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Performance; 6.4 Fatigue Performance; 6.5 Modelling of Braided Composites; 6.6 Summary; Chapter 7. Knitted Composite Materials; 7.1 Introduction; 7.2 In-Plane Mechanical Properties; 7.3 Interlaminar Fracture Toughness; 7.4 Impact Performance; 7.5 Modelling of Knitted Composites; 7.6 Summary; Chapter 8. Stitched Composites; 8.1 Introduction to Stitched Composites; 8.2 The Stitching Process; 8.3 Mechanical Properties of Stitched Composites; 8.4 Interlaminar Properties of Stitched Composites; 8.5 Impact Damage Tolerance of Stitched Composites; 8.6 Stitched Composite Joints; Chapter 9. Z-Pinned Composites; 9.1 Introduction; 9.2 Fabrication of Z-Pinned Composites; 9.3 Mechanical Properties of Z-Pinned Composites; 9.4 Delamination Resistance and Damage Tolerance of Z-Pinned Composites; 9.5 Z-Pinned Joints; 9.6 Z-Pinned Sandwich Composites; References; Subject Index

Sommario/riassunto

Fibre reinforced polymer (FRP) composites are used in almost every type of advanced engineering structure, with their usage ranging from aircraft, helicopters and spacecraft through to boats, ships and offshore platforms and to automobiles, sports goods, chemical processing equipment and civil infrastructure such as bridges and buildings. The usage of FRP composites continues to grow at an impressive rate as these materials are used more in their existing markets and become established in relatively new markets such as biomedical devices and civil structures. A key factor driving the increa
