

Elasticity in Engineering. By Ernest E. Sechler. 419 pp. Galt Aeronautical Series. John Wiley and Sons, Inc., New York, 1952. \$8.50.

According to the preface, this book was written primarily for structural engineers, and the subject matter was chosen largely for aeronautical needs. The book was evidently not designed for reference or self-instruction at an advanced theoretical level. For example, it does not discuss the use of complex variables in two-dimensional problems, and it gives only an introductory discussion of the stress distribution around notches; for more complete discussions the reader is usually referred to other books, such as those of Love and of Timoshenko and Goodier, rather than to journal articles. On the other hand, partial differential equations and stress functions are used freely. These examples indicate the level at which the book will be found useful. The reader who uses it for self-instruction should consult other books as well; otherwise he might erroneously suppose, for instance, that the double sum developed here for the torsional rigidity of a rectangular bar was the only formula available.

The book is divided into three parts: (I) fundamental equations and analysis; (II) engineering problems in stable structures; (III) engineering problems in instability. The mathematical arguments are usually clear, but they would be easier to follow if the main logical steps were distinguished from the algebraic details, e.g. by use of two sizes of type. A cognate criticism is that the diagrams give as much prominence to details as to essentials. Some of the most basic topics are discussed least clearly; this is partly inherent in the nature of the topics, but there is still no need to confuse Newton's third law of motion with the equilibrium condition, as seems to be done on pages 7-8. On the troublesome problem of notation, the author does a daring thing: instead of discussing all the notations that have been used, he simply explains the notation that he is going to use and then uses it. I wish more authors would do just this.

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Elementary Text Book

Physics—For Science and Engineering Students (694 pp.; The Blakiston Company, New York, 1952; \$6.50) is a comprehensive textbook on general physics by W. H. Furry, E. M. Purcell, and J. C. Street of Harvard. Calculus is introduced gradually under the assumption of a concurrent calculus course, but few of the problems require its use. The electricity and magnetism sections are in the CGS system, with an appendix devoted to a summary of the formulas in rationalized MKS units. The book, while on a fairly elementary level, contains a considerably greater amount of material than can be covered in an average year-length course, leaving the instructor free to make whatever selection of material he chooses. A two-column format is employed, and the illustrations are adequate.

The Earth

Harold Jeffreys' classic *The Earth, Its Origin, History, and Physical Constitution* (392 pp., Cambridge University Press, 1952, \$13.50) has been revised and partially rewritten for its new third edition. In the more than twenty years since the previous version, geophysics has advanced considerably, and changes in our knowledge of the earth are reflected in this book. For instance, the elastic properties of the earth all the way to the center are now known, and its age and thermal history have been the subjects of recent work as well. To make room for the added material the four outmoded chapters on the origin of the earth have been replaced by a chapter-length general discussion of the problem with reference to several modern theories.

Books Received

REGULAS DE SELECTION PRO SPECTROS VIBRACIONAL DE MOLECULAS POLYATOMIC. By Forrest F. Cleveland. 21 pp. Spectroscopy Laboratory, Illinois Institute of Technology, Chicago, Illinois, 1953. \$0.75.

GENERAL CHEMISTRY. AN INTRODUCTION TO DESCRIPTIVE CHEMISTRY AND MODERN CHEMICAL THEORY (Second Edition). By Linus Pauling. 710 pp. W. H. Freeman and Company, San Francisco, California, 1953. \$6.00.

PROTECTIVE ATMOSPHERES. By A. G. Hotchkiss and H. M. Webber. 341 pp. John Wiley & Sons, Inc., New York, 1953. \$7.00.

ELECTROCHEMICAL CONSTANTS. Proceedings of the NBS Semicentennial Symposium on Electrochemical Constants Held at the NBS on September 19-21, 1951. 310 pp. NBS Circular 524. U. S. Government Printing Office, Washington, D. C., 1953. \$2.00.

THE THEORY OF METALS (Revised Second Edition). By A. H. Wilson. 346 pp. Cambridge University Press, New York, 1953. \$8.50.

A SPECULATION IN REALITY. By Irving F. Laucks. 154 pp. Philosophical Library, New York, 1953. \$3.75.

MATHEMATICS IN WESTERN CULTURE. By Morris Kline. 484 pp. Oxford University Press, New York, 1953. \$7.50.

METEOROLOGICAL INSTRUMENTS (Third Revised Edition). By W. E. Knowles Middleton and Athelstan F. Spilhaus. 286 pp. University of Toronto Press, Toronto, Canada, 1953. \$11.50.

INTRODUCTION TO DYNAMICS. By L. A. Pars. 501 pp. Cambridge University Press, New York, 1953. \$6.00.

OPPORTUNITIES IN ELECTRICAL ENGINEERING. By S. Paul Shackleton. 128 pp. Vocational Guidance Manuals, New York, 1953. \$1.00.

DIE LAPLACE-TRANSFORMATION UND IHRE ANWENDUNG. By Paul Funk, Hans Sagan, and Franz Selig. 106 pp. Franz Deuticke, Vienna, Austria, 1953. Paperbound.

READINGS IN THE PHILOSOPHY OF SCIENCE. Edited by Herbert Feigl and May Brodbeck. 811 pp. Appleton-Century-Crofts, Inc., New York, 1953. \$6.00.

TELEVISION RECEIVER DESIGN. BOOK VIII B. FLYWHEEL SYNCHRONIZATION OF SAW-TOOTH GENERATORS (Monograph 2). By P. A. Neeteson. 165 pp. Philips' Technical Library, Eindhoven, Netherlands; Elsevier Press, Inc., New York, 1953. \$4.50.