

## Book review

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### Structures for nuclear power

by S. Gill

Published by C.R. Books Ltd, London, 1964. pp. 398. Price 120s.

The contents of this book are generally confined to the reactor portion of nuclear power stations. It is pleasant, well laid out, easy to read and, as an over-all general introduction to the young engineer entering the nuclear power field, it puts across simply and well a lot of basic data and information. However, the practising engineer already employed in the industry will find little of assistance to him in his work.

It is, no doubt, a feature of the present scientific age that this type of book is destined to be out of date by the time of its publication just as the power stations themselves are by the time of their completion. When the attention of the industry is already focused on the advanced gas-cooled reactor and the American-type water reactor, large sections of this book become inevitably of historical interest only.

The reader is led through a description of atomic processes, descriptions of some of the earlier reactors, a short treatise on radiation and shielding and a chapter on concrete properties, to the design and layout problems of reactor foundations, biological shields, active liquid effluent treatment works, aseismic design and prestressed concrete pressure vessels. The book rarely, however, gets very far away from general des-

cription and the establishment of basic principles, and very little actual design is included.

After a 22-page chapter on concrete properties and a comprehensive bibliography of 56 references, one looks in vain for a chapter on the effect of these properties and movements coupled with the establishment of working tolerances, accuracy of setting of shielding inserts, etc., which are of such vital importance to the successful operation of the stations. Again, space is given to descriptions of the experimental reactors Bepo and Gleep which can surely only be of very mild historical interest now, whereas the later stations at Dungeness, Sizewell, Oldbury and Wylfa are excluded. A final chapter on the latest stations would have helped considerably in preserving the balance of the book.

The chapter on high-density concretes (defined as being greater than 150 lb/ft<sup>3</sup>) is of interest but many of the present stations do not include such concretes and there is a general tendency to avoid their use, facts which are not brought out in the chapter.

The sum total of these comments is not intended to detract from the readability and attractive layout of the book but one feels that as it will obviously have a very limited appeal outside the few hundred civil engineers engaged on nuclear power work, these engineers will expect rather more for their money than the book contains.

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