

# Review



This comprehensive guide to prestressed concrete design is aimed at students and recent graduates, but will also be of use to more experienced practising engineers in Australia, concludes **David Morris**.

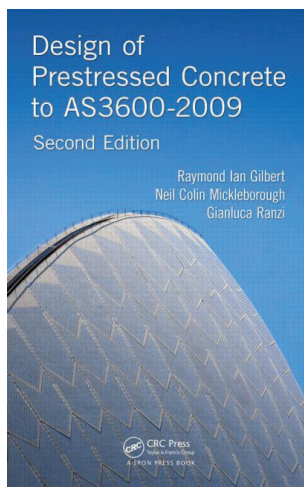
## Design of Prestressed Concrete to AS3600-2009 (2nd ed.)

**Authors:** Raymond Ian Gilbert, Neil Colin Mickleborough and Gianluca Ranzi

**Publisher:** CRC Press

**Price:** £50.99 (paperback); £35.69 (E-book)

**ISBN:** 978-1-466-57269-0



*Design of Prestressed Concrete* is a specialised, comprehensive and up-to-date text on the subject. The book began life in 1985 as undergraduate teaching material for two of the present authors (Gilbert and Mickleborough). The authors are well known to students and practitioners alike.

The book's first edition (1990) took a first-principles approach, with references to accepted international codes of the day. This is important for both students and practitioners, who need to understand the principles of this important structural material before applying codes of practice.

This is a revised edition of a popular book, and it comprises a thorough update which is referenced to the Australian Standard AS3600-2009. I agree with the stated target audience for this book as senior undergraduate and graduate students, as well as practising engineers in Australia.

The second edition contains three new chapters in addition to those found in the first edition. Chapter 2 is a good AS3600-specific section on design procedures and applied actions; Chapter 3 provides a good introduction to prestressing hardware and systems; and Chapter 14 comprises a good section on detailing for members and connections.

Familiarity with the Australian Standard

for reinforced and prestressed concrete, AS3600, is essential for any structural engineer involved in the design and detailing of buildings in Australia. Of particular interest to Australian readers, Ian Gilbert has been deeply involved in the AS3600 code committee since inception.

**"THIS IS A REVISED EDITION OF A POPULAR BOOK, AND IT COMPRISES A THOROUGH UPDATE"**



There are other texts which include prestressed concrete design to AS3600, but this one is a specialist book, and benefits from the author's research strengths in time-dependent changes in concrete. As you might expect from a book which has its origins in teaching material, it is well set out, with good coverage of the subject, clear diagrams and tables, and 48 worked examples.

The various summaries contained in the book are helpful; for example, the design requirements for shear. The explanation of the anchorage zone analysis, with examples, is refreshingly clear.

The inclusion of the material on design procedures, as well as prestressing systems, and detailing is useful, and will help new graduates to get started in practical engineering design.

Buildings and bridges use the same principles of prestressed concrete design. References to bridge decks in this book are somewhat misleading as AS3600 is for buildings. Since 2004, a separate code (AS5100) has been used for bridges, but not surprisingly, there are many similarities with AS3600. Professionals should be aware that the respective codes have significant differences which often lead to different end results.

This is a book undergraduates and new graduates should use, and more experienced engineers will still find helpful in practice.

### Dr David Morris

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David is a civil and structural engineer with over 40 years' professional experience, practising as a

consulting engineer in Melbourne since 2012. Since completing the Imperial College London Concrete Structures course in 1981, a good proportion of his work has involved reinforced and prestressed concrete, usually in bridges.

