

be of vital importance to fusion and magnetohydrodynamic power equipment, to magnetically levitated railroad vehicles, and are being considered for energy storage in a range of applications. The superconducting Josephson junction has "secured an important niche in the electronic hierarchy of advanced computer systems." Also, "the big science of high energy physics has made extensive use of superconducting magnets."

The ability of superconductors to operate at very high current densities offers the prospect of magnets with very compact lightweight windings able to produce high fields and high-field gradients. The problem of instability and the various techniques for stabilization have exerted the most influence on practical superconductor design. Also, protective techniques are required to ensure safe quenching of superconducting magnets.

The editors point out that materials development and performance in operating systems are the basis of the continued applications and economic viability of superconducting technology. A complete review of all materials technology is presented by leading authorities who were instrumental in the development of superconducting materials technology, which has mushroomed in the past decade. Technologies in this field, which were discussed only in the early 1970s, are now well beyond the prototype stage.

Adjunct professor of materials science and technology and nuclear energy at the University of California, San Diego, Massoud T. Simnad obtained his PhD at Cambridge University. He has held senior positions at GA Technologies and served as a visiting professor at the Massachusetts Institute of Technology.

He has authored or coauthored over 90 papers and 14 patents on nuclear fuels and materials.

Nuclear Power Hazard Control Policy

Author John C. Chicken
Publisher Pergamon Press, Inc.
 Elmsford, New York (1982)
Pages 280
Price \$15.00
Reviewer Gerald A. Schlapper

This book presents an analysis of factors that seem to have influenced the formation and organization of control of nuclear power in Great Britain. The presentation begins with a discussion of the technical nature of the hazards and of the legal and administrative framework that exists for control of these hazards. Following this introductory material, the main body of the publication addresses the influence exerted on the "hazard control" efforts by social and political factors.

Special emphasis is placed on those political groups that have developed interest in the problems of nuclear power. The author traces the history of these groups from their formation, some during the World War II time frame, to the events at Windscale. The analysis of policymaking and im-

plementation includes discussion of the manner in which power and authority are exercised in society to influence decisions on technical matters. The author addresses the evolution of policy in a changing atmosphere of economics and conflicting ideas of morality. A model of a policymaking system that accounts for changes in the technical, social, and political environment is proposed.

While the text is primarily oriented toward developments in Great Britain, numerous parallels are made with events in the United States. This study is well referenced with over 750 specific references in the text and a bibliography of over 80 books, 30 reports, and a list of over 110 newspaper and journal articles. Reading of the text is somewhat difficult due to the small-sized type that was employed, I assume, to keep the size of this volume tractable. There is much more information contained in this publication than the number of pages indicates.

This book is not a publication for light reading and is recommended for senior level managers, regulators, educators, and others of a similar level. It is useful as a reference for individuals interested in the interplay of factors that control the formation and development of regulation of the nuclear industry not only in Great Britain but also in the United States.

After receiving his MS in nuclear engineering from the University of Missouri at Columbia in 1970, Gerald Schlapper joined the reactor operations staff of the University of Missouri Research Reactor Facility. Dr. Schlapper received his PhD in 1977 and remained on the staff of the Research Reactor Facility until January 1981, when he assumed his current position as a faculty member of the nuclear engineering department at Texas A&M University. During his career, he has served as a consultant to various government and private organizations.

Heat Exchangers—Theory and Practice

Authors J. Taborek, G. F. Hewitt, and N. Afgan
Publisher Hemisphere Publishing Corporation,
 New York (1983)
Pages 992
Price \$69.95
Reviewer Warren M. Rohsenow

This book is a collection of papers presented at the 1981 Seminar of the International Centre for Heat and Mass Transfer in Yugoslavia. The papers were selected to cover a large spectrum of heat exchanger applications.

The first 18 papers cover evaporation and condensation. The initial paper is a survey of problems in condensation and boiling. In flow boiling the Steiner paper neglects the forced convection contribution, and his proposed correlation departs from data by as much as 400%. Bonn presents detailed results for the effect on nonuniform peripheral heat flux on flow boiling, and three papers present results for boiling on enhanced surfaces in tube bundles. Bonn also presents critical heat flux (CHF) data for flow boiling of nitrogen and argon