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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.

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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.

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