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3.9 The Frequency-Average Radiation Efficiency of Plates 3.10 Sound Radiation due to Concentrated Forces and Displacements; 3.11 Sound Radiation by Non-Uniform Plate Structures; 3.12 Sound Radiation by Curved Shells; 3.13 Sound Radiation by Irregularly Shaped Vibrating Bodies; Problems; Chapter 4. Fluid Loading of Vibrating Structures; 4.1 Practical Aspects of Fluid Loading; 4.2 Pressure Fields on Vibrating Surfaces; 4.3 Wave Impedances of Structures and Fluids; 4.4 Fluid Loading of Vibrating Plates; 4.5 Natural Frequencies of Fluid-Loaded Plates
4.6 Effects of Fluid Loading on Sound Radiation from Point-Excited Plates 4.7 Natural Frequencies of Fluid-Loaded, Thin-Walled, Circular Cylindrical Shells; 4.8 Effects of Fluid Loading on Sound Radiation by Thin-Walled, Circular Cylindrical Shells; 4.9 Damping of Thin Plates by Porous Sheets; Problems; Chapter 5. Transmission of Sound through Partitions; 5.1 Practical Aspects of Sound Transmission through Partitions; 5.2 Transmission of Normally Incident Plane Waves through an Unbounded Partition; 5.3 Transmission of Obliquely Incident Plane Waves through an Unbounded Flexible Partition
5.4 Transmission of Diffuse Sound through a Bounded Partition in a Baffle

Sommario/riassunto

The first edition of Sound and Structural Vibration was written in the early 1980's. Since then, two major developments have taken place in the field of vibroacoustics. Powerful computational methods and procedures for the numerical analysis of structural vibration, acoustical fields and acoustical interactions between fluids and structures have been developed and these are now universally employed by researchers, consultants and industrial organisations. Advances in signal processing systems and algorithms, in transducers, and in structural materials and forms of construction, have facilitated