

Short Notice

Properties of engineering materials

J. B. Moss

Butterworths, 332 pages, £4.50 cased, £2.50 limp.

With the numerous books dealing with engineering materials and materials science now available any new text appearing in this area must either represent some significantly new approach to the subject or include new information about the development of materials.

This book does neither. The author claims in his opening chapters, which deal with atoms, atomic movement and thermal equilibria, to present the unifying principles for his subsequent discussion of metals, polymers and ceramics. However, this unified approach does not appear and the text reads more like a catalogue of materials available together with some of their relevant properties. There are numerous mistakes and misrepresentations in the text, typical

examples being the use of only half of the unit cell of NaCl, the incorrect atomic arrangements of atoms around a screw dislocation, and the indication that the Burgers vector of this defect is perpendicular to its axis.

Very little new information is presented and in many cases the text is either trivial or sadly out of date; for example there is no discussion at all of the thermomechanical testing of polymeric materials in Chapter 5 or the concept of fracture toughness in the last chapter which deals with fracture as a mode of engineering failure.

As the stated aim of the book is a unified discussion of the properties and behaviour of materials, and their response to different environments, it is a pity that the essential unity of approach in this subject is almost totally absent.

This is therefore not a book the reviewer would recommend to his engineering students.

R.A.F.

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SCHOOL OF APPLIED SCIENCES
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From April 1972 the Materials Science Division has available a Research Fellowship for an S.R.C. – sponsored project on the development of acoustic emission methods for the study of failure in fibre composite materials.

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Dr. Bryan Harris, School of Applied Sciences, University of Sussex, Brighton, BN1 9QT.
