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.

Modern Formulas for Statics and Dynamics

Authors Walter D. Pilkey and Pin Yu Chang

Publisher McGraw-Hill Book Company (1978)

Pages 418

Price $18.50

Reviewer Allan J. Malvick

This book is an excellent reference for the structural engineer who must design or analyze complex bars, beams, shafts, cylinders, plates, and spherical shells. The authors correctly state that the book begins where the simple stress and strain formula books leave off and attempts to fill the gap between handbook formulas and general-purpose computer programs. While no derivations of formulas are provided, references are comprehensively supplied.

The authors' style is clear and forthright, but this will be apparent only to experienced structural analysts. This book furnishes additional proof that the linear theory of structures and solids is both simple in concept and exceedingly complex in mathematical description of solutions. Indeed, the collection of formulas and tables in this book can only be described as colossal.

The authors state that a background in elementary mechanics of solids is necessary to use the book. In the reviewer's opinion, at least a recently acquired master's degree with an emphasis in solid mechanics and dynamics is also required. This is not a criticism of the book, but rather an acknowledgment of the difficulty and complexity of the subject. Unless the user has extensive training and experience, and understands the underlying theory, he is running a grave risk of misusing the formulas and arriving at irrelevant or disastrous results.

The authors also state that all computations required by the methods of this book can be completed within two minutes by a computer and within two hours by hand calculation. In the reviewer's opinion, this is true only if the user is thoroughly familiar with the notation, analysis, and background theory, and only if the computer program to be used is present on the computer and is producing valid output. Otherwise the user can expect to spend days or even weeks getting familiar with the topic, writing or procuring the computer program, and installing and supplying input data to the program.

The authors claim thorough verification of formulas, text, and example problems. While the reviewer in his relatively brief study of the book did not observe any errors, he would advise the user to check any formulas he intends to use, or at least obtain independent verification. Nevertheless, this book will be invaluable to the structural analyst or to anyone who desires a ready reference to the subject of mechanics of solids.

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Storage of Spent Fuel Elements
(Proceedings of the Nuclear Energy Agency Seminar, Madrid, June 1978)

Publisher Organization for Economic Cooperation and Development Publications Center (1978)

Pages 348

Price $15.00 (soft cover)

Reviewer Anthony Foderaro

This book is the written record of a seminar sponsored by the Organization for Economic Cooperation and Development (OECD) in June 1978, a little over a year after President Carter had announced that the U.S. would indefinitely