



Re-design of commercial aircraft interior components incorporating sustainable FR308 composites

Press release

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SHD recently supplied established aircraft interior company Percival Aviation with FR308 – a novel bio-based, fully FST compliant resin system for use in aircraft and rail interior applications. The highly sustainable product, initially derived from a waste product of cane sugar production, ultimately finding applications on Boeing and Airbus aircraft.

In an initial program, the end customer needed to extend the storage capability of overhead bins on their Boeing 757 aircraft. Percival Aviation created a solution that allows passengers on the aircraft to stow their luggage lengthways, instead of width-ways, and so enables more passengers to put their bag in an overhead bin.

The resin was tested for full conformance with aircraft interiors standards and was used in the overhead bin doors to replace a traditional fossil fuel derived phenolic prepreg. Utilising the resin increased the durability of the new OHB Doors. The improved surface finish of FR308 reduced the need for filling and re-work, reducing both the weight of the part and the cost of manufacture.

This was the first time FR308 had been used in a commercial passenger aircraft, marking an important milestone in the development of the material. Subsequently, through their EASA-certified design (Part 21J), production (Part 21G) and EASA Part 145 capabilities, Percival Aviation has used FR308 for the manufacture of a wash basin door of an Airbus A320 aircraft.

FR308 reinforced with 300gsm glass fibre is environmentally, and health and safety friendly in comparison to alternative products. There are no hazardous chemicals, the product is formaldehyde and phenol free, and no organic solvents are used in the manufacturing process. As FR308 is bio-based and sustainably sourced, it can significantly reduce the carbon footprint of the aircraft versus phenolic prepregs

Customer Testimonial:

Ian Leece, Operations Manager at Percival Aviation commented *“the team at SHD were easy to work with and provided a suitable solution at a reasonable price. As the FR308 is a renewable bio resin system, it helps keep in line with our company environmental policy. Overall we were very impressed with the product and will return for future projects.”*

About Percival Aviation

Percival Aviation is a privately owned organisation specialising in the Design, Production and Maintenance of aircraft interiors and associated equipment. Percival Aviation's aim is to be the aviation industry's supplier of choice for aircraft interiors.

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About SHD Composites Group

SHD Composites Group operates through 3 manufacturing sites in the UK, Europe and USA, and are well-established industry suppliers of high quality structural and tooling prepreg materials. EN 9100 : 2018 and BS EN ISO 9001:2015 certified, SHD pride themselves on their quality, service and responsiveness to local customer needs, all with a focus on continually increasing sustainability .

SHD Composite Materials: www.shdcomposites.com

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