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2.1.4 Electromagnetic stress tensor and momentum vector2.1.5 Electromagnetic power; 2.1.6 Poynting theorem; 2.2 Maxwell Equations; 2.3 Balance Equations of Mass, Momentum, Moment of Momentum, and Energy; 2.4 Constitutive Relations; 2.5 Linearized Theory; Chapter 3 : Introduction to Thermoviscoelasticity; 3.1 Thermoelasticity; 3.2 Viscoelasticity; 3.3 Coupled Theory of Thermoviscoelasticity; 3.3.1 Fundamental principles of thermodynamics; 3.3.2 Formulation based on Helmholtz free energy functional; 3.3.3 Formulation based on Gibbs

Sommario/riassunto

Fracture Mechanics of Electromagnetic Materials provides a comprehensive overview of fracture mechanics of conservative and dissipative materials, as well as a general formulation of nonlinear field theory of fracture mechanics and a rigorous treatment of dynamic crack problems involving coupled magnetic, electric, thermal and mechanical field quantities.Thorough emphasis is placed on the physical interpretation of fundamental concepts, development of theoretical models and exploration of their applications to fracture characterization in the presence of magneto-electro-thermo-mechanical coupl