

Innovative new material has aerospace potential

Midlands innovation is behind a new metallic material with huge potential for the aerospace industry. Called Fibresheet, it is the result of six years of research by Nottinghamshire company Fibretech and Cambridge University.

Fibretech, a leader in direct cast metal fibre products, says the new material has excellent filtration and sound deadening properties and is able to withstand extreme differences in operating temperatures. These properties make it suitable for use in noise reduction and exhaust systems in aerospace.

The material resembles a metallic open-weave cloth, and is created in a similar way. These stainless steel fibre sheets are heated to extremely high temperatures using a specially designed vacuum furnace and the very fine filaments of stainless steel fibres are bonded together to produce a sheet as little as 1.2mm thick.

Fibretech has developed an innovative, low cost, low energy method of producing this material from recycled steel.

Fibresheet's resistance to corrosion, and its ability to retain its properties in a wide range of temperatures make it an ideal material in many hostile environments. The ability to cut, weld and form the material into complex shapes is another major advantage, and offers considerable benefits to the filtration industry.

The material is suitable for a variety of uses in aerospace, particularly noise reduction, and can be manufactured as a bespoke parts for exhausts replacing existing components. Its excellent thermal and acoustic properties also make it suitable for heat exchange, electromagnetic shielding, fire protection, vibrational damping and noise reduction.

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