



# VULCAN

## INFRA-RED EMITTERS APPLICATIONS COMPOSITES INDUSTRY

### Pre-Heating Of Thermoplastic Composites

A major project to develop innovative new pultrusion processes for composite materials is utilising an infra-red system from Vulcan Refractories.

Experimental trials are being carried out over a two year period by Pera at its Melton Mowbray technology centre. The project is co-funded by the DTI and 12 leading plastics products manufacturers, and also has links with Newcastle University.



During traditional pultrusion processes, polymer resins, which are liquid at room temperature, are treated with glass fibres then cured to form solid plastic shapes. The Pera trials will subject composite glass fibre reinforced plastics to an inversion of this process, melting down solid materials to produce liquid prior to cooling.

This process will produce a stronger product than plastic, suitable for a variety of applications, including building products such as window frames, cladding and pipes. It will also be more cost effective - the process will be quicker than traditional plastic resin extrusion, offering time and energy saving, and in addition the composite's increased strength will mean less material is required in the manufacture of the end product.

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