

the necessity of importing foreign prestressing systems, with their associated high cost, for use on site. Several methods are shown that might well be applied in other countries where some simple means of stressing is required for relatively small jobs.

The remaining sections of the symposium deal with precast concrete roofs and with the research that has been carried out on prestressed concrete as applied to buildings.

The section on roofs contains a paper of special interest, presented by Dr Zielinski, which mentions the work on lattice girders that has been carried out in Poland and hints at the considerable economy such forms of roof beam can give.

The progress of roof construction in India itself is amply illustrated by the remaining papers in this section and of particular interest is a small shell roof made from lime-surkhi concrete which has been developed by the Roorkee Institute and which has great potentialities as an economic roof for all types of structure.

Papers in the section dealing with progress in research deal, in the main, with work which has been previously reported elsewhere, but readers will find it very convenient to have summaries by various noted authors and research workers of the work that has been going on over a period of years.

The final section deals with the economics of prestressed concrete and it is interesting to note that the majority of the papers in this section were prepared by American engineers and give details of the progress made in that country, the advancement made in pre-tensioning concrete, and the associated economies that pre-tensioning can give.

## Concrete Practice : Volume I

by R. H. Elvery

Published by Contractors Record Ltd, London. 1st edition. 1958. pp. viii, 214. Price 28s.

This addition to the Concrete Library (Advisory Editor: J. Singleton-Green) will be welcomed by all connected with the building and civil engineering industries.

Although it is intended to serve as a textbook for the course leading to the Grade I Certificate in Concrete Practice of the City and Guilds of London Institute, the contents will be of value to all interested in concrete production and construction.

The author describes in simple terms the properties of concrete and its constituents and, which is probably more important, explains why certain procedures should be followed on the site. There would, for example, be less misunderstanding over mix proportions if the chapter on "Proportioning and batching"

was studied by all supervisors. As most nominal concrete mixes are specified by volume, it would have perhaps been more realistic for one of the worked examples to have shown the equivalent proportions by weight.

No one will disagree with the author's contention that "In practice, the cement to aggregate proportion is chosen so that the most suitable workability for conditions of placing will be obtained . . .". It is therefore to be hoped that the reference made in the chapter on mechanical compaction to the placing and compacting of concrete in 18 in. lifts in walls and columns is not misinterpreted, particularly if a column is cast its full height in one lift.

While this book is well illustrated with photographs and diagrams carefully related to the text, the section dealing with formwork would be of greater value if typical designs for timber beam moulds, column and wall forms had been included. Furthermore, there appears to be no correlation between the concrete strengths in Table 1 and the graphs in Figures 23 and 53. Such discrepancies are understandable, but tend to confuse the beginner.

With a book of this nature there must always be sympathetic understanding of the author's difficulties in knowing what information to omit rather than to include. One has a feeling that the author, in following the syllabus for the Concrete Practice Course (Grade I) so rigidly, has missed the opportunity to make the best presentation of his material.

## The industrial cooling tower

with special reference to the design, construction operation and maintenance of water cooling towers

by K. K. McKelvey and Maxey Brooke

Published by the Elsevier Publishing Company, Amsterdam. Distributed in Great Britain by D. Van Nostrand Company Limited, 358 Kensington High Street, London, W.14. 1st edition. 1959. pp. xviii, 429. Price 90s.

This book should find a ready welcome for, as the authors claim, the subject was only covered previously in disjointed and scattered articles. One author is a British engineer, the other an American chemist and they have corresponded with experts in many other countries in order to give a comprehensive view of the subject.

After a short historical introduction, they discuss the methods of determining and measuring atmospheric conditions and illustrate them with tables, graphs, and conversion charts relating to possible conditions in many countries and series of weather maps of the British Isles and Europe. The third chapter discusses methods of cooling water and defines terms.

Other chapters discuss: heat transfer in cooling towers; the natural draught cooling tower; the assess-