



AWS D1.1 Interpretation

Subject: Code Thickness Limitations
Code Edition: D1.1-79
Code Provision: Subsection 1.2.2
AWS Log: D1-85-017(1)

Inquiry: What is the meaning of the thickness limitation provisions of 1.2.2 in AWS D1.1-79 (1.2.3 in AWS D1.1-83 through D1.1-94 editions)?

Response:

- (1) When the thickness of the material is over 0.18 in., the rules of AWS D1.1 apply.
- (2) When the thickness of the material is between 1/8 and 0.18 in., either AWS D1.1 or AWS D1.3 apply, as applicable.
- (3) When the thickness of the material is less than 1/8 in., the rules of AWS D1.3 should apply.
- (4) When welding a material less than 1/8 in. thick to a material more than 0.18 in. thick, the rules of AWS D1.3 should apply, but they are to be supplemented by the provisions of AWS D1.1 (e.g. adequate preheat, low hydrogen electrode, etc.).

AWS D1.1, Structural Welding Code—Steel, is prepared by the AWS Structural Welding Committee. Because the Code is written in the form of a specification, it cannot present background material or discuss the committee's intent.

Since the publication of the first edition of the Code, the nature of inquiries directed to the American Welding Society and the Structural Welding Committee has indicated that there are some requirements in the Code that are either difficult to understand or not sufficiently specific, and other that appear to be overly conservative.

It should be recognized that the fundamental premise of the Code is to provide general stipulations applicable to any situation and to leave sufficient latitude for the exercise of engineering judgment. Another point to be recognized is that the Code represents the collective experience of the committee; and, while some provisions may seem overly conservative, they have been based on sound engineering practice.