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Autore	Akbarov Surkay D
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 Introduction -- 2 Dynamics of a moving and oscillating moving load acting on a pre-strained bi-material layered systems -- 3 Forced vibration of pre-stressed layered bodies -- 4 Wave propagation in pre-strained layered systems -- 5 Torsional wave dispersion in pre-stressed compound cylinders -- 6 Axisymmetric longitudinal and flexural wave propagation in pre-strained bi-material compound circular cylinders -- 7 Supplement 1: Some stability loss and wave propagation problems regarding the double-walled carbon nanotube (DWCNT) -- 8 Supplement 2: On one application of the approach developed in Chapter 3 on the dynamics of pre-strained hydro-elastic systems -- 9 Supplement 3: Some problems on the sandwich plate-strip with piezoelectric face and elastic core layers containing interface

cracks -- 10 Supplement 4: Forced vibration of the initially stressed rectangular plates with holes and inclusions.

Sommario/riassunto

This book deals with dynamics of pre-stressed or pre-strained bi-material elastic systems consisting of stack of pre-stressed layers, stack of pre-stressed layers and pre-stressed half space (or half plane), stack of pre-stressed layers as well as absolute rigid foundation, pre-stressed compound solid and hollow cylinders and pre-stressed sandwich hollow cylinders. The problems considered in the book relate to the dynamics of a moving and oscillating moving load, forced vibration caused by linearly located or point located time-harmonic forces acting to the foregoing systems. Moreover, a considerable part of the book relate to the problems regarding the near surface, torsional and axisymmetric longitudinal waves propagation and dispersion in the noted above bi-material elastic systems. The book carries out the investigations within the framework of the piecewise homogeneous body model with the use of the Three-Dimensional Linearized Theory of Elastic Waves in Initially Stressed Bodies.