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MATRIX-GRADED AND FIBRE-STEERED COMPOSITES TO TACKLE STRESS CONCENTRATIONS

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Abstract

This paper studies the feasibility of improving structural performance of composites in the presence of stress concentrators. *Matrix grading* through local deposition of additive-enhanced matrices and *fibre steering* by varying fibrous architecture are examined independently and in combination on a glass-fibre triaxial braided composite subjected to open hole tensile test. Stiffened and toughened matrices were incorporated through precise point-wise injections of liquid reactive resin into dry preforms (Liquid Resin

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