Encyclopedia of Applied Physics

Encyclopedia of Applied Physics
Volume 1, Accelerators to Analytic Methods
George L. Trigg, Editor
BK030104
VCH Publishers Inc., 220 East 23rd Street, Suite 909, New York, NY 10010. The publisher also has offices in Weinheim, Germany and Cambridge, United Kingdom.
666 pp., hard cover, 1991, USD 295

As indicated by the subtitle, this volume contains a wide variety of topics in applied physics. Since acoustics falls between accelerators and analytic methods, one will find several chapters of interest to those working in noise control. There are 285 pages devoted to acoustics. The topics covered in these chapters are:

- Acoustic Properties of Liquids
- Acoustical Instrumentation
- Acoustical Tomography
- Architectural Acoustics
- Linear Acoustics
- Nonlinear Acoustics
- Psychological Acoustics
- Underwater Acoustics

These chapters are followed by a chapter on aerodynamics which is also of interest to workers in noise control.

Of the above chapters, the ones on instrumentation, architectural acoustics, linear acoustics, and physiological acoustics are most relevant to noise control. The instrumentation chapter, by Busch-Vishniac and Hixon presents a detailed description of transducers, but little on analysis equipment. The chapter on architectural acoustics, by Walsh and Norris describes sound fields in rooms, the effects of sound absorptive materials, reverberation time equations and sound isolation. The chapter on linear acoustics, by Pierce, covers the basic equations of acoustics, sound attenuation, sound intensity and sound power, and wave propagation. The chapter on psychological acoustics, by Yost, covers the scientific aspects of response to sound and hearing impairment, but does not include noise control criteria.

Some of the topics which are to be covered in future volumes will also be of interest to workers in noise control. The following subjects are related to acoustics, but are indexed under different topics. These include filters and resonators, solids, sensors, holography, microscopy, engineering acoustics, and atmospheric acoustics. It is hoped that the publishers will, when the final volume has been published, consider republishing the chapters related to acoustics and noise control as an Encyclopedia of Applied Acoustics. Such a volume would be of considerable interest to those concerned with acoustics and noise control.