

ALUMINUM DESIGN MANUAL 2015



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2015 Aluminum Design Manual

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FOREWORD

The *Aluminum Design Manual* includes an aluminum structural design specification and accompanying commentary, a supplemental design guide, material properties, properties of common shapes, design aid tables, illustrative design examples, and guidelines for aluminum sheet metal used in construction.

This edition of the *Aluminum Design Manual* is the product of the efforts of the Aluminum Association Engineering and Design Task Force, whose members are listed below.

The Aluminum Association Engineering and Design Task Force

Steve Sunday, Alcoa Inc., Chair
Tony Anderson, ITW Welding North America
Frank Armao, Lincoln Electric Co.
Tanya Dolby, Kawneer Company, Inc.
Randy Kissell, The TGB Partnership
George Olive, Enclos Corporation
Gerald Orrison, CST Covers
Teoman Peköz, Cornell University
Frank Shoup, Alcoa Inc.
Robert W. Walton, Consultant
Ronald D. Ziemian, Bucknell University
John Weritz, The Aluminum Association, Inc.

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Please check **www.aluminum.org** for postings of 2015 *Aluminum Design Manual* errata.

Aluminum Design Manual

PART I

Specification for Aluminum Structures



I

Specification for Aluminum Structures

FOREWORD

The first edition of the *Specification for Aluminum Structures* was published in November, 1967, followed by subsequent editions in 1971, 1976, 1982, 1986, 1994, 2000, 2005, 2010, and 2015. This 10th edition of the *Specification*, developed as a consensus document, includes new or revised provisions concerning

- material specifications (A.3.1)
- modulus of elasticity, compressive yield strength and shear ultimate strength (A.3.1)
- cast alloy strengths (A.3.3)
- effective net area (D.3.2)
- axial compression member buckling strength (E.2)
- alternative methods for determining column and beam elastic strengths (E.2, F.2.1.4)
- flexural strength (F.1, F.2, F.3, F.4)
- shear in webs supported on one edge (G.3)
- shear strengths of rods (G.5)
- shear and torsional strengths (G.1, H.2)
- welded connections (J.2)
- slip-critical connections (J.3.7)
- pins (J.6)
- fabrication of edges (M.2, M.4)
- contact with dissimilar materials (M.7)
- quality control and quality assurance (Chapter N)
- testing (Appendix 1)
- fatigue (Appendix 3)

The Aluminum Association gratefully acknowledges the efforts of the Engineering Advisory Committee in developing the *Specification*.

THE ALUMINUM ASSOCIATION ENGINEERING ADVISORY COMMITTEE

Steve Sunday, *Alcoa Inc., Chair*
Tony Anderson, *ITW Welding North America*
Frank Armao, *Lincoln Electric Co.*
Tanya Dolby, *Kawneer Company, Inc.*
Randy Kissell, *The TGB Partnership*
George Olive, *Enclos Corp.*
Gerald Orrison, *CST Covers*
Teoman Peköz, *Cornell University*
Frank Shoup, *Alcoa Inc.*
Robert W. Walton, *Consultant*
Ronald D. Ziemian, *Bucknell University*
John Weritz, *The Aluminum Association, Inc.*

Robert E. Abendroth, *Iowa State University*
Joseph Bowman, *Hapco American Flag*
Terence Cavanagh, *TJC and Associates, Inc.*
Karen C. Chou, *Northwestern University*
Cynthia Ebert, *Larson Engineering, Inc.*
Michael Feldberg, *Valmont Industries, Inc.*
Andrew J. Hinkle, *Wyle*
James LaBelle, *Computerized Structural Design*
LeRoy Lutz, *Computerized Structural Design*
Ken Walerius, *Permasteelisa North America*

I
Specification for Aluminum Structures

**GUIDELINES FOR THE PREPARATION OF TECHNICAL INQUIRIES
ON THE SPECIFICATION FOR ALUMINUM STRUCTURES**

Technical inquiries to obtain an interpretation or request a revision to the *Specification for Aluminum Structures* should be directed to:

Vice President, Standards and Technology
jweritz@aluminum.org
The Aluminum Association
1525 Wilson Blvd, Suite 600
Arlington, VA 22209
www.aluminum.org

Comments on other parts of the *Aluminum Design Manual* are also welcome.

Inquiries should include the inquirer's name, affiliation, and address. Each inquiry should address a single section of the *Specification* unless the inquiry involves two or more interrelated sections. The section and edition of the *Specification* should be identified.

Requests for interpretations should be phrased, where possible, to permit a "yes" or "no" answer and include the necessary background information, including figures where appropriate.

Requests for revisions should include proposed wording for the revision and technical justification.

Inquiries are considered at the first meeting of the Engineering and Design Task Force following receipt of the inquiry.

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Specification for Aluminum Structures

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