



AWS D17.1 Interpretation

Subject: Qualified Thickness Range
Code Edition: D17.1:2001
Code Provision: Paragraph 4.3.3.1
AWS Log: D17.1-01-I04

Inquiry: Paragraph 4.3.3.1 (1) defines the qualified thickness range based on a test weld thickness of t . It also defines that 2 test welds qualify welds with intermediate thickness.

It is however unclear on the qualification range when 2 unequal thicknesses are used in a fillet test weld. This can be interpreted in several different ways. Take the following for example:

- a.) $0.67t$ of thinner member to $4t$ of the thicker member
- b.) $0.67t$ to $4t$ of the thinner member
- c.) Range of thinner member to thicker member thicknesses

Proposed Reply

Define qualified thickness range if un-equal thickness members are used in fillet weld tests for welder qualifications.

Response: The answer is $0.67t$ to $4t$ of the thinner member.

AWS D17.1:2001, *Specification for Fusion Welding for Aerospace Applications*, is prepared by the AWS Welding in the Aircraft and Aerospace Industry Committee. Because AWS D17.1:2001 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 AWS D17.1:2001, the nature of inquiries directed to the American Welding Society and the Aircraft and Aerospace Committee has indicated that there are some requirements in AWS D17.1:2001 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 AWS D17.1:2001 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 AWS D17.1:2001 represents the collective experience of the committee; and, while some provisions may seem overly conservative, they have been based on sound engineering practice.