

<<振声学 (第1卷)>>

图书基本信息

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内容概要

Vibro-Acoustics

Noise pollution is a general problem. Structures excited by dynamic forces radiate noise. The art of noise reduction requires an understanding of vibro-acoustics. This topic describes how structures are excited, energy flows from an excitation point to a sound radiating surface, and finally how a structure radiates noise to a surrounding fluid. The aim of this text is to give a fundamental analysis and a mathematical presentation of these phenomena. The text is intended for graduate students, researchers and engineers working in the field of sound and vibration.

作者简介

Anders C. Nilsson holds MSc in Engineering Physics from University of Lund and Dr. Tech. in Sound and Vibration from Chalmers University in Sweden. Anders C. Nilsson worked with problems on the propagation of sound and sonic booms at Boeing Co., Seattle, USA. Later he moved to Norway and the Research Division of Det Norske Veritas. At Veritas Anders C. Nilsson worked on the propagation of structureborne sound in large built up structures and on the excitation of plates from flow and cavitation. Anders C. Nilsson then transferred to Denmark and was head of the Danish Acoustical Institute for four years. His main activities in Denmark concerned building acoustics. In 1987, Anders C. Nilsson was appointed professor of Applied Acoustics at KTH in Stockholm, Sweden. He was also the head of the Department of Vehicle Engineering and the founder and head, until 2002, of the Marcus Wallenberg Laboratory of Sound and Vibration Research (MWL). Anders C. Nilsson has been a guest professor at James Cook University, Australia, INSA-Lyon in France and at the Institute of Acoustics, Chinese Academy of Sciences in Beijing and is professor emeritus at MWL, KTH since 2008. His main interests are problems relating to composite structures as well as vehicle acoustics. Bilong Liu received his PhD in acoustics at the Institute of Acoustics, Chinese Academy of Sciences in 2002. Then he worked on noise transmission through aircraft structures at MWL, KTH, Sweden till 2006.

Bilong Liu also holds PhD in applied acoustics from MWL, KTH. During Aug. 2004 to Jan. 2005, he worked on pipe and pump noise at the University of Western Australia in Perth. From 2007 he has been working as a research professor at the Institute of Acoustics, Chinese Academy of Sciences, and from 2011 he has been acting as an associate editor for an Elsevier journal - Applied Acoustics. His main interests include vibro-acoustics, acoustics materials, fluid-structure interaction, duct acoustics, active noise control, smart acoustic materials and structures.

书籍目录

Preface
 Notations
 Chapter 1 MECHANICAL SYSTEMS WITH ONE DEGREE OF FREEDOM
 1.1 A simple mass-spring system
 1.2 Free vibrations
 1.3 Transient vibrations
 1.4 Forced harmonic vibrations
 1.5 Fourier series
 1.6 Complex notation
 Problems
 Chapter 2 FREQUENCY DOMAIN
 2.1 Introduction
 2.2 Frequency response
 2.3 Correlation functions
 2.4 Spectral density
 2.5 Examples of spectral density
 2.6 Coherence
 2.7 Time averages of power and energy
 2.8 Frequency response and point mobility functions
 2.9 Loss factor
 2.10 Response of a 1-DOF system, a summary
 Problems
 Chapter 3 WAVES IN SOLIDS
 3.1 Stresses and strains
 3.2 Losses in solids
 3.3 Transverse waves
 3.4 Longitudinal waves
 3.5 Torsional waves
 3.6 Waves on a string
 3.7 Bending or flexural waves-beams
 3.8 Waves on strings and beams-a comparison
 3.9 Flexural waves-plates
 3.10 Orthotropic plates
 3.11 Energy flow
 Problems
 Chapter 4 INTERACTION BETWEEN LONGITUDINAL AND TRANSVERSE WAVES
 4.1 Generalised wave equation
 4.2 Intensity
 4.3 Coupling between longitudinal and transverse waves
 4.4 Bending of thick beams/plates
 4.5 Quasi longitudinal waves in thick plates
 4.6 Rayleigh waves
 4.7 Sandwich plates-general
 4.8 Bending of sandwich plates
 4.9 Equations governing bending of sandwich plates
 4.10 Wavenumbers of sandwich plates
 4.11 Bending stiffness of sandwich plates
 4.12 Bending of I-beams
 Problems
 Chapter 5 WAVE ATTENUATION DUE TO LOSSES AND TRANSMISSION ACROSS JUNCTIONS
 5.1 Excitation and propagation of L-waves
 5.2 Excitation and propagation of F-waves
 5.3 Point excited infinite plate
 5.4 Spatial Fourier transforms
 5.5 Added damping
 5.6 Losses in sandwich plates
 5.7 Coupling between flexural and inplane waves
 5.8 Transmission of F-waves across junctions, diffuse incidence
 5.9 Transmission of F-waves across junctions, normal incidence
 5.10 Attenuation due to change of cross section
 5.11 Some other methods to increase attenuation
 5.12 Velocity level differences and transmission losses
 5.13 Measurements on junctions between beams
 Problems
 Chapter 6 LONGITUDINAL VIBRATIONS OF FINITE BEAMS
 6.1 Free longitudinal vibrations in finite beams
 6.2 Forced longitudinal vibrations in finite beams
 6.3 The mode summation technique
 6.4 Kinetic energy of vibrating beam
 6.5 Mobilities
 6.6 Mass mounted on a rod
 6.7 Transfer matrices
 Problems
 Chapter 7 FLEXURAL VIBRATIONS OF FINITE BEAMS
 7.1 Free flexural vibrations of beams
 7.2 Orthogonality and norm of eigenfunctions
 7.3 Forced excitation of F-waves
 7.4 Mode summation and modal parameters
 7.5 Point mobility and power
 7.6 Transfer matrices for bending of beams
 7.7 Infinite periodic structures
 7.8 Forced vibration of periodic structures
 7.9 Finite composite beam
 Problems
 Chapter 8 FLEXURAL VIBRATIONS OF FINITE PLATES
 8.1 Free vibrations of simply supported plates
 8.2 Forced response of a simply supported plate
 8.3 Forced excitation of a rectangular plate with two opposite sides simply supported
 8.4 Power and energy
 8.5 Mobility of plates
 8.6 The Rayleigh-Ritz method
 8.7 Application of the Rayleigh-Ritz method
 8.8 Non flat plates
 8.9 The effect of an added mass or mass-spring system on plate vibrations
 8.10 Small disturbances
 8.11 Plates mounted on resilient layers
 8.12 Vibration of orthotropic plates
 8.13 Circular and homogeneous plates
 8.14 Bending of plates in tension
 Problems
 References
 Index

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