American Welding Society®

AWS A2.4 Interpretation

Subject: Complete Joint Penetration
Document: A2.4, *Standard Symbols for Welding, Brazing, and Nondestructive Examination*
Edition: 2012
Provision: 7.2.2

Inquiry:

Purpose:

Request the revision of complete joint penetration weld symbols illustrations and definition.

Content:

Current illustrations and definition of complete joint penetration weld symbols are inconsistent with the prequalified joints found in the AWS D1 series code books.

Proposed reply:

1. Add the following to clause 7.2.2, "Groove welds with back weld, backing bar, back gouge or melt through are complete joint penetration. Groove welds without back weld, backing bar, back gouge or melt through are partial joint penetration, regardless of the depth of groove."
2. Add a tail and the word "back gouge" to the symbol in Figure 12 (D).
3. Add a backing bar to the symbol in Figure 12 (E).

Response:

Per subclause 7.2.2 (Complete Joint Penetration), AWS A2.4 symbols defines and illustrates complete joint penetration as a groove weld that extends through the thickness of the joint, i.e., the faying surfaces of the weld joint are completely fused. The presence or lack of backing, back welding, or reinforcement is independent of the definition of a weld that extends through the thickness of the joint.

While the correspondence has merit, weld joint requirements do not fall within the scope of AWS A2.4. The symbols in this publication are intended to be used to facilitate communication among the design, fabrication, and inspection communities. AWS A2.4 communicates that a dimensionless groove welding symbol requires that the weld extend through the thickness of the joint. No changes will be made to the standard.