



AWS D1.1 Interpretation

Subject: Fillet Weld Procedure Qualification
Code Edition: D1.1:2002
Code Provision: Table 4.4 and Table 4.5
AWS Log: D1.1-02-I04

Inquiry: We have had a running question regarding the application of Table 4.5, Essential Variable 16), and the application of Note 3.
When the procedure qualified is only used as a single pass weld, does the code permit the qualification of the WPS described in Table 4.4 - Plate T-test, "Single pass, maximum size to be used in production" without qualification of the "Multiple pass, minimum size to be used in construction" and subsequently using Table 4.5, Essential Variable 16), Note 3 to determine the WPS travel speeds for smaller size fillets by increasing the travel speed while maintaining the PQR wire feed speed?

Response: (1) Yes, qualification of a single pass, maximum size fillet weld to be used in construction may be performed without performing the multiple pass, minimum size fillet weld to be used in construction qualification that is shown in Table 4.4.
(2) Yes, for the same PQR wire feed speed (as permitted in Note 3 of Table 4.5), smaller single pass fillet welds may be performed by increasing travel speed as restricted by Essential Variable 16.

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.