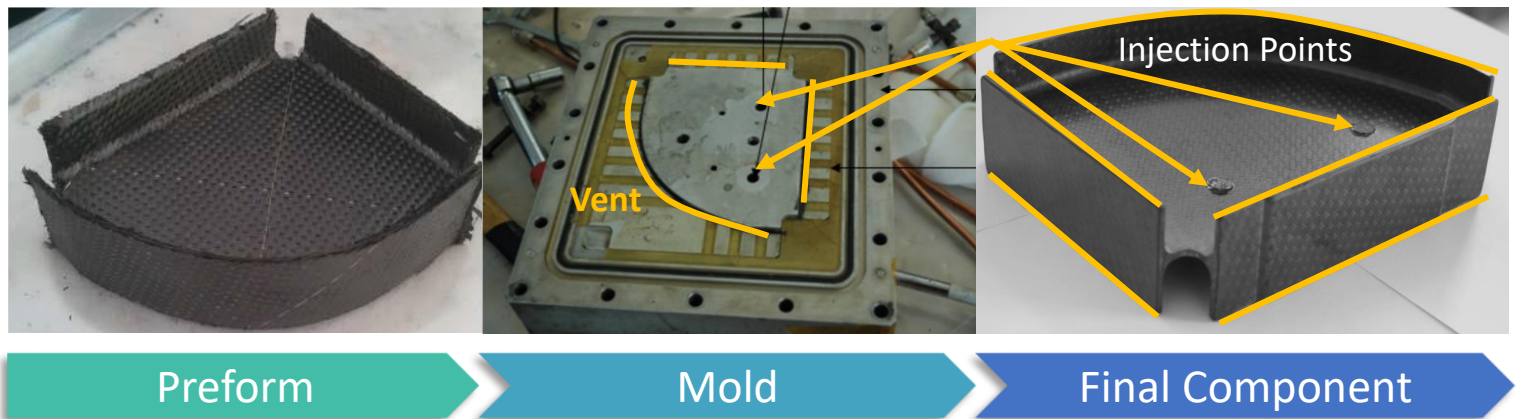
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Virtual Testing and failure analyses of helicopter cabin after impact on a rigid floor



AGUSTA WESTLAND

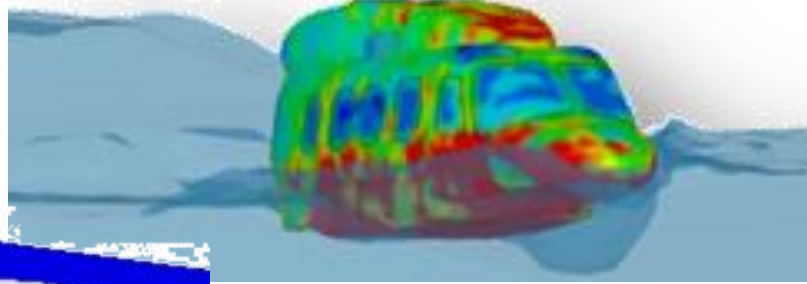
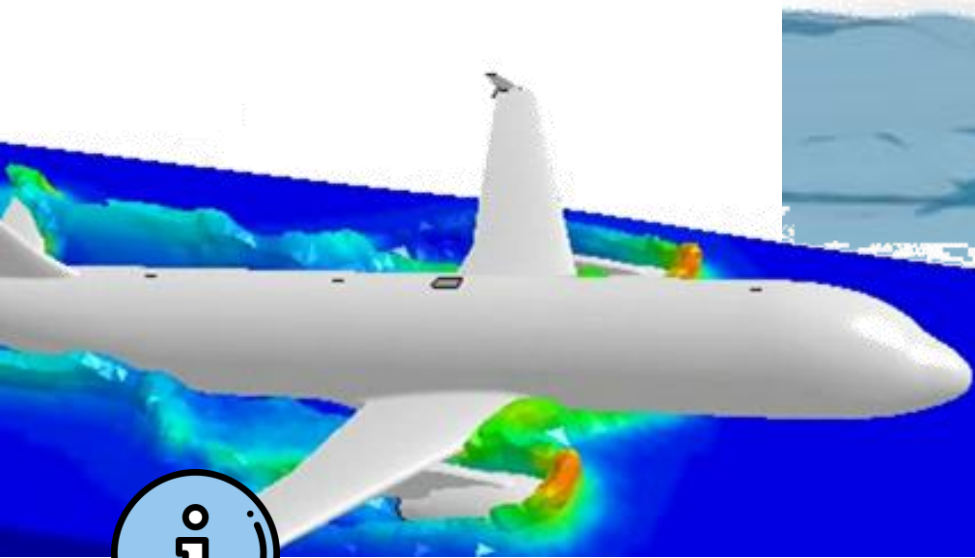
Development of a simulation Tool for the drapability analysis of Prepregs



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AGUSTA WESTLAND

RTM process for Aeronautical Composite Materials: Numerical and Experimental Approach

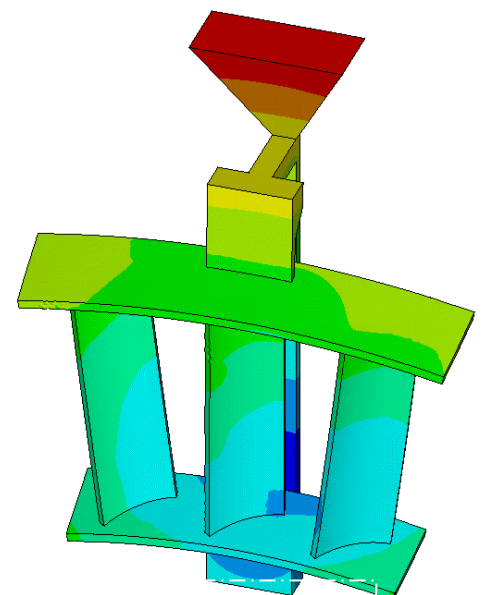
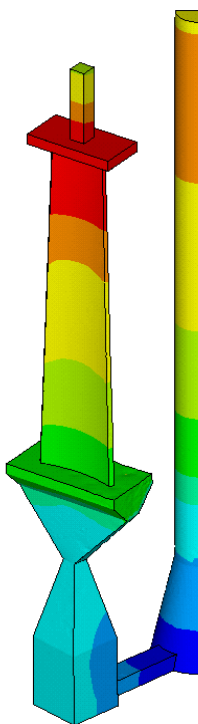


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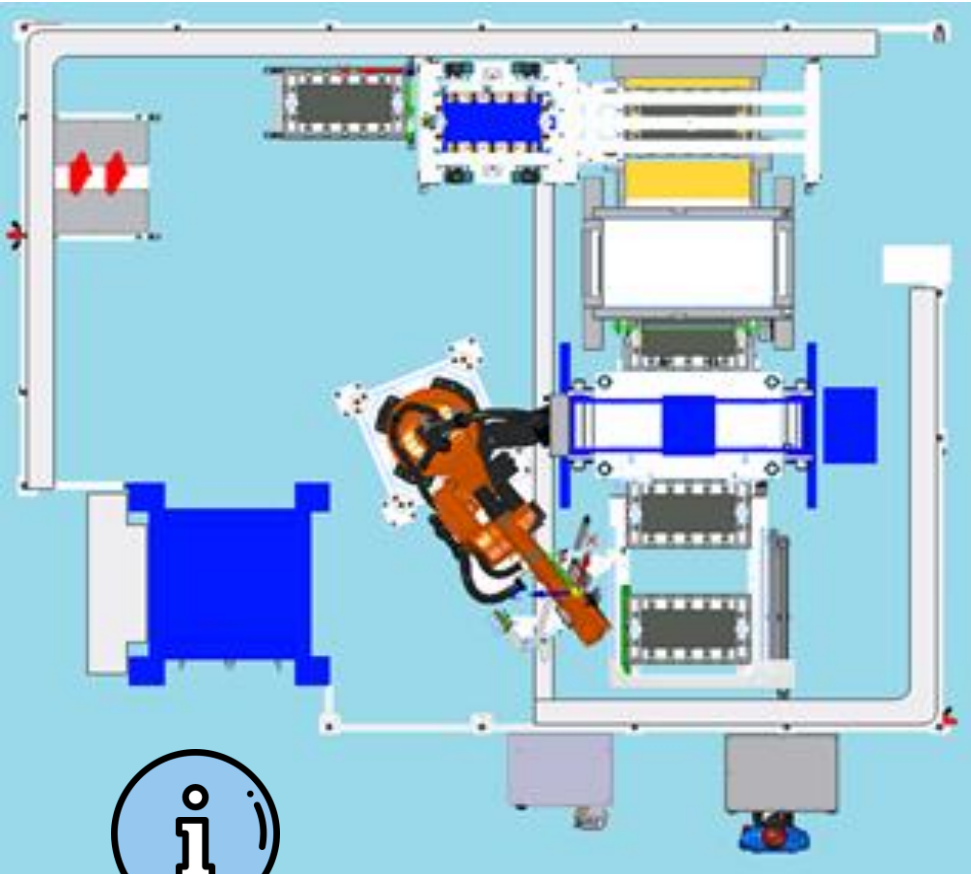
Virtual Testing and failure analyses of aeronautical components during water landing or ditching



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Development of numerical models of the cooling and solidification steps in Directional Solidified ("DS") and Equiax ("EXQ") investment casting processes



 **LEONARDO**
AEROSTRUCTURES

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LEONARDO AEROSTRUCTURES

Development of fully automated compression molding line



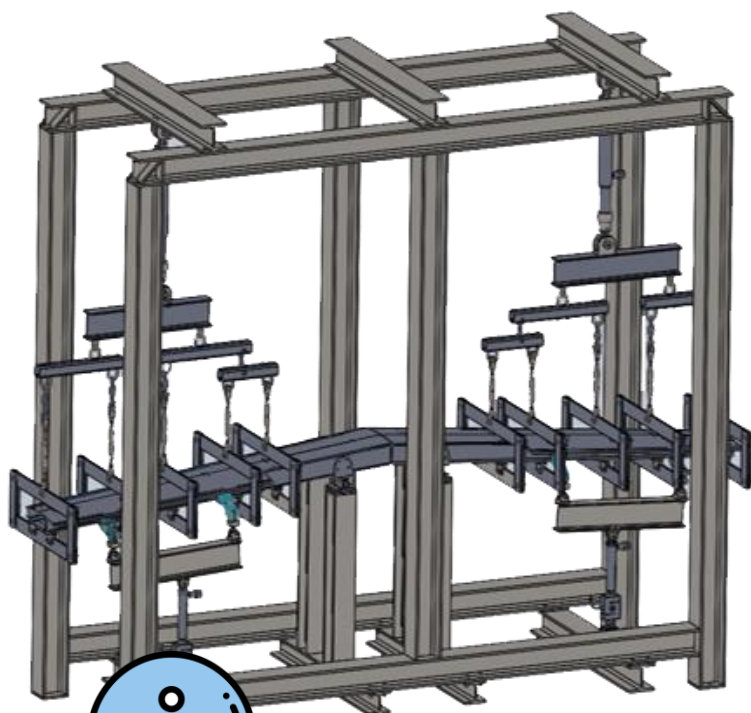
 **LEONARDO**
AEROSTRUCTURES

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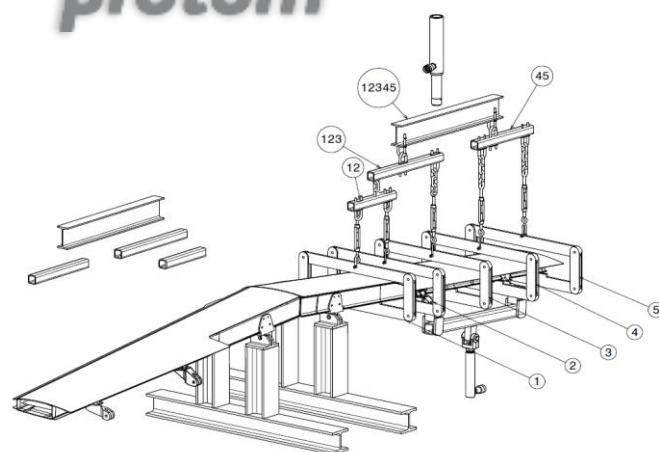
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LEONARDO AEROSTRUCTURES

Development of SQRTM process for the manufacturing of a windows frame, to be installed on a regional aircraft



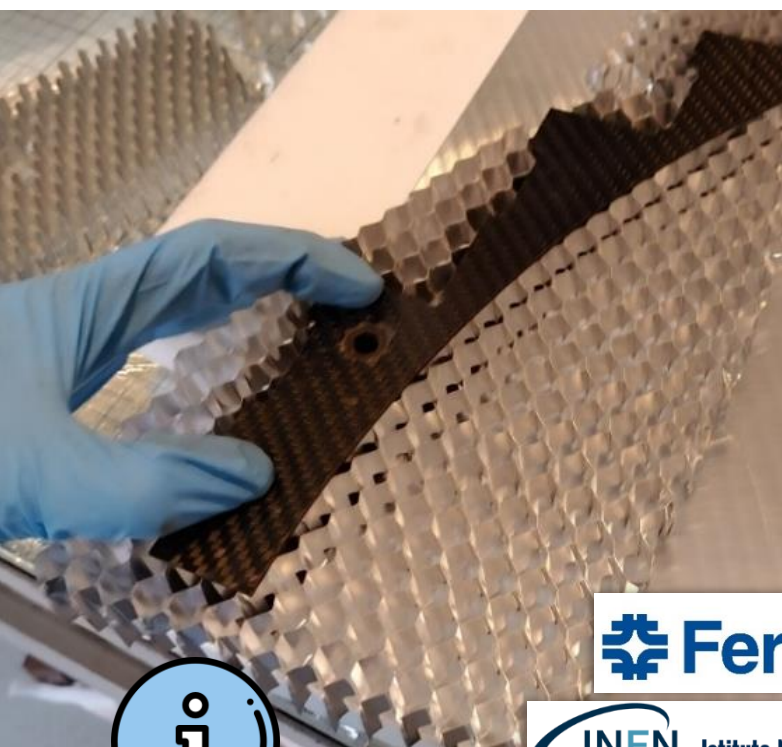
protom



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PROTOM

Static load bearing test on full scale composite wings



Fermilab

INFN Istituto Nazionale di Fisica Nucleare



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FERMILAB - INFN

Production of CFRP parts with cyanate-ester out of autoclave resin for INFN



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