

Natural fibre composites : materials, processes and properties / edited by Alma Hodzic and Robert Shanks

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Abstrak

The use of natural fibres as reinforcements in composites has grown in importance in recent years. Natural fibre composites summarises the wealth of significant recent research in this area.

Chapters in part one introduce and explore the structure, properties, processing, and applications of natural fibre reinforcements, including those made from wood and cellulosic fibres. Part two describes and illustrates the processing of natural fibre composites. Chapters discuss ethical practices in the processing of green composites, manufacturing methods and compression and injection molding techniques for natural fibre composites, and thermoset matrix natural fibre-reinforced composites. Part three highlights and interprets the testing and properties of natural fibre composites including, non-destructive and high strain rate testing. The performance of natural fibre composites is examined under dynamic loading, the response of natural fibre composites to impact damage is appraised, and the response of natural fibre composites in a marine environment is assessed.