

# Book reviews

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## Structural analysis

### A unified classical and matrix approach

A. Ghali and A. M. Neville

Published by Intext Educational Publishers, Scranton, Pa., 1972. 233 × 160 mm. pp. 16,769. Price: £4.00.

Distributed in Great Britain by the Intertext Group of Publishers, 158 Buckingham Palace Road, London, SW1.

This book attempts to combine recent matrix methods of structural analysis with classical methods and to show the interrelation between them. It succeeds in this aim very well.

Matrix methods are presented initially in a series of chapters describing force and stiffness methods of analysis, strain energy and virtual work. After this, moment area methods, column analogy, the theory of three moments, slope deflection and moment distribution are described and related to the earlier chapter. In each case, the utility of the various methods of analysis is discussed. These subjects are covered in the first fifteen chapters, amounting to approximately half of the text.

The remaining part of the book is concerned with the analysis of shear wall structures, methods of analysis by finite differences and finite elements, plastic theory and structural dynamics. The section on plastic theory covers both frames and the analysis of slabs by yield-line methods. Naturally these subjects

are only dealt with briefly but the chapters all give a good general introduction to the subjects. References to more complete works on these subjects are given in the text.

The units used in the book are Imperial but this should not deter British readers as a book on analysis is relatively unit-free, more so than a book on design, for example.

This book has much to commend it. It will be of use to a student as a standard work on indeterminate structures, covering all but the beginning of his theory of structures course. The work will also be of interest to an older engineer who studied his theory of structures before matrix methods were introduced; the book will enable him to see the relations between the new and old methods and bridge the gap between the two.

At the published price of £4.00 this book gives good value for money.

H. P. J. TAYLOR

## Reinforced concrete fundamentals

Phil. M. Ferguson

Published by John Wiley & Sons Ltd, Chichester. Third edition. 1973. 235 × 175 mm. pp. x, 750. Price: £8.25.

This book is written primarily for students but this should not be allowed to deter more experienced engineers from reading it, as it is undoubtedly one of the best books of its type. Nor should readers be deterred by its being the third edition of a book first

published in 1958, since well over half the material is new or has been completely rewritten. Its scope is encyclopedic, touching on almost all common aspects of reinforced concrete design within its 750 pages.

The content is arranged in a logical way, starting