

## Ceramicx Completes Factory Extension

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Ceramicx, Ireland, has completed an 1800 m<sup>2</sup> expansion to its production facility, doubling capacity for the manufacture of infrared heating equipment for the composites industry.

“Ceramicx specialise in the development of high-quality heating systems for unique applications in aerospace, space, defence, automotive and many other industries so this expansion enables us to meet the increasing demand of the composites industry,” says the company’s Managing Director, Frank Wilson. “Our previous customers have included Rolls-Royce, Aston Martin, GM, Bombardier among the industry forerunners, but with this expansion we are able to deliver much larger machine build projects typically required by the aerospace industry.”

Infrared (IR), the part of the electromagnetic spectrum ranging from 0.75 µm to 10 µm, has been utilised for the efficient heating of materials for decades but its use in composites has only recently seen more widespread adaptation in curing, forming and high temperature environmental simulation. Preforming of dry fibre composites prior to thermoset resin injection has been a notable focus of the aerospace sector in the pursuit of higher quality out of autoclave composites and this led to the development of the Vector range of machinery for this purpose. Recently, Ceramicx has demonstrated the ability to accurately cure carbon fibre epoxy composite prepreg using IR thereby eliminating the need for traditional convection cured composites.

“The close adherence to intended cure profiles and the potential benefits of IR radiation in reducing porosity in composite structures has led many of our customers to look at our technology,” notes Wilson.

One of the primary areas where IR can deliver large benefits is in thermoplastic composites where rapid heating can be more beneficial, but the combination of heater type, processing conditions and targeted material must be carefully considered. With heating from rapid response elements and a comprehensive materials-testing database linking the target material with Ceramicx’s various elements, even thick sections with low specific heat capacity can be heated at much faster rates than other methods. Ceramicx has delivered a number of automated IR heating solutions to composite compression moulding and thermoforming manufacturers.

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Photo provided by Ceramicx

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