



AWS D1.1 Interpretation

Subject: Flux electrode classification essential variable
Code Edition: 1998
Code Provision: Table 4.5
AWS Log: D1.1-98-I01

Inquiry:

- 1) Since the original flux-electrode class no longer exists (for the flux/wire combination under consideration), is it reasonable to presume that during the process of updating the original WPS/PQR, it would be acceptable to revise the old class F7A6-EG-G to F7A6-EM14K?
- 2) The F7A6-EM14K class used for WPS qualification also qualifies the WPS for the use of filler metals possessing lower strength levels, i.e., F7A6-EM14K also qualifies: F7A4-EXXX, F6A2-EXXX, F6A2-EXXX.... The use of the lower classifications, depending on the flux manufacturer's recommendation may result in the use of a differing wire class, such as EM13K or EM12K. Is it reasonable to assume that these wires can be used without requiring requalification of the WPS?

Response:

- 1) Yes, the electrode designation or electrode/flux designation on the WPS may be changed, providing that there has been no other change in the electrode/flux designation other than the electrode classification. The filler metal manufacturer and manufacturer's trade name(s) must be unchanged.
- 2) No, a change in electrode classification other than a decrease in tensile strength requires requalification.

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.