

The Official Book of D1.1 Interpretations

**A Collection of
Responses to Formal
Inquiries about the
Requirements of AWS
D1.1 (1976–2008)**



American Welding Society



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THE OFFICIAL BOOK of D1.1 INTERPRETATIONS

Second Edition, 2008

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NOTE: This Publication contains interpretations of AWS D1.1, Structural Welding Code—Steel, by the AWS D1 Committee. The interpretations contained herein are the results of balloted responses to submitted inquiries approved by the D1 Structural Welding Committee, made for specific Code editions. The concept of assembling D1 Committee inquiry responses into one convenient source came forward from the AWS Product Development Committee in 1995.

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INTRODUCTION

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 others 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 judgement. 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.

The format of this document presents Code interpretations grouped according to the Code date. Individual inquiries for the specific issue date of the Code are arranged by the applicable section number within the Code. To assist the reader, an index is provided that is compiled by subject matter, and a second index is provided that supplies the various section numbers referenced in the document in numerical order, regardless of Code date.

Readers are reminded that the basic format of the Code was reorganized extensively in the 1996 edition. Therefore, the provision numbers of the interpretations included herein in most cases will not be similar to the provision numbers of editions for 1996 or later.

This is the second edition of this document, and it is the intent of the Society to provide an updated version of this publication on a frequent schedule. The first edition of this document was published in 2000.

Recent official interpretations of AWS D1.1 technical requirements are published regularly in the July and November issues of the *Welding Journal*. Original requests for official interpretation of any Code requirement shall be submitted in writing to the Managing Director of Technical Services, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

D1.1-76

Subject: Essential Variables
Code Edition: D1.1-76
Code Provision: Subsection 5.5
AWS Log: D1-86-011

Inquiry: In procedure qualification, does the Code permit the use of several different variations of current, voltage, travel speeds, or wire feed speeds during the course of the qualifications?

Response: Yes, provided that the variables used during qualification are recorded on a form similar to Appendix E, Form E-2, Welding Qualification Test Record.

D1.1-79

Subject: Code Thickness Limitations
Code Edition: D1.1-79
Code Provision: Subsection 1.2.2
AWS Log: D1-85-017(1)

Inquiry: What is the meaning of the thickness limitation provisions of 1.2.2 in AWS D1.1-79 (1.2.3 in AWS D1.1-83 through D1.1-94 editions)?

- Response:**
- (1) When the thickness of the material is over 0.18 in., the rules of AWS D1.1 apply.
 - (2) When the thickness of the material is between 1/8 and 0.18 in., either AWS D1.1 or AWS D1.3 apply, as applicable.
 - (3) When the thickness of the material is less than 1/8 in., the rules of AWS D1.3 should apply.
 - (4) When welding a material less than 1/8 in. thick to a material more than 0.18 in. thick, the rules of AWS D1.3 should apply, but they are to be supplemented by the provisions of AWS D1.1 (e.g., adequate preheat, low hydrogen electrode, etc.).

Subject: Code Thickness Limitations for Performance and WPS Qualification
Code Edition: D1.1-79
Code Provision: Subsection 1.2.2
AWS Log: D1-85-017(2)

Inquiry: May a fabricator qualify welding procedures and welders for flare-bevel-groove welds and fillet welds on material having thickness less than 1/8 in. in accordance with the provisions of AWS D1.1?

Response: No. The provisions of AWS D1.1 are not intended to apply to the welding of base metals having a thickness less than 1/8 in.

Subject: Prequalified Skewed T-Joints
Code Edition: D1.1-79
Code Provision: Subsection 2.7.4, Figure 2.7.1
AWS Log: D1-85-026

Inquiry: Are welds made in skewed T-joints, (e.g., Figure 2.7.1), where the groove angle is less than 60°, accorded prequalified status?

Response: Yes. Welds made in skewed T-joints, where the groove angle is less than 60°, are accorded prequalified status provided that the welds are made with a prequalified joint welding procedure in accordance with 5.1.1 and the welder is qualified for groove welding.

Subject: Inspector Responsibilities
Code Edition: D1.1-79
Code Provision: Subsections 6.5.4, 6.5.5
AWS Log: D1-84-010

Inquiry:

- (1) Does 6.5.5 require that all welding related activities listed in Section 3, including preparation of base metal and assembly, [have] 100% documentation of inspection by the Inspector?
- (2) Is the inspector required to systematically verify that the criteria in Section 3 are met by random checks to assure compliance with the workmanship requirements?

Response:

- (1) No.
- (2) Yes. 6.5.4 and 6.5.5 require observation of the work at suitable intervals to verify that applicable requirements of Section 4 and Section 3, respectively, are met.

D1.1-80

Subject: Web Flatness Tolerances
Code Edition: D1.1-80
Code Provision: Subsections 3.5, 9.23
AWS Log: D1-85-024

Inquiry: What tolerances should be used for the flatness of the panel between the bearing stiffener and the end of the web?

Response: These dimensional tolerances are not addressed by AWS D1.1 except in 8.13.3 and 9.23.3 when end panels are connected to other girders by bolted splices. Agreement between the contractor and the owner should be in accordance with 3.5.1.13.

D1.1-81

Subject: Mill Scale on Flange Surfaces
Code Edition: D1.1-81
Code Provision: Subsection 3.2.1
AWS Log: D1-85-021

Inquiry: Is the flange surface directly under the web considered to be a weld surface requiring all mill scale to be removed?

Response: Yes.

Subject: Prequalified WPS Requirements
Code Edition: D1.1-81
Code Provision: Subsection 5.1.1 and Appendix E
AWS Log: D1-84-014(5)

Inquiry: Why does 5.1.1 not specifically state the required information to be presented on Form E-1 for prequalified joint welding procedures, and reference at least one qualified procedure with a history of satisfactory performance?

Response: Table E-1 lists the mandatory Code requirements for prequalified joint welding procedures; listing in 5.1.1 would be awkward and redundant.

Subject: Welding Personnel Qualification Responsibility
Code Edition: D1.1-81
Code Provision: Subsection 5.3
AWS Log: D1-84-014(7)

Inquiry: Who should actively participate in the qualification of welders and welding operators?

Response: It is clearly the responsibility of the contractor, although the actual mechanism of qualification varies with the individual organization.

Subject: Witness of Tests
Code Edition: D1.1-81
Code Provision: Subsections 5.13, 5.31
AWS Log: D1-84-014(1)

Inquiry: Does 5.13 and 5.31 require the contractor to witness all tests and record all data on suggested forms in Appendix E?

Response: Yes.

Subject: Performance Qualification WPS
Code Edition: D1.1-81
Code Provision: Subsections 5.25, 5.36
AWS Log: D1-84-014(2)

Inquiry: Do qualification provisions in 5.25 and 5.36 require a welder or welding operator to follow a qualified or a prequalified joint procedure specification?

Response: Yes. Either a qualified or prequalified procedure specification is acceptable.

Subject: Performance Qualification RT/Bend Requirements
Code Edition: D1.1-81
Code Provision: Subsections 5.26, 5.37
AWS Log: D1-84-014(4)

Inquiry: Why are not both radiographic testing and mechanical testing required for welder or welding operator qualification in 5.26 and 5.37?

Response: In the Committee's opinion, either radiography or mechanical bend tests are acceptable for determining the soundness of the weld.

Subject: Evidence of Qualification
Code Edition: D1.1-81
Code Provision: Subsection 5.29
AWS Log: D1-84-014(3)

Inquiry: What constitutes evidence; what are the specific time intervals; and what degree of further training or practice must be established before a retest is valid in 5.29?

Response: The contractor must determine the individual requirements.

Subject: Ultrasonic Inspection
Code Edition: D1.1-81
Code Provision: Section 6, Part C
AWS Log: D1-SUT

Inquiry: (1) One of the questions concerns the evaluation of discontinuities once they have been located by one of the scanning methods specified in Table 6.19.5.2, Page 117 and 118 of the 1980 Edition. The method numbers are derived from the procedure chart, based upon the type of joint and material thickness. The number in the left side of the box refers you to the procedure legend,

which specifies the angles that will be used to scan the various weld areas. In the procedure chart, the only way you get to the right side of the box under the asterisk, is when a fusion zone discontinuity is suspected. In the case of a T-joint in 2 in.-thick material, the procedure chart refers you to “F” or “XF” for further evaluation of a suspected fusion zone discontinuity. Paragraph F reads as follows:

Further evaluate fusion zone indications, with either 70°, 60°, or 45° search unit, whichever sound path is nearest to being perpendicular to the suspected fusion surface.

“X” Check From Face “C”

In the type joints in question, face “C” always has a continuity plate shop-welded between flanges, thereby nullifying examinations from face “C.”

We interpret this to mean that if the indication being evaluated is suspected of being in the vertical member fusion zone, we would use a 70° search unit to evaluate the severity of the discontinuity regardless of its elevation in the weld throat. Further, if the indication found is suspected to be in the horizontal member fusion zone (i.e., flange bevel), an angle which most nearly intersects the fusion zone perpendicularly would be used for evaluation. For example, if the fusion zone bevel is 30°, you should use a 60° search unit along the entire 30° bevel. If the fusion zone bevel is 45°, you should use a 45° search unit along the entire 45° bevel.

Question: Are you limited to making evaluation of a discontinuity from face “A” only, or can you evaluate from face “B”?

- (2) In the past, we have evaluated discontinuities from whichever face (A or B), that allowed us to perform the evaluation in Leg 1. We use a search unit whose sound path angle is nearest to being perpendicular to the largest plane of the discontinuity for further evaluation.

Question: Are you limited to using only the angles specified in the procedure legend for the upper, middle, and bottom portions of the weld, when evaluating a discontinuity?

- (3) Another question which has been raised concerns discontinuity indications which are not in the vertical column fusion zone or in the horizontal member fusion zone bevel. Indications of discontinuities may occur anywhere in the weld area and may be indicative of slag inclusions, cracks, or lack of fusion between individual weld beads or layers. It has been our practice to evaluate these indications with a 70°, 60°, or 45° search unit to determine at what angle the largest reflecting surface of the indications is perpendicular to. Then, an accept or reject evaluation is made using the attenuation formula and the appropriate severity level from Table 8.15.3 for the angle used.

We have been challenged relative to our ultrasonic examinations, as questioned and exemplified above, due to the fact that the Code does not state specifically that examinations may be conducted in these manners. It has been suggested that the intent of the Code was to evaluate only flaws in the fusion zone, as these are the only flaws of interest.... We feel it is evident that the Code procedure chart does not cover all situations as evidenced by paragraph 6.13.2 under Part C.

Question: Do we ignore flaws other than fusion zone flaws, which exceed the critical limits of Table 8.15.3? Also, should we not try to make the evaluation in Leg 1 where possible and should we not also use whatever angle most nearly intersects the largest plane of the flaw perpendicularly?

Response:

- 1) It is correct to interpret that flaws in the vertical member fusion zone be evaluated with a 70° search unit, and that flaws in the horizontal member fusion zone be evaluated with either a 45°, 60°, or 70° search unit angle using the search unit that produces a sound beam most nearly normal to the intersecting fusion zone. The evaluation should be made from Face A only. It is the intent of the Code that other faces be used only where the full volume of weld cannot be tested from Face A, except as required by the Procedure Legend on Page 121 and 6.19.5.

- (2) For discontinuities in the weld, only the angles listed in Table 6.19.5.2 are to be used. It is the intent of the Code that all T-joints be tested from one face only; Legs II and III are to be used when necessary to achieve full coverage (see Table 6.19.5.2, Notes 3, 4, and 5). It is not the intent of the Code that such discontinuities be calculated with search unit angle selected to maximize the amplitude responses.
- (3) It is not the intent of the Code that any flaw be ignored. It is the intent of the Code that flaws in the weld metal and heat-affected zone be evaluated to the weld criteria. As stated in the response above, it is not the intent of the Code that discontinuities be evaluated by selecting an angle based on discontinuity reflected characteristics. While searching at scanning level with angle(s) selected as prescribed in the first column of Table 6.19.5.2, it is the intent of the Code that fusion zone(s) be further evaluated. Either a 70°, 60°, or 45° transducer—whichever sound path is nearest to being normal to the vertical face of the column or the bevel surface of the beam—shall be used for evaluation.

Subject: Qualification Supervision
Code Edition: D1.1-81
Code Provision: Subsection 6.4.1
AWS Log: D1-84-014(6)

Inquiry: Does the Code require individuals, observing qualifications, to be qualified to supervise qualification?
Response: No.

Subject: Minimum Requirements
Code Edition: D1.1-81
Code Provision: Appendix E
AWS Log: D1-84-014(8)

Inquiry: Are the mandatory requirements for test record data, as presented on Appendix E forms to be completed, a minimum requirement?
Response: Yes.

D1.1-82

Subject: Reentrant Corners
Code Edition: D1.1-82
Code Provision: Subsection 3.2.4
AWS Log: D1-84-016

Inquiry:

- (1) What is the definition of reentrant corners as used in 3.2.4 of AWS D1.1?
- (2) Is it readily deducible by a user of D1.1 that 3.2.4 applies in general to welded joints at intersections between members?
- (3) In the specific case illustrated in the attached sketch, does D1.1 automatically require a 3/4 in. or any certain radius at intersections between the flanges, as are shown in the sketch?
- (4) If the designer requires a specified minimum radius at intersections between members, should it be detailed clearly in design drawings or specifications?

- Response:**
- (1) Reentrant corners are defined in *Webster's New Collegiate Dictionary* and in *Webster's Third International Dictionary*. (See also *AISC Manual of Steel Construction*, 8th Edition, Page 4-167.)
 - (2) No.
 - (3) No. (Sketch does not illustrate a "reentrant corner.")
 - (4) Yes.

Attachment to D1-84-016

Typical Girder/Beam

Flange-to-flange welds are complete penetration, all others are fillets.

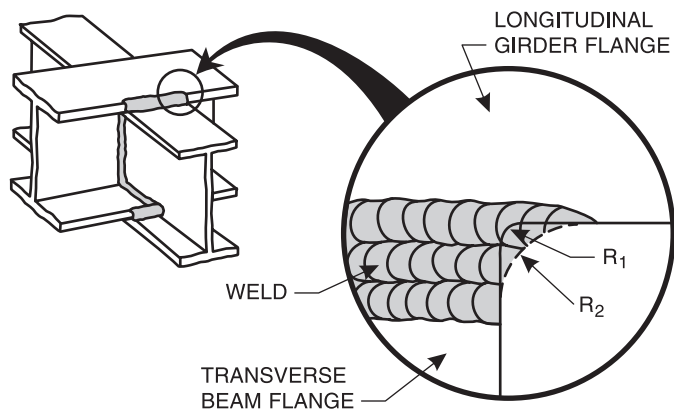
Girder flanges are 1 in. thick, beam flanges are 1 in. or 1/2 in.

Typical Flange Intersection Detail in Plan View

True Scale

F_1 = Unspecified normal good workmanship radius governed by the radius of the grinding wheels used.

R_2 = 3/4 in. radius directed by our customer.



Subject: WPS Qualification Tables
Code Edition: D1.1-82, D1.1-90
Code Provision: Tables 5.10.5 and 5.4
AWS Log: ID1-90-021-03

- Inquiry:**
- (1) Do AWS D1.1-82, Table 5.10.5 and D1.1-90, Table 5.4, have text stating that groove weld testing on plate will also qualify for fillet?
 - (2) Will a pipe groove 6GR procedure qualification test qualify for complete and partial penetration groove (butt and T) joints and fillets on plates?

- Response:**
- (1) No. Information contained in tables need not have supporting text. Provisions stated in tables of the Code are as equally binding as textual material.
 - (2) Yes. See Table 5.4 of D1.1-90 and applicable footnotes for joints qualified.

Subject: Welding of Nuts
Code Edition: D1.1-82
Code Provision: Subsections 5.16.1, 5.24, 10.2
AWS Log: D1-85-023

- Inquiry:** May welding procedures and welders be qualified for the purpose of welding an ASTM A563 nut to a structural member?

Response: AWS D1.1 does not cover the application of welding a nut to a structural member.

D1.1-83

Subject: Root Openings
Code Edition: D1.1-83
Code Provision: Figure 2.10.2
AWS Log: D1-85-012

Inquiry: Since zero root openings have a tendency to crack, should Figure 2.10.2 be revised to remove zero as an allowable fit-up condition?

Response: No. Figures 2.9.1 and 2.10.2 are recommendations only. A zero opening is a possible fit-up condition.

Subject: Welder/Welding Operator Qualification
Code Edition: D1.1-83
Code Provision: Section 5, Part D
AWS Log: D1-84-013

Inquiry: (1) Does qualification as a welder under Part C, Section 5, qualify the welder as a welding operator under Part D, Section 5?
 (2) Under what condition, if any, does a welder qualified in accordance with Part C, Section 5, [also] qualify as a welding operator in accordance with Part D, Section 5?

Response: (1) No.
 (2) None.

Note: For AWS D1.1-85, the Committee has approved provisions for a welder under certain specified conditions to be qualified as a welding operator.

Subject: Fillet Welder Qualification
Code Edition: D1.1-83
Code Provision: Subsections 5.10.3, 5.17.1.2
AWS Log: D1-85-022

Inquiry: May a welder who has successfully performed a procedure qualification test for fillet welds using a fillet weld test plate qualify as a welder for fillets welds only?

Response: No. The performance qualification requirements for fillet welds are different from the procedure qualification requirements for fillet welds.

Subject: NDT Operator Responsibilities
Code Edition: D1.1-83
Code Provision: Subsection 6.7.7
AWS Log: D1-84-011

Inquiry: Should the phrase "...working under..." be interpreted as follows:

- (1) Must a Level II be watching over the shoulder of the Level I as he performs NDT?
- (2) Does the Level II NDT operator, working as a supervisor of Level I operators, and providing surveillance or guidance or both to the Level I operator(s), retain responsibility for the work of the Level I operator(s)?

Response: (1) No.
 (2) Yes.

Subject: NDT Level III Qualifications
Code Edition: D1.1-83
Code Provision: Subsection 6.7.7
AWS Log: D1-84-012

Inquiry:

- (1) Is it the intent of the Code to prohibit Level III NDT individuals from performing NDT testing if they are not qualified as Level II NDT operators?
- (2) Is a Level III who also has been qualified as a Level II NDT operator, and who maintains his Level II NDT operator status on a regular basis, qualified to perform NDT testing under the Code?

Response:

- (1) Yes.
- (2) Yes.

D1.1-84

Subject: Earlier Code Editions
Code Edition: D1.1-84
Code Provision: None
AWS Log: D1-84-015

Inquiry: May the current Code (e.g., AWS D1.1-84) requirements be applied to contract documents that specify an earlier edition of the Code (e.g., AWS D1.1-80)?

Response: The Code edition specified in the contract documents governs the work under that contract. However, when requested by the contractor, the Committee recommends to the Engineer that the provisions of the current AWS D1.1 be permitted in lieu of the edition specified in the contract documents.

Subject: Prequalified Partial Joint Penetration Groove Welds
Code Edition: D1.1-84
Code Provision: Subsection 2.10.1.1
AWS Log: D1-85-027

Inquiry: Is it the intent of the Code in 2.10.1.1 to restrict all such prequalified welds to the design category “partial joint penetration groove welds” in Tables 8.4.1, 9.3.1, and 10.4.1—Allowable Stresses in Welds?

Response: Yes. However, the procedure may be qualified for a full joint penetration groove weld under the provisions of 5.2 for other appropriate stress categories and allowable stresses.

Subject: Notches and Gouges on Oxygen Cut Surfaces
Code Edition: D1.1-84
Code Provision: Subsection 3.2.2
AWS Log: D1-85-025

Inquiry:

- (1) Does 3.2.2 mean just oxygen cut areas adjacent to welds, or areas to be welded?
- (2) What is meant by “occasional notches or gouges”; and how close or far away is “occasional”?

- (3) Is repair required for notches and gouges up to 3/16 in., or is repair required for notches and gouges 3/16 in. and larger?
- (4) What are the requirements pertaining to other conditions such as ends of girder flanges, ends of beams, cope and notches in beams, base plate and gusset plates?

Response:

- (1) Applies to all oxygen cut areas.
- (2) [The meaning of “occasional” is] as defined in *Webster’s New Collegiate Dictionary* (i.e., “infrequent occurrence”) and as explained in the Commentary 3.2.2. [Spacing is] determined by the fabricator, together with the Inspector or Engineer, or both. (Also see Commentary 3.2.2.)
- (3) For notches and gouges up to and including 3/16 in., repair is to be made by fairing, grinding, or machining. Notches or gouges over 3/16 in. are repaired by welding only with approval of the Engineer.
- (4) All oxygen cut edges must meet the requirements of 3.2.2.

Subject: Camber Tolerances
Code Edition: D1.1-84
Code Provision: Subsection 3.5.1.3
AWS Log: D1-85-028

Inquiry:

- (1) In 3.5.1.3 there are three different tolerances available to determine the variation from camber of welded beams or girders, and the Code states that when the calculations are made that the greatest variation from specified camber is to be used. Are these tolerances appropriate?
- (2) In 3.5.1.3 it states, “camber of welded beams or girders.” Do these tolerances also apply to rolled beams?

Response:

- (1) The tolerances of 3.5.1.3 are appropriate.
- (2) No. Tolerances in 3.5.1.3 are applicable to beams with weldments, such as cover plates. For unwelded beams, AISC specifications should apply.

Subject: Shelf Bars for Horizontal Column Splice Welds
Code Edition: D1.1-84
Code Provision: Subsection 3.6.2
AWS Log: D1-85-018

Inquiry:

During the welding of column splices in the horizontal position, it appears to be standard practice in building construction to provide a shelf to facilitate completely filling the joint. The shelf, attached to the lower member (similar to a weld tab), supports the excess weld metal beyond the joint.

- (1) Is the use of a shelf for welding column splices in the horizontal position permitted by the Code?
- (2) Does the use of a shelf in column splices welded in the horizontal position violate the 1/8 in. maximum reinforcement permitted by 3.12.2?

Response:

- (1) Yes. The use of a shelf or weld tab is acceptable when welding compression members. For removal, see 3.12.2.
- (2) No. The 1/8-in. reinforcement refers to face of unsupported weld metal only; when a shelf or welded tab is used this requirement does not apply.

Subject: Tools for Welder Qualification Test
Code Edition: D1.1-84
Code Provision: Section 5, Part C
AWS Log: D1-86-010

Inquiry: In performing the welder qualification test, does the Code prohibit the use of power tools (mechanical, pneumatic, electrical, or other) to remove weld imperfections?

Response: No.

Subject: Combination of Qualified and Prequalified WPSs
Code Edition: D1.1-84
Code Provision: Subsection 5.1.3
AWS Log: D1-85-019

Inquiry: Does 5.1.3 permit a welding procedure to be used that combines a welding procedure qualified in accordance with 5.2 for the root of the weld and a prequalified procedure for the remainder of the weld?

Response: Yes. A combination of qualified or prequalified joint welding procedures may be used without qualification provided the limitation of essential variables applicable to each process is observed.

Subject: 6GR Test
Code Edition: D1.1-84
Code Provision: Table 5.10.5 and Figure 5.21A
AWS Log: D1-85-029

Inquiry:

- (1) In the welded 6GR test joint (Figure 5.21A), is it permissible to machine the ID of the heavier wall pipe to the other pipe before performing radiographic examination?
- (2) In joints between parts of unequal thickness, does the term “complete joint penetration” refer to the situation where the weld metal completely fills the groove and is fused to the thinner base metal throughout its total thickness?
- (3) When removing side bend specimens from the 6GR welded test joint, is it permissible, prior to bending, to machine sufficient metal from the thicker wall pipe section to obtain a uniform test specimen cross section?
- (4) When removing test specimens from the 6GR welded test joint for tension testing, is it permissible to machine the ID of the heavier wall pipe to the ID of the other pipe to obtain a test specimen of uniform cross section?
- (5) For qualification of T-, Y-, and K-connections, is it permissible to use job size pipe?
- (6) In qualifying in the 6GR position, may job size pipe of different wall thickness other than shown in Figure 5.12A be used?
- (7) Does procedure qualification of pipe or tubing in the 6GR position qualify for all positions of plate and pipe welding?
- (8) Are there prerequisites for procedure or personnel qualification?

Response:

- (1) Yes, if so stated in the contract documents. (See also 6.10.3 of the Commentary.)
- (2) Yes.
- (3) Yes. Figure 5.10.1.3H shows the pipe thickness the same as the size of the weld.
- (4) Yes. In AWS D1.1-86, Figure 5.10.1.3F, the specimen thickness is shown as being uniform throughout the test specimen except for the edges of a pipe specimen.

- (5) Yes. See Table 5.10.1-2.
- (6) Yes. The specific thickness and root “high-low” conditions need not be met, but the thickness differential between the pipes should be maintained to the extent possible. (See Table 10.12, Single Welded T-, Y-, and K-Connections, Other.)
- (7) Yes.
- (8) No. The contractor need only have a qualified (or prequalified) joint welding procedure for the work to be performed; the contractor only needs to have qualified personnel for the work they will perform.

Subject: Qualification Requirements
Code Edition: D1.1-84
Code Provision: Figure 5.10.1.3 and Subsections 5.18, 5.19
AWS Log: D1-85-031

Inquiry:

- (1) Does Note 4 in Figure 5.10.1.3F, Reduced Section Tension Specimens, apply to the capacity of the testing machine?
- (2) In Figure 5.10.1.3D, Location of Test Specimens on a Welded Test Plate Over 3/8 in. Thick—Procedure Qualification, is the 20 in. minimum plate width required?
- (3) Is the rolling direction important for test plate validity?
- (4) Is a welder who qualified using groove details of 5.18 or 5.19 qualified to weld other groove details?
- (5) Is it permissible for a welder to qualify using a test plate with thickness larger than 3/8 in. and smaller than 1 in.?
- (6) Must only the standard joint details specified for plate in Figures 5.18 and 5.19 be used for qualifying welders?

Response:

- (1) No. Note 4 applies to specific cases where small diameter tubing is tested.
- (2) Yes.
- (3) Yes.
- (4) Yes, within the limits of Section 5, Part C.
- (5) Yes. Table 5.26.1 permits groove welding qualification on plate with thickness larger than 3/8 in. and smaller than 1 in.
- (6) No.

Subject: Bend Jigs
Code Edition: D1.1-84
Code Provision: Figure 5.27.1
AWS Log: ID1-85-010

Inquiry: Figure 5.27.1(A, B, or C) shows three test jigs for the testing of guided bend specimens. May any device which uniformly bends the specimen around the radius as required by Figure 5.27.1(A, B, or C) be used, provided the entire weld is located in the bent portion?

Response: Yes.