AWS D1-Series References to WPS for Plug and Slot Welds

AWS D1.1:

There are provisions of Prequalified WPS's for Plug and Slot Welds in this code.

4.4.5 Plug and Slot Welds: Diameter and Width Limitations, Slot Length and Shape, Effective Area of Plug and Slot Welds, and Depth of Filling

4.10 Joint Configuration and Details-Plug and Slot Welds: Minimum Spacing, Prequalified Dimensions, and Prohibition in Quenched and Tempered Steels.

Note: 4.10.3 Prequalified Dimensions: Dimensions for prequalified plug and slot welds are described in **4.4.5** and **5.4.4**

5.4.4 Plug and Slot Weld Requirements: SMAW, GMAW (except GMAW-S), or FCAW processes are described in **4.4.5.1, 4.4.5.2**, **4.4.5.4** and **4.10** may be used without performing qualification tests described in **Clause 6**, provided the technique provisions of **7.24** are met.

C-5.4.4: Plug and slot welds conforming to the dimensional requirements of **4.5**, welded by techniques described in **7.24** and using materials listed in **Table 5.3** or **Table 6.9** are considered prequalified and may be used without performing joint WPS qualification tests.

7.24: Technique for Plug and Slot Welds for Flat, Vertical or Overhead Position

To Test Plug and Slot Welds:

6.14 Plug and Slot Welds for Tubular and Nontubular Connections: When plug and slot welds are specified, WPS qualification shall be in conformance with **6.22.3**

6.22.3 Plug and Slot Welds for Tubular and Nontubular Connections: Qualification for CJP groove welds on tubular or non-tubular connection shall qualify for all plug and slot welds.

See **Table 6.10** for plug and slot weld qualification only (test joint detail is shown in **Figure 6.26**).

Note g of **Table 6.10** [Non-Tubular] and Note **e** of **Table 10.12** [Tubular]: Groove weld qualification (Plate or Pipe or Box tube) shall qualify plug and slot welds for the test position indicated.

AWS D1-Series References to WPS for Plug and Slot Welds

AWS D1.2:

No details for testing are available in this code.

2.6 Plug and Slot Welds (Depth of Filling, Diameter, Space, Length, Width)

Table 2.1 Minimum Diameter of Hole for Plug Welds or Width of Slot for Slot Welds

C-2.6 Plug and Slot Welds Technique for Flat, Vertical or Overhead Position

3.15.3 Qualification of any groove weld (CJP, PJP) or fillet weld procedure, qualifies any WPS for making plug and slot welds.

3.17.6 Welders qualified to make groove or fillet welds shall also be qualified to make any plug or slot welds.

AWS D1.3:

Details for Arc Plug Weld, Arc Seam Weld, and Arc Spot Weld are available in this code.

AWS D1.5:

There are provisions of Prequalified WPS's for Plug and Slot Welds in this code.

4.9 Details of Plug and Slot Welds (Diameter, Space, Length, Depth of filling)

4.9.1.1 Plug and slot welds may be used without performing the WPS qualification described in **7.7.5**, provided the technique provisions of **6.23**, **6.24**, and **6.25**, as applicable, are met.

4.23, 4.24, 4.25 (Part G): Plug and Slot Welds Technique for Flat, Vertical or Overhead Position

To Test Plug Welds:

7.23.1.5 Plug Weld Qualification Tests for Plug Welds Only (See detail of weld joint on **Figure 7.23**)

AWS D1-Series References to WPS for Plug and Slot Welds

AWS D1.6:

No details for testing are available in this code.

There are provisions of Prequalified WPS's for Plug and Slot Welds in this code.

4.5 Plug and Slot Welds (Depth of Filling, Diameter, Space, Length, Width)

5.9 Plug and Slot Weld Requirements (for purpose of prequalified WPSs)

5.9.1 The details of prequalified plug and slot welds made by SMAW, GMAW, GTAW, and FCAW welding processes are listed in **4.5.3**, and **4.5.4**, and may be used without performing the WPS qualification tests prescribed in **Clause 6**, provided the technique provisions of **7.16** are met.

6.7.1 CJP Groove Weld Qualification shall also qualify PJP groove, plug and slot, and fillet welds, when the test and requirements of **6.7.1.1** (**Table 6.3A**) are met.

6.7.2 PJP Groove Weld Qualification shall also qualify all plug and slot, and fillet welds, when the test and requirements of **6.7.2.1** (**Table 6.3A**) are met.

7.16 Techniques for Plug and Slot Welds: When using SMAW, GMAW, GTAW or FCAW process, the techniques for Plug and Slot Welds in Flat, Overhead, and Vertical Positions are described in this Clause (for purpose of prequalified WPSs).

AWS D9.1:

No details for testing are available in this code.

5.2.2 Qualification of Complete Groove Weld (CJP), as shown in Annex G, shall also qualify any groove, fillet, plug or slot welds.

5.2.3 Qualification testing using the butt joint groove welds in **Figure 1** shall qualify all groove, fillet, plug or slot weld joint types.

8.3 Reinforcement of Plug and Slot Welds: The surface of plug and slot welds shall be at least flush with the surrounding base metal.

8.6.1 Undercut of Plug and Slot Welds: Undercut shall not exceed 0.15T

AWS D1-Series References to WPS for Plug and Slot Welds

AWS D17.1:

No details for testing of procedure qualification for plug or slot welds are available in this code.

The only data available in this code in regards to Plug or Slot is for performance qualification (**Clause 5.4.5**: Base Metal Form and Weld Type).

AWS B2.1:

No any data for Plug and Slot Weld is available in this code.