

BOOK REVIEWS

H. P. GARG, S. C. MULICK and A. K. BHARGARA,
Solar Thermal Storage. D. Reidel, Dordrecht, Hol-
land, 1985, 742 pp.

THE FOLLOWING topics are dealt with in eight chapters: Importance and Modes of Energy Storage; Sensible Heat Storage; Latent Heat or Phase-change Thermal Energy Storage; Chemical Energy Storage; Long-term Energy Storage; Energy Storage in Building Materials; High Temperature Heat Storage; and Testing of Thermal Energy Storage Systems. Appendices include very valuable information on the physical properties of various substances.

The coverage of chapters is very thorough and very well presented. At the end of each chapter extensive references are provided. Time has not permitted this reviewer to read every chapter in detail. This reviewer particularly enjoyed reading the chapters on sensible and latent heat storage and chemical energy storage.

The authors have done very well in reviewing the existing knowledge on solar energy storage and putting it together in a clear and understandable way. The book is coherent and logical.

Among some minor drawbacks are small typographical errors, poor figures and the use of the word "recent" to describe work which is 5–10 years old. On the whole, however, the drawbacks of the book are minor and are by far outweighed by the good treatment of the subject matter.

The reviewer's overall impression is that this volume is well written and is compulsory reading for those doing research in solar energy storage. Any engineer dealing with energy storage problems in practice will find this book a useful reference. Additionally, it could serve as a textbook for continuing educational courses.

SADIK KAKAÇ
Department of Mechanical Engineering
University of Miami
Coral Gables, FL 33124, U.S.A.

R. E. WHITE, **An Introduction to the Finite-element Method with Applications to Non-linear Problems.** John Wiley, New York, 1986.

THIS short and attractively printed book has some computer programs in it. They are the best parts, being simple,

comprehensible, useful and (to judge from the one which I tested) in working order. I am glad to have the book; and many others may find it worth buying.

Including computer programs is a dangerous practice for an author; for it may incline the reader (as it did this reviewer) to judge the text by computer program standards, according to which all terms used must be precisely defined, and breaks in logic are totally disallowed. By these standards, the current text is deficient; and even by the more liberal standards appropriate to human readers (who can guess, to some extent, what the writer inadvertently omitted to state) it leaves something to be desired. This is a pity—for the book is well organized; and its contents are wisely chosen for those readers who want no more than an introduction.

Why is it that authors are so much kinder to their computers than to their readers, overstraining by far the latter's ability to make intelligent guesses? It is because readers have some good nature to be exploited whereas computers have none: a confident-seeming author can cow his readers into believing their lack of understanding to be their fault, not his; but computers are immune to such brow-beating. Authors are so unfair to readers, in this regard, that reviewers should not be reproached for being strict, as I have tried to be here. Had I not been, I should simply, as many will do, have praised the book as a wholly excellent piece of work.

J. GOSSE, **Technical Guide to Thermal Processes.** Cambridge University Press, Cambridge, 1986, 227 pp., £22.50/\$7.95.

PROFESSOR Gosse has long been known to his fellow editors of this Journal as a man who is sparing of words; but who, when he speaks, talks excellent sense. It is no surprise therefore that the book here reviewed is short (227 pp.), laconic in style, and packed with useful information—definitions, tables, formulae and references.

"It would be tedious", writes the author in his preface, "to list the things which distinguish this text from those already published": he therefore does not do so. I will be equally taciturn stating only that, because Professor Gosse has avoided *all* divagations, the book is excellent value for money.

D. B. SPALDING
Imperial College of Science and Technology
Exhibition Road
London SW7 2BX, U.K.