

BOOK REVIEWS

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



Nuclear Power Generation
(2nd ed., Vol. 8 of a series on Modern Power Station Practice)

Publisher Pergamon Press (1971)

Pages 374

Price \$13.50

Reviewer V. Lawrence Parsegian

This volume on nuclear power generation is the eighth of a series devoted to electric power producing practices in Great Britain. The series has been developed with the help of "over 100 experts" from the Central Electricity Generating Board, and is designed "to help all engineers with the difficult problem of keeping pace with advances in power station technology."

The book begins with a matter-of-fact introduction to nuclear and reactor physics, with remarkable economy of words. Examples of reactor types are taken from the work

of various nations before settling down to the strictly British power plants in Chap. 3. The latter plants and their fuel elements and associated equipment are briefly described and compared. There follows a long chapter on the operational features of reactors, covering such topics as fission product buildup, irradiation damage, temperature-related phenomena, fuel cycles, reactor kinetics and control, the general philosophy and practices affecting safety, and instrument techniques for measurement of radiation, flow rate, and systems performance. The volume concludes with the arduous tasks that go with planning, testing, designing, and justifying reactor plants through construction and commissioning procedures. Also included are summaries of the legislated requirements affecting nuclear plant design and operation.

My impression is that "non-nuclear" engineers would find the treatment of the topics a meaningful introduction to nuclear systems, which appears to have been the ob-

jective of this series of books. The illustrations are numerous and detailed. As a brief survey of British reactors the volume would have limited interest for readers in the United States. This becomes especially so since our current interests are with advanced breeders, simplified reactor designs, and environmental problems with which the volume is not concerned.

Following 13 years in industrial research and nearly 5 years as director of the Research Division of the New York Operations Office of the Atomic Energy Commission, Dr. Parsegian moved to Rensselaer Polytechnic Institute. A physicist from MIT and New York University by education, he served 7 years as dean of engineering. In 1961 he was appointed to the distinguished Chair of Rensselaer Professor, from which time his interests have been the bridging of the technological and humanities disciplines in educational curricula.