

**BOOK REVIEWS**

engineer. An anticipated second volume is expected to treat specific problems more rigorously.

The book is divided into 13 chapters which include such subjects as "Vibration Testing," "Shock Testing and Shock Spectra," "Topics Related to Design and Test," "Selection of Vibration Isolators and Shipping Container Cushions," "Spectra and Probability Distribution," "Data Reduction," "Statistics of Reliability," and "Random Noise Theory." The book is authoritative and easy to read and will be appreciated by the workers in this field.

## Solid Continuum Mechanics

**Theory of Flow and Fracture of Solids, vol. II.** By A. Nadai. McGraw-Hill Book Company, Inc., 1963. Cloth,  $6 \times 9\frac{1}{2}$  in., xviii and 705 pp. \$25

REVIEWED BY P. G. HODGE, JR.<sup>6</sup>

THE coverage of this book is broader than its title might indicate. The three chapters of Part I cover thermal phenomena, work and energy, and extremum principles. Part II (six chapters) contains the general theories and numerous applications of linear

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elasticity and viscoelasticity. Part III consists of three chapters applying viscoelasticity to post-glacial uplift and extrusion, plus chapters on thermal strains and residual stresses. The final three chapters are devoted to plasticity and soil mechanics, creep at elevated temperatures, and geomechanics.

Inevitably, with such a wide coverage attempted, the specialist can object to omissions. This reviewer finds it difficult to understand the inclusion of the narrowly restrictive Haar-Karman minimum principle of plasticity formulated in 1909, with no mention being made of any of the more general principles which have been proved since then.

The emphasis throughout is on engineering with many references to experimental evidence and continued referral to practical situations which give rise to the problems treated. The mathematics is at an adequate level, though certainly not elegant, but the sentence structure tends to become somewhat involved and difficult to follow. The book is written at an advanced level and requires some previous familiarity with solid continuum mechanics, but specific dependence upon Volume I, published in 1950, has been largely avoided. However, both volumes certainly belong on the bookshelf of every research worker interested in the practical aspects of solid continuum mechanics.