

BOOK REVIEWS

Selection of books for review is based on the editor's opinions regarding possible reader interest and on the availability of the book to the editor. Occasional selections may include books on topics somewhat peripheral to the subject matter ordinarily considered acceptable.



Air Movement and Vacuum Devices

Editors Mahesh V. Bhatia and Paul N. Cheremisinoff
Publisher Technomic Publishing Company, Westport, Connecticut (1981)
Pages 323
Price \$35.00
Reviewer Thomas R. Rehm

The book is a series of six chapters, each written by a different author on "Fans and Blowers," "Compressor Applications and Selection," "Centrifugal Compressors," "The Liquid-Ring Vacuum Pump," "Jet Ejectors and Condensers," and "Positive Displacement Compressors."

The material presented in these chapters is primarily in text and graph/picture form. Selected, but by no means complete, equations are given for certain applications. Much of the text is devoted to peripherals and mechanical components that are ancillary to the main apparatus.

The book is written for a low level of technical background. As such, it would be appropriate for a new operations technician or a manager without engineering fundamentals, primarily in an already operating facility.

A major shortcoming is the often poorly written and noncohesive style of material presentation. The first chapter is particularly poor. On the other hand, material in some of the latter chapters is very well presented and is clearly written. On the whole, however, the book is lightweight.

Thomas R. Rehm (PhD, University of Washington) has been a professor of chemical engineering at the University of Arizona since 1966. Special areas of interest are mass transfer, equipment and process design, and computer applications to design. He has industrial experience with UOP, Chevron, and Monsanto.

Energy and Sea Power

Editors D. Walsh and M. Cappellari
Publisher Pergamon Press, Inc., New York (1981)
Pages 200
Price \$25.00
Reviewer Efstathios E. Michaelides

This is a collection of 11 articles presented at the 8th Annual Pacific Coast Sea Power Forum. The subjects addressed are nontechnical, written basically by company executives and officers of the armed forces.

The articles cover the following topics: the present (1979) and future energy needs of the world; the burden of increased energy prices on the U.S. economy; the hydrocarbons to be produced by offshore drilling; regulatory and environmental aspects of offshore drilling; naval power needed to protect oil shipments and the corresponding merchant marine buildup; military mobility and its energy needs; the application of ocean thermal energy conversion in the military; the necessary engineering skills for offshore production to extend to arctic regions; energy-efficient ship design; and the needs of the shipbuilding industry to support the ocean-energy development.

The originality of the book lies in the fact that it brings together the military, economic, political, and technical considerations of offshore oil exploration and oil transportation. It will be useful to high-level managers of energy-related companies. It may also appeal to the energy engineer who pursues a global understanding of the nontechnical energy problems.

The book is well written with many tables and charts on energy production and consumption. However, there are very few references for those who wish to study the subjects in depth. One major drawback of the book is that the material was written in 1980, before the recent drop in oil prices. Because of this, a lot of the information contained is obsolete and some predictions on the future prices and oil demand are inaccurate.

Efstathios E. Michaelides (BA, engineering science and economics, University of Oxford, United Kingdom, 1977; MS, 1979, and PhD, 1980, engineering science, Brown University) has been an assistant professor in the Department of Mechanical and Aerospace Engineering, University of Delaware, since 1980. His research interests include multiphase flow, energy conversion, geothermal energy applications, and irreversible thermodynamics. He has contributed about 40 papers to the scientific and technical literature.

Fast Breeder Reactors: An Engineering Introduction

Author A. M. Judd
Publisher Pergamon Press, Inc., New York (1981)
Pages 161
Price \$12.50 paperback; \$25.00 hardcover
Reviewer R. A. Karam