

JEC COMPOSITES CONNECT

Digital event series for
the composites community

Online | June 01-02, 2021



PREVIEW

www.jeccomposites-connect.events

#JECConnect

Aerospace COMPOSITE MATERIALS IN AIRCRAFT LANDING GEARS

Every single aircraft part has very high requirements of strength and durability as well as the smallest possible weight. The use of composite materials in this case allows to meet all requirements at once.

Using carbon fibre for the suspension damper body drastically reduces the assembly's weight and, due to the combination with aerospace-grade aluminium, the body is within the necessary physical property tolerances and the required safety factor is reached.

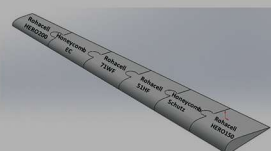
This product can be coupled with a lift/retract system as a ready-to-use system for ultralight aircraft main landing gear.

■ www.facebook.com/DGComposites/



Aerospace HYBRID WING FLAP CORE

Pronat will display a hybrid wing flap core typically used on a UAV. The challenge was to produce an airframe section that would showcase the different materials that can be used in this application.



The wing was divided into six sections, each incorporating different grades of Nomex honeycomb and high-density foam. The construction illustrates the different surface quality levels that are possible when machining these lightweight, yet extremely strong, sections.

This innovative wing flap enables composite design engineers to have a feel for the various materials that could be used in their design construction.

Materials used:

Rohacell high-density foam: HERO200, 71WF, 51HF, HERO150

Nomex honeycomb: Euro Composite ECA-R-4.8-48, Schutz C1-3.2-64

■ www.pronatindustries.com

Design WOODOO JASPR: INNOVATIVE GIANT WOODEN SCREENS

Imagine a screen made out of authentic wood... The JASPR wood panelling is a LED display unit covered with Woodoo's patented translucent wood that is ideal for assembling custom screen walls or making partitions with integrated screens.



This elegant and innovative product is perfect for the layout and digitalization of sales areas, shopping centres and stores, airports and train stations, cultural venues or places open to the public... or at the back of the stage in a performance hall or a theatre.

This wood panelling is recommended for indoor use with a fixed installation. It is composed of LED displays in different sizes and pitch variations (1.9 mm, 2.5 mm, etc.) and allows the creation of custom screens with total dimensions corresponding to a multiple of the size of its basic modules.

JASPR has a unique characteristic: it reveals all the beauty and naturalness of the wood fibre when it is on standby or switched off, or while showing images on portions of its surface. And when images are displayed over its entire surface, it offers remarkable and unprecedented visual rendering and chromatic quality. ■ www.woodoo.com

Design WOODOO SWITCHR: A REVOLUTIONARY WOODEN CONTROL PANEL

Imagine the future of digital interfaces... on authentic wood!

The SWITCHR control panel technology features both tactile and gesture control capacities on a beautiful translucent wooden screen made with Woodoo Slim, an unprecedented translucent sheet of augmented wood.

SWITCHR's interface technology is very flexible and can be used for many applications inside vehicles, homes and electronics (dashboards, switches, door panels, ceilings, etc.), and in any size (up to 2m wide+) and any form (it can even be thermoformed).

SWITCHR has a unique characteristic: it reveals all the beauty and naturalness of the wood fibre when it is on standby or switched off, or while showing images on portions of its surface. And when images are broadcast over its entire surface, it offers remarkable and unprecedented visual rendering and chromatic quality. ■ www.woodoo.com



Aerospace CO-CURED WING USING DRY CARBON FIBRE, RTM AND SMART TOOLS

Hawthorn Composites produced a co-cured wing structure using dry carbon fibre braids and sleeveings, combined with resin transfer moulding (RTM) and smart tooling, creating a complex composite part without prepreg or the use of an autoclave. The control surface achieves structural equivalency, weight neutrality and 20% or greater cost savings versus traditional processes. Traditionally, aerospace manufacturers have steered away from RTM processing due to expected repeatability issues and lower fibre volumes. Recent advancements in automation and tooling technologies now make it possible for RTM-infused and oven-cured composite parts to be a viable possibility for the aerospace sector.

■ www.hawthorncomposites.com



Design REUSING COMPOSITE FIBRE SCRAP FOR A CIRCULAR ECONOMY

Enrico Raimondo uses pure Italian manufacturing techniques to create unique objects thanks to the reuse of composite fibre lamination scrap, giving a second life to materials that should be disposed of as special waste, to produce designer articles based on a pure circular economy and eco-sustainability. Through its eight patents, the company produces wine bottles, plates, glasses, magnetic induction pans and many other objects for the food and beverage world, while for the fashion world it produces bags, accessories and shoes. Even used leather is reused in full compliance with the basics of sustainability. All objects are handmade in Italy. ■ www.enricoraimondo.it

