

CASE STUDY

Resin Infusion of Fibre Composite Doors and Hatches

The Problem. Weight reduction is an increasing requirement for all types of structures, be they in Defence, Marine, Civil Infrastructure, Transport, Aerospace or Recreation markets. Increasingly there is also a need to incorporate fire retardancy to meet more stringent performance criteria, while still meeting strength requirements.

The Solution. BAC has developed a Light Resin Transfer Moulding technique for the manufacture of a wide range of doors and hatches, as well as other components and structures. This has enabled BAC to incorporate all the required features and performance requirements into a relatively light weight component, giving:



- a. High Strength to Weight.
- b. Corrosion Resistance.
- c. Fire Retardancy.
- d. Possibly EMI shielding.

BAC R&D and Prototyping/Testing. BAC is well versed in undertaking R&D and prototyping activities in all fields of fibre composites and can work with customers to provide tailored solutions to meet specific requirements, or to solve a particular problem. Testing can be either conducted in-house or through selected testing facilities.

Complementary Components and Structures. Where reverse engineering is required to develop complementary components or structures, eg door latching mechanisms, frames, etc, BAC can also work with the customer to develop these items to complement the initial doors, hatches or structures. If necessary, BAC can undertake Finite Element Analysis (FEA).

CNC Milling Tool Manufacture. The capability to undertake tooling development in-house has been enhanced by the incorporation of a CNC milling capability to manufacture plugs and moulds from customer-supplied, or internally developed, 3D models.

