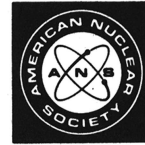


BOOK REVIEWS

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.



Power Condenser Heat Transfer Technology (Computer Modeling, Design, Fouling)

Authors P. J. Marto and R. H. Nunn
Publisher Hemisphere Publishing Corporation,
Washington, DC (1981)
Pages 490
Price \$47.50
Reviewer Clyde C. Richard

In 1980 the Naval Postgraduate School in Monterey, California, hosted a workshop entitled "Modern Developments in Marine Condensers." The workshop was well attended by individuals from government, universities, and industry, from the United States and abroad, who have had active involvement in the advancement of the technologies related to marine surface condensers. Topical areas included in this workshop were: computer modeling, the effects of noncondensable gases, vapor shear and condensate inundation, enhancement, and fouling. Each topic was treated by a keynote paper followed by prepared discussions and an open discussion. A final panel discussion summarized important findings in power condenser heat transfer technology.

"Modern Developments in Marine Condensers" is a compilation of the papers, discussions, and findings of this meeting. The papers prepared for this meeting and presented in this text summarize the latest developments in marine condenser heat transfer technology. Beginning with a discussion of computational methods for designing land- and sea-based steam condensers for power plants, the reader is informed both quantitatively and qualitatively of recent developments aimed at improving condenser performance. The papers compiled in this text do an excellent job in presenting both governing heat transfer equations and graphical solutions for the various parameters that affect condenser design. The relationship among such variables as noncondensable gases, venting, deaeration, vapor shear and condensate inundation, and their effects on condenser performance and sizing are thoroughly discussed by the numerous presenters.

Further papers treat the newer technology of using enhanced surfaces to improve both external and internal heat transfer. The potential of using these surfaces to reduce both the size and weight of shipboard condensers has recently been realized. This text gives an excellent summary of the most recent research in this area and outlines the potential that exists for using such surfaces.

The last section of the text treats fouling of heat transfer surfaces as it relates to condenser design and performance. With today's interest in using new materials such as titanium in condenser design as well as the inability in some cases to use chlorination for condenser cleaning due to environmental limitations, fouling is an important subject for the engineer to understand. This text does justice to this area of study.

Overall this book does an excellent job in updating the reader with the newest developments in marine condenser heat transfer technology. By reading the papers as well as the comments and discussions, an engineer working in this technology is able to quickly review the most important aspects of condenser design and performance. By further study of this text, he is able to utilize the various quantitative information in his daily work. Further use can be made of the many excellent references presented by the various authors who contributed to this text. These references cover nearly every aspect of condenser work from design to operating problems.

Dr. Clyde C. Richard received his bachelor and master degrees in mechanical engineering from Rensselaer Polytechnic Institute, and his PhD in mechanical engineering from the University of Connecticut. He has been involved in power plant condenser work for over 15 years, having been employed by a major U.S. utility company, acted as a consultant to a utility on their condenser problems, and performed research studies on condenser waterbox hydraulics. Presently he is an associate professor at the U.S. Naval Academy and is involved in research studies to quantify the weight and volume reduction of a marine power plant condenser that uses enhanced tubes in a vertical orientation.

Neutron Radiography Handbook

Editors P. Von Der Hardt and H. Rottger
Publisher D. Reidel Publishing Company
Hingham, Massachusetts (1981)
Pages 170
Price \$26.00
Reviewer Gerald A. Schlapper

This handbook was prepared by the Euratom Working Group on Neutron Radiography. The book is written so