

Foreword

This foreword is not a part of AWS D1.1/D1.1M:2006, *Structural Welding Code—Steel*, but is included for informational purposes only.

The first edition of the *Code for Fusion Welding and Gas Cutting in Building Construction* was published by the American Welding Society in 1928. The first bridge welding specification was published separately in 1936. The two documents were consolidated in 1972 into the D1.1 document but were once again separated in 1988 when the joint AASHTO/AWS D1.5, *Bridge Welding Code*, was published to address the specific requirements of State and Federal Transportation Departments. Coincident with this, the D1.1 code changed references of buildings and bridges to statically loaded and dynamically loaded structures, respectively, in order to make the document applicable to a broader range of structural configurations.

Underlined text in the subsections, tables, or figures indicates an editorial or technical change from the 2004 edition. A vertical line in the margin next to a figure drawing indicates a revision from the 2004 edition.

The following is a summary of the most significant technical revisions contained in D1.1/D1.1M:2006:

Section 2.3.1.4 and Table 2.1—Revised and clarified the requirements for the effective size of flare-groove welds.

Table 2.4, Case 4.1—A correction was made to base metal thickness.

Table 3.1 and Table 3.2—New prequalified steels were added to the table.

Figure 3.3—New prequalified joint for flare-V-groove welds was added.

Section 4.1.2.1 and C-4.1.2.1—Section was revised and commentary was added.

Section 4.18 and Table 4.9—Revisions were made to address qualification of welding operators for all positions.

Section 4.8.1—The visual inspection acceptance criteria for welding procedure and welder performance tests was revised to differentiate between fillet and groove weld tests.

Table 4.5—Changes were made to essential variables regarding constant voltage, constant current, voltage, heat input, travel speed, and mode of transfer.

Table 4.11—Table was revised to allow for qualification on pipe grooves less than 4 inches in diameter. A new figure was added.

Section 5.3.1.3—Requirement for dew point was referenced back to source standard.

Section 5.4.1—Limitation on the use of ESW and EGW was revised.

Sections 5.15.2 and 5.14.4—Section was revised to clarify use of plasma arc gouging.

Section 5.30—The allowable equipment used for interpass cleaning was clarified.

Sections 6.2, 6.3, and 6.5—Sections were reorganized to clarify inspector's duties. Sections 6.3.2, 6.5.2, and 6.5.3 were deleted; however, issues addressed in those sections are now addressed in 6.2 and 6.3.

Section 6, Part G—Entire section on advanced NDT techniques was reorganized and revised.

Table 6.2—Table was revised to clarify requirements.

Section 7.4.5—Spacing requirements for stud shear connectors was clarified.

Table 7.1—Type B stud diameter was added to Note b.

Annexes—Annexes were renumbered (see page 276).

Annex III—Content was moved to Section 4, Part D.

Annex IV—Annex on WPS Requirements was deleted.

Annex I, Table I.2—A new note was added to clarify table's intent.

Annex A—Content was moved to commentary, C-3.2.1.

Annex M—Annex on code approved base metals was moved into Section 4 of the code.

Section C-4.7—New commentary was added to this section.

AWS B4.0, *Standard Methods for Mechanical Testing of Welds*, provides additional details of test specimen preparation and details of test fixture construction.

Commentary. The Commentary is nonmandatory and is intended only to provide insightful information into provision rationale.

Normative Annexes. These annexes address specific subjects in the code and their requirements are mandatory requirements that supplement the code provisions.

Informative Annexes. These annexes are not code requirements but are provided to clarify code provisions by showing examples, providing information, or suggesting alternative good practices.

Index. As in previous codes, the entries in the Index are referred to by subsection number rather than by page number. This should enable the user of the Index to locate a particular item of interest in minimum time.

Errata. It is the Structural Welding Committee's Policy that all errata should be made available to users of the code. Therefore, in the Society News Section of the *AWS Welding Journal*, any errata (major changes) that have been noted will be published in the July and November issues of the *Welding Journal* and posted on the AWS web site at: <http://www.aws.org/technical/d1/>.

Suggestions. Your comments for improving AWS D1.1/D1.1M:2006, *Structural Welding Code—Steel* are welcome. Submit comments to the Managing Director, Technical Services Division, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126; telephone (305) 443-9353; fax (305) 443-5951; e-mail info@aws.org; or via the AWS web site <<http://www.aws.org>>.

Interpretations. Official interpretations of any of the technical requirements of this standard may only be obtained by sending a request, in writing, to the Managing Director, Technical Services, American Welding Society. A formal reply will be issued after it has been reviewed by the appropriate personnel following established procedures (see Annex O).