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4.5 SOME ISOTROPIC PROPERTIES OF PLATELET SYSTEMS4.6 SUMMARY OF EFFECTIVE STIFFNESS PROPERTIES AND CONCLUSIONS; PROBLEMS; REFERENCES; CHAPTER V - LAMINATES; 5.1 TRANSFORMATION RELATIONS; 5.2 CLASSICAL THEORY OF LAMINATED PLATES; 5.3 CYLINDRICAL BENDING; 5.4 HIGH-ORDER THEORY; 5.5 INTERLAMINAR EDGE EFFECTS; PROBLEMS; REFERENCES; CHAPTER VI - ANALYSIS, STRENGTH, AND DESIGN; 6.1 A BOUNDARY LAYER THEORY OF ANISOTROPIC ELASTICITY; 6.2 STRENGTH AND FAILURE CRITERIA; 6.3 DESIGN EXAMPLE I: FIBER REINFORCED PRESSURE VESSELS; 6.4 DESIGN EXAMPLE II: FIBER REINFORCED FLYWHEELS; PROBLEMS; REFERENCES CHAPTER VII - WAVE PROPAGATION7.1 WAVE CHARACTER IN EQUIVALENT HOMOGENEOUS MEDIA; 7.2 TRANSMISSION AND REFLECTION IN LAYERED MEDIA; 73 DISPERSION RELATIONS; 7.4 TRANSIENT WAVE PROPAGATION: LAYERED MEDIA; 7.5 TRANSIENT WAVE PROPAGATION: THREE-DIMENSIONALLY PERIODIC MEDIA; 7.6 ATTENUATION DUE TO RANDOM INHOMOGENEITIES; 7.7 A MIXTURE THEORY APPLICATION: DYNAMIC INSTABILITY IN FLUIDIZED COLUMNS; PROBLEMS; REFERENCES; CHAPTER VIII - INELASTIC AND NONLINEAR EFFECTS; 8.1 PLASTIC DEFORMATION OF POROUS MEDIA; 8.2 PLASTIC DEFORMATION OF FIBER SYSTEMS; 8.3 VISCOELASTIC PROPERTIES OF COMPOSITES
8.4 A VISCOELASTIC FLUID SUSPENSION MODEL8.5 LARGE DEFORMATION OF FIBER SYSTEMS; PROBLEMS; REFERENCES; CHAPTER IX - EFFECTIVE THERMAL PROPERTIES; 9.1 THERMOELASTICITY THEORY; 9.2 THERMAL CONDUCTIVITY; 9.3 THERMAL EXPANSION COEFFICIENT; 9.4 SPECIFIC HEATS; 9.5 DISCUSSION OF RESULTS; PROBLEMS; REFERENCES; AUTHOR INDEX; SUBJECT INDEX

Sommario/riassunto

A comprehensive account of the basic theory of the mechanical behavior of heterogeneous media, this volume assembles, interprets, and interrelates contributions to the field of composite materials from theoretical research, laboratory developments, and product applications.The text focuses on the continuum mechanics aspects of behavior; specifically, it invokes idealized geometric models of the heterogeneous system to obtain theoretical predictions of macroscopic properties in terms of the properties of individual constituent materials. The wide range of subjects encompasses macroscopic stiffn

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Sommario/riassunto	Whether or not the United States has safe and effective medical countermeasures--such as vaccines, drugs, and diagnostic tools--available for use during a disaster can mean the difference between life and death for many Americans. The Food and Drug Administration (FDA) and the scientific community at large could benefit from improved scientific tools and analytic techniques to undertake the

complex scientific evaluation and decision making needed to make essential medical countermeasures available. At the request of FDA, the Institute of Medicine (IOM) held a workshop to examine methods to improve the development, evaluation, approval, and regulation of medical countermeasures. During public health emergencies such as influenza or chemical, biological, radiological/nuclear (CBRN) attacks, safe and effective vaccines, treatments, and other medical countermeasures are essential to protecting national security and the well being of the public. Advancing regulatory science for medical countermeasure development examines current medical countermeasures, and investigates the future of research and development in this area. Convened on March 29-30, 2011, this workshop identified regulatory science tools and methods that are available or under development, as well as major gaps in currently available regulatory science tools. Advancing regulatory science for medical countermeasure development is a valuable resource for federal agencies including the Food and Drug Administration (FDA), the Department of Health and Human Services (HHS), the Department of Defense (DoD), as well as health professionals, and public and private health organizations"--Publisher's description.