Book review

Structural elements for architects and builders

Jonathan Ochshorn. Butterworth-Heinemann, Oxford, UK, 2010, ISBN 978-1-856-17771-9, 384 pp.

This book is aimed at architects and builders and the content is organised to be consistent with the structures curriculum within the Department of Architecture at Cornell University. The author is a registered architect and an associate professor within this department who writes in his preface: 'This text is intended to be used only for the preliminary (schematic) design and understanding of structural elements. For the design of an actual structure, a competent professional should be consulted.' It is important to keep this in mind when assessing this book.

There are nine chapters and ten appendices within the book's 384 pages. Chapter 1 is concerned with some very basic structural analysis and strength of materials, the sort of material which would be covered in the first few weeks of an 'Introduction to mechanics' lecture course. Chapter 2 gives a brief overview of loads and this is followed by seven chapters devoted to the design of columns, beams and tension elements in timber, steel and reinforced concrete. The appendices, which comprise about one third of the book, are devoted mainly to material properties and design data.

The text is clear and well written and is enhanced considerably by numerous well-produced figures. There are also many worked examples and the volume of reference data in the appendices is considerable. However, the coverage lacks depth (for instance, there are no references

to codes of practice in the main text or appendices) although, to some extent, this is understandable in view of the breadth of material which the book attempts to cover. However, for engineers wishing to enhance their design knowledge, it makes for a frustrating read. There are only three references which are listed in a brief section at the end of the book. One might have expected a much more comprehensive list to assist readers who wished to explore design methods and criteria in more depth. It is also unfortunate that, owing to a typo, one of these three references is given incorrectly (the ACI Building Code for Structural Concrete should be ACI 318-08 not ACI 818-08).

US customary units are used throughout the book. Inches, pounds and kips may be nostalgic to some potential purchasers, but the reality is that this is a serious drawback for anybody outside the US.

This is a useful book for US students of building and architecture which, to be fair, is what the author intended. It may also have some appeal for others outside the engineering profession who seek a general overview of design approaches used for timber, steel and reinforced concrete. However, for engineers (and particularly those outside the US) the appeal of this book is limited and it is likely to have a hard time competing in what is already a fairly crowded market.

Richard Scott