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Soggetti	Mechanics Mechanics, Applied Materials science Aerospace engineering Astronautics Theoretical and Applied Mechanics Characterization and Evaluation of Materials Aerospace Technology and Astronautics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	I Laminate concepts and properties -- 1 Introduction -- 2 Intellectual property and patents -- 3 Laminate concepts and typical properties -- II Prediction & analysis methods -- 1 Stress-strain -- 2 Blunt notch strength -- 3 Bearing strength -- 4 Fatigue initiation -- 5 Static and fatigue delamination -- 6 Fatigue crack propagation -- 7 Residual strength -- III Environmental aspects -- 1 Temperature -- 2 Effect of frequency (wave form, hold time) -- 3 Acoustic fatigue.
Sommario/riassunto	This book contributes to the field of hybrid technology, describing the current state of knowledge concerning the hybrid material concept of laminated metallic and composite sheets for primary aeronautical structural applications. It is the only book to date on fatigue and fracture of fibre metal laminates (FMLs). The first section of the book provides a general background of the FML technology, highlighting the major FML types developed and studied over the past decades in conjunction with an overview of industrial developments based on filed

patents. In turn, the second section discusses the mechanical response to quasi-static loading, together with the fracture phenomena during quasi-static and cyclic loading. To consider the durability aspects related to strength justification and certification of primary aircraft structures, the third section discusses thermal aspects related to FMLs and their mechanical response to various environmental and acoustic conditions.
