

AWS D1.3 (Structural Welding Code-Sheet Steel)

Quick Review on Essential Variables

1-Guide (Position)

AWS D1.3, Table 6.1 WPS Qualification Tests:

Note 1: Each test position qualifies only the same position, **except** that test on fillet welds or flare-bevel-groove welds in horizontal position (H) qualify welding for both F and H

Note 2: Two tests shall be required for each welding position, thickness, and type of coating.

2-Guide (Thickness of Base Metal Range)

AWS D1.3, Table 6.2 A change in sheet steel thickness listed below are essential variables:

-Arc spot weld or arc seam welds only: A change in base metal thickness of sheet steel by more than 10% needs re-qualification. **Except arc spot weld or arc seam weld:**

-Qualified sheet steel thickness range of 0.5t Min. 2t Max., where t is the thickness of the thinner sheet steel qualified.

As an alternative, the following qualification tests, a) and b), cover all range of sheet steel thicknesses.

a) A qualification weld performed on 18 gage sheet steel shall provide qualification for that WPS for sheet steel 16 gage and thinner.

b) A qualification weld performed on 10 gage sheet steel or thicker shall provide qualification for that WPS for sheet steel as thin as 16 gage and thicker, up to 2t thickness, where t is the thickness of the thinner sheet steel qualified.

3-Guide (Filler Metal Selection)

AWS D1.3, Table 6.2 A change in the classification of electrode, diameter of the electrode, type of welding current or polarity are essential variables.

(See **AWS D1.3, Table 6.2** for more essential variables)