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Preface

Since the release of the seventh edition of the *Steel Designers' Handbook* in 2005, there have been significant changes to Australian and other national Standards, key design references and aids as well as noteworthy advances in the research and development of steel structures. These changes precipitated the need for this eighth edition of the Handbook.

One of the more significant changes to Standards included a major amendment to the 1998 version of AS 4100 *Steel Structures*. This amendment was released on 29 February 2012. Amongst other aspects, the key changes due to the amendment to AS 4100 are summarised in Section 1.14 and other related parts of the Handbook and, with grateful acknowledgement of Standards Australia, are listed in Appendix D of the Handbook. Additionally, there have been significant changes to design aids and models for structural steel connections.

The use of this Handbook is not intended to be a stand-alone steel design code. The authors recommend that readers take this text as a map and guide to AS 4100 and related publications. Readers should also refer to AS 4100, its Commentary, related Standards and other relevant publications, to gain a suitable appreciation of current structural steel design requirements.

This text is intended to cover enough material to enable the design of everyday structural steel frames, members and connections. Appendix A includes a thoroughly revised and expanded bibliography, and a substantial updated list of related Standards and references. The Handbook, together with the information included in the Appendices, should provide the reader with a solid background to a variety of structural steel design tasks.

As noted in previous editions, the following key points should be considered when using the Handbook:

- Significant reference is made to other key design aids and publications (e.g. Australian Steel Institute (ASI) Design Capacity Tables, etc.) for quick design calculations.
- Tips, shortcuts and design/fabrication economics are presented where possible.
- Useful links and references are provided to other Standards, websites, manufacturers and suppliers in the steel construction and related industries (no other similar hard-bound publication provides this consolidated information).
- As is normal practice, and in line with the typical precision of data used in structural design, all calculations and worked examples are generally done to *three* (3) significant figures—hence there may be some very minor numerical rounding when comparing calculated or listed values with those in other references.
- Linear interpolation of tables may generally be undertaken.

- The worked examples are for illustrative purposes and consequently some may depart from actual detail practice (e.g. bolt threads excluded from the shear plane, etc.).

It is with deep regret that we note the passing of the Handbook's first author Branko Gorenc in June 2011. Branko's legacy through his visionary structural steel designs and publications are well known and he will be truly missed.

Lastly, the authors gratefully acknowledge the support and assistance provided by the Handbook's publisher (UNSW Press), together with the valued inputs provided by Paul Uno (Cement and Concrete Services), Peter Russell (Sitzler), Tim Hogan (steel consultant), Australian Steel Institute (Margrit Colenbrander, Dr Peter Key), OneSteel and others who were kind enough to offer feedback. As always, the authors welcome further comments, observations and questions from readers in the interests of ongoing improvement.

May your steel designs be fruitful ones!

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