

# Civil Engineering Update

MAIN SELECTION

VOLUME 14 NUMBER 4

## Structural Steel Design

**LRFD Method**    **Second Edition**

by Jack C. McCormac

The design profession is gradually moving to the Load and Resistance Factor Design method from the Allowable Stress Design procedure. This trend is expected to continue and accelerate in the near future because LRFD provides a more realistic design procedure than ASD, and its use commonly results in more economical structures.

*Structural Steel Design: LRFD Method—Second Edition* gives you what you need to know to use this new method to develop safer, sturdier buildings.

*Structural Steel Design* enables practicing engineers who have been trained to use ASD to change easily to this new method for proportioning steel structures. The book comes with problem-solving software on a 3.5-inch disk. The software is tied to chapter exercises, allowing you to specify parameters for particular problems and have the computer assist you. On-screen information about how to use the software and the significance of various problem parameters is featured.

**Discover a more  
economical and  
realistic method for  
proportioning steel  
structures**



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## MAIN SELECTION

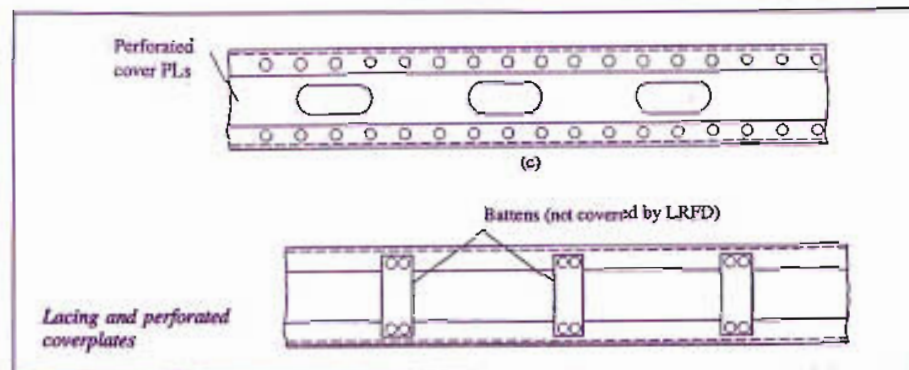
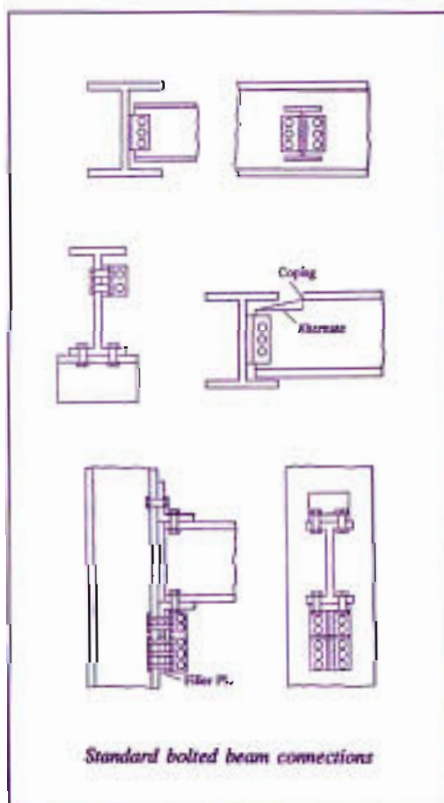
*Structural Steel Design: LRFD Method—Second Edition* features:

- Updated coverage that is consistent with the revised steel specifications of the LRFD. This makes the text more complete and accurate in its adherence to the most recent methodology in the field.
- A practical approach that simplifies complex concepts, allowing you to grasp the fundamentals of mechanics of materials and structural analysis for the study of the LRFD.
- A comprehensive, easy-to-follow examination of structural steel design. The book reviews the design of individual tension members, beams, beam columns, and connections.
- A more complete, systematic treatment of composite steel and concrete members, built-up steel beams including plate girders, and overall building designs.

### Updated to include LRFD specs

Jack C. McCormac's major objective in preparing this new edition was to update the text to conform to the 1993 LRFD Specification of the American Institute of Steel Construction (AISC). Many changes were made in the new LRFD Specification from the first, or 1986, specification. Of particular note are various changes in design stress values: information for the use of heavy rolled shapes, revised requirements for built-up sections, updated provisions for slender web girders, and others.

Perhaps the most obvious changes made by the AISC are those pertaining to the LRFD Manual, which is now published in two volumes. Volume II is wholly concerned with connections. Numerous improvements have been made in these manuals, perhaps the most useful being the improvement in the procedure for designing column base plates.



Many study problems in this book have been revised and their number substantially increased. The computer disk packaged with the book can be used to solve most of the rather common and mathematically tedious problems faced in structural steel design.

*Structural Steel Design* is the book you need to make sure your skills keep pace with advancing methods and technology.

### Contents

Introduction to Structural Steel Design • Specifications, Loads, and Methods of Design • Analysis of Tension Members • A Design of Tension Members • Introduction to Axially Loaded Compression Members • Design of Axially Loaded Compression Members • Design of Axially Loaded Compression Members Continued • Introduction to Beams • Design of Beams for Moments • Design of Beams—Miscellaneous Topics • Bending and Axial Force • Bolted Connections • Eccentrically Loaded Bolted Connections and Historical Notes on Rivets • Welded Connections • Building Connections • Composite Beams • Composite Columns • Built-up Beams, Built-up Wide-Flange Sections, and Plate Girders • Design of Steel Buildings • Appendices A-F • Glossary • Index.

- 714 pages
- Illustrated
- 6" x 9"
- Includes 3.5" disk
- Hardcover

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