

## Conditions for Use of AWS D1.1 Section 5 Prequalified Welding Procedures

### **SCOPE**

Prequalified AWS D1.1 welding procedures are not permitted for construction where impact testing of the WPS is required by the construction code.

Prequalified AWS D1.1 welding procedures may require client / project approval prior to use.

### **USE OF PREQUALIFIED PROCEDURES**

The manufacturer or contractor shall be responsible for application of this prequalified AWS D1.1 welding procedure and comply with the following requirements prior to use in production:

- a) Enter name of the manufacturer or contractor on the prequalified AWS D1.1 welding procedure.
- b) An employee of that manufacturer or contractor shall sign and date the AWS D1.1 welding procedure.
- c) Welders employed by the manufacturer / contractor shall be qualified in accordance with [AWS D1.1 Section 6 Part C](#).

### **LIMITATIONS OF PREQUALIFIED PROCEDURES**

- a) Any change from the stated prequalified variables or nominated equipment shall require qualification in accordance with [AWS D1.1 Section 6](#).
- b) Where impact testing of welding procedures is required, the use of prequalified AWS D1.1 welding procedure is prohibited.
- c) Only materials listed within [AWS D1.1 Section 5 Table 5.3](#) may be welded. Unlisted steels shall require qualification in accordance with [AWS D1.1 Section 6](#).
- d) Where PWHT is applied in production, data shall be available verifying the welding consumable used demonstrates acceptable strength and ductility in the PWHT condition, in accordance with [AWS D1.1 Clause 5.9](#). Reference to AWS consumable certification shall be made. If unavailable, the prequalified AWS D1.1 welding procedure shall be qualified in accordance with [AWS D1.1 Section 6](#).

### **OTHER PREQUALIFIED PROCEDURE RESTRICTIONS**

- a) The manufacturer or contractor may not deviate from the welding conditions specified on the prequalified AWS D1.1 welding procedure.
- b) Prequalified AWS D1.1 welding procedures may not be supplemented with PQRs or revised in any manner.
- c) Multiple prequalified AWS D1.1 welding procedures shall not be used in the same production joint.
- d) Prequalified AWS D1.1 welding procedures may be used in combination with a welding procedure qualified to [AWS D1.1 Section 6](#), provided the limitation of essential variables applicable to each welding process is observed.
- e) Weld bead depth shall not exceed the width at the surface for each individual pass. See [AWS D1.1 Figure 5.6](#).
- f) Complete penetration joint (CJP) butt welds shall be welded from both sides or use permanent steel backing.

### **CONSUMABLES**

- a) Consumables may require special conditioning, storage and handling prior to and during production to ensure AWS hydrogen status classification is maintained.
- b) See [ASME II Part C Annex A Table A3](#) for guides on consumable treatments.
- c) Use manufacturer recommendations for consumable conditioning if those recommendations differ from that detailed in [ASME II Part C Annex A Table A3](#).

### **GUIDELINES**

- a) The user shall consider all AWS D1.1 design requirements where restrictions may apply in particular to joint design and WPS application (see [AWS D1.1 Section 4 - Design of Welded Connections](#)).
- b) The user shall consider factors affecting the preheat temperature which may include carbon equivalent value, combined joint thickness and restraint conditions.
- c) The user needs a significant knowledge of welding and accepts full responsibility for the performance of the weld and for providing the engineering capability, qualified personnel and proper equipment to implement Prequalified AWS D1.1 welding procedures.
- d) The user shall consider applicability or relevance of health and safety regulatory limitations / precautions prior to use.