

mind that they recount the history of antinuclear protests in the two countries and view the nuclear opposition primarily as a social movement. Given the divergence in the history and the development of governmental organizations of France and the Federal Republic of Germany, it is interesting to see the difference in the role of the courts and in the government response to this conflict in the two countries. To the American reader, the authors' analysis of the role of scientific expertise in this struggle and the significance of extraparliamentary dissent should be of interest and contain some lessons.

Moss's book takes a more journalistic approach to his subject. He tends to overdramatize his statements but presents a fair attempt to explain the history of nuclear power development and to present technical material to a nontechnical audience. Moss seems to feel that nuclear power has been oversold, that nonproliferation of weapons is a valid issue in fuel cycle policy decisions, and, in the process of maintaining an evenhanded approach, tends to leave the reader with his worst fears unresolved. The slightly breezy style may offend some and it is easy to spot some technically dubious statements. Nevertheless, the book can be recommended to any reader who would like a readable review of atomic power and of the political problems surrounding it.

Editor's Note: These two books are being presented in a combined review because of the reviewer's desire to compare two different approaches to political considerations in the development of the nuclear industry.

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Handbook of Multiphase Systems

Editor G. Hetsroni

Publisher Hemisphere Publishing Corporation, New York (1981)

Pages 1536

Price \$64.50

Reviewer Efstathios E. Michaelides

The *Handbook of Multiphase Systems* has been long awaited by the engineering community. It thoroughly presents all aspects of two-phase flows of current interest

for research or design purposes. Starting from the basic equations for the modeling of flows, the book individually examines gas-liquid, solid-liquid, and solid-gas flows. Special topics of engineering interest such as boiling, condensation, pneumatic conveying, fluidization, and measurement techniques are examined separately.

The authors have provided a scholarly presentation of the material with all chapters in the form of review articles. The articles contain most of the data and theories published to date and the bibliography is adequate.

The book is likely to be used by engineers in both design and research areas. The amount of information contained in the book is enormous, and it certainly will find a place in every technical library as a reference text. The only shortcoming of the otherwise excellent work is the great number of typographical errors in it.

Efstathios E. Michaelides studied at the University of Oxford, England (BA, engineering science and economics, 1977) and Brown University (MS, 1979, and PhD, 1980, engineering science). Since the summer of 1980 he has been an assistant professor at the University of Delaware, Department of Mechanical and Aerospace Engineering. His research interests are multiphase flow, energy conversion, geothermal energy applications, and irreversible thermodynamics. He has contributed about 25 papers to scientific and technical literature.

Light Water Reactor Nuclear Fuel Cycle

Editors Raymond G. Wymer and Benedict L. Vondra, Jr.

Publisher CRC Press, Inc., Boca Raton, Florida (1981)

Pages 259

Price \$74.50

Reviewer Bernard L. Cohen

This book is basically a compendium of five articles by staff members of the Oak Ridge National Laboratory dealing largely with the chemical aspects of the light water reactor (LWR) fuel cycle. After a brief introductory chapter, there is a 55-page overview of the fuel cycle by R. E. Leuze with special emphasis on the front end—mining, milling, refining, conversion, enrichment, and fuel fabrication. The remaining four chapters are on the back end of the fuel cycle, with three of them on reprocessing—chemical aspects of reprocessing (42 pages) by D. O. Campbell, Purex chemistry (60 pages) by W. D. Bond, and chemistry of volatile fission products (28 pages) by J. C. Mailen and L. M. Toth. The final chapter is on radioactive waste management (52 pages) by A. G. Croff. The first and last of these five articles give very extensive coverage with minimal detail; whereas, the three articles on reprocessing seem, to a nonchemist at least, to be more detailed. A considerable fraction of the discussion is about future and proposed technologies like hold-back of tritium in