


**AWS D1.2/D1.2M:2003**  
**An American National Standard**



# **Structural Welding Code— Aluminum**



**American Welding Society**



**Key Words**—Aluminum plate, castings, cyclically loaded structures, inspection, qualification, structural details, statically loaded structures, structural shapes, stud welding, tubular structures

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# **Structural Welding Code—** **Aluminum**

**Fourth Edition**

**Supersedes ANSI/AWS D1.2-97**

Prepared by  
AWS D1 Committee on Structural Welding

Under the Direction of  
AWS Technical Activities Committee

Approved by  
AWS Board of Directors

## **Abstract**

This code covers the welding requirements for any type structure made from aluminum structural alloys, except for aluminum pressure vessels and fluid-carrying pipe lines. Sections 1 through 7 constitute a body of rules for the regulation of welding in aluminum construction. This edition has been reorganized extensively from the 1997 edition. A Commentary on the code is also included with the document.



**American Welding Society**

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# Structural Welding Code—Aluminum

## 1. General Requirements

### 1.1 Scope

This code contains the requirements for fabricating and erecting welded aluminum structures. When this code is stipulated in the contract documents, conformance with all provisions of the code shall be required, except those provisions that the Engineer or contract documents specifically modifies or specifically exempts.

**1.1.1 Limitations.** This code is not intended for specialized fabrication such as pressure vessels or pressure piping.

**1.1.2 Alternate Requirements.** Alternate requirements from those in this code shall be submitted to the Engineer for approval. These requirements shall be based on experience, experimental evidence, or engineering analyses, and shall consider materials, loads, and environment.

### 1.2 Approval

All references to the need for approval shall be interpreted to mean approval by the Building Commissioner or the Engineer. Hereinafter, the term *Engineer* shall be used, and is to be construed to mean the Building Commissioner or the Engineer.

### 1.3 Definitions

Welding terms used in this code shall be interpreted in conformance with the latest edition of AWS A3.0, *Standard Welding Terms and Definitions*.

### 1.4 Welding Symbols

Welding symbols shall conform to the latest edition of AWS A2.4, *Symbols for Welding, Brazing, and Non-*

*destructive Examination*. Special conditions shall be explained in notes or details.

### 1.5 Safety Precautions

**1.5.1** This code may involve hazardous materials, operations, and equipment. The code does not purport to address all of the safety problems associated with its use. It is the responsibility of the user to establish appropriate safety and health practices. The user should determine the applicability of any regulatory limitations prior to use.

**1.5.2** Safety precautions shall conform to the latest edition of ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society (see Annex I, Safe Practices).

### 1.6 Standard Units of Measure

This standard makes use of both U.S. Customary Units and the International System of Units (SI). The measurements may not be exact equivalents; therefore, each system shall be used independently of the other without combining in any way. The standard with the designation D1.2:2003 uses U.S. Customary Units. The standard with the designation D1.2M:2003 uses SI units. The latter are shown within brackets.

### 1.7 Reference Documents

Annex A contains a list of all documents referenced in this code.