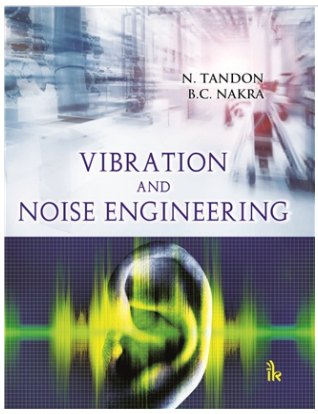
Book Information Sheet



Vibration and Noise Engineering

N. Tandon & B.C. Nakra

2017 | 204 pp | Paperback | ISBN: 9789385909528 | Price: 345.00

About the Book

Vibration and Noise Engineering deals with the fundamentals of mechanical vibrations and noise engineering. The contents have been organized in such a way that the general requirements of the students are fulfilled. The text lays emphasis on mechanical engineering applications of the subject and develops conceptual understanding with the help of many worked-out examples. The book is primarily designed for postgraduate and undergraduate students who are in the later stages of their engineering course. It will also be well-suited for the practitioners.

Salient Features

Covers measurement analysis and control of vibration and noise.
Introductory chapter includes the theory of vibration and covers free and forced signals as well as two degrees of freedom system.
Various types of transducers and instruments such as, accelerometers, proximity probes, torsional vibration sensors, TEDS and MEMS sensors and laser doppler vibrometer (LDV), available for vibration measurement and analysis are also covered.
Different microphones, frequency analysis of noise signal using octave and FFT analysis, sound intensity measurement technique and noise source location have been explained.
Noise pollution due to air, rail and road vehicles has been covered.
Acoustic materials and various noise control measures such as enclosures, barriers, silencers and active noise control are well described.

Table of Contents

Introduction to Vibration
Vibration Control
Introductory Theory of Noise
Noise Pollution
Mechanical Signatures Analysis
Vibrations Measurement and Analysis
Predictive Maintenance Systems
Noise Measurement and Analysis
Noise Control Measures

About the Author

N. Tandon :- **Dr Naresh Tandon,** is professor at Industrial Tribology, Machine Dynamics and Maintenance Engineering Centre, Indian Institute of Technology, Delhi. He obtained B.Tech. (Mechanical Engg.) degree from Indian Institute of Technology, BHU (1976) and PhD from IIT Delhi in 1991, specializing in noise and vibration engineering. He has more than 38 years of experience of research and industrial consultancy projects & teaching in the area of noise engineering and vibration monitoring. He has published more than 120 papers in journals and conferences and one book.

B.C. Nakra :- **Prof BC Nakra,** did his B.Sc. Engg. (Hons.) from Punjab Engineering College, Chandigarh (1959) and M.Tech from IIT Kharagpur in 1961. He obtained his PhD at Imperial College of Sciences & Technology, London in 1966. On return to India, he did his research in vibration and noise engineering at IIT Delhi where he guided 21 PhD scholars and published about 96 papers in peer reviewed journals and two books.