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the piping has met the requirements of § 56.97–1.

[CGD 73–254, 40 FR 40168, Sept. 2, 1975]

§ 56.97–40 Installation tests.

(a) The following piping systems must be hydrostatically leak tested in the presence of a marine inspector at a pressure of 1.5 times the maximum allowable working pressure of the system:

(1) Class I steam, feedwater, and blowoff piping. Where piping is attached to boilers by welding without practical means of blanking off for testing, the piping must be subjected to the same hydrostatic pressure to which the boiler is tested. The maximum allowable working pressures of boiler feedwater and blowoff piping must be the design pressures specified in §§ 56.50–30(a)(3) and 56.50–40(b) of this subpart, respectively.

(2) Fuel oil discharge piping between the pumps and the burners.

(3) Flammable or corrosive liquids and compressed gas cargo piping, but not less than 150 psig.

(4) Any Class I, I–L, II–L piping.

(5) Cargo oil piping.

(6) Firemains.

(7) Fuel oil transfer and filling piping.

(8) Class I compressed air piping.

(9) Fixed oxygen-acetylene system piping.

(b) Installation testing requirements for refrigeration, fluid power, and liquefied petroleum gas cooking and heating systems may be found in part 58 of this subchapter.

(c) Class II piping systems must be tested under working conditions as specified in the section on initial service leak test, § 56.97–38.

[CGFR 68–82, 33 FR 18843, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9980, June 17, 1970; CGD 72–206R, 38 FR 17229, June 29, 1973 CGD 73–254, 40 FR 40168, Sept. 2, 1975; CGD 95–028, 62 FR 51202, Sept. 30, 1997]

PART 57—WELDING AND BRAZING

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AUTHORITY: 46 U.S.C. 3306, 3703, E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

SOURCE: CGFR 68–82, 33 FR 18872, Dec. 18, 1968, as amended by USCG–2020–0634, 89 FR 50162, June 12, 2024, unless otherwise noted.

Subpart 57.01—Scope

§ 57.01–1 Qualifications and production tests.

(a) (Replaces QW 100 and QB 100.) The regulations in this part apply to the qualification of welding procedures, welders, and brazers, and to production tests for all types of manual and machine arc and gas welding and brazing processes.

(b) (Modifies QW 305 and QB 305.) Operators of fully automatic welding and

brazing machines are specifically exempt from performance qualification tests.

[CGFR 68–82, 33 FR 18872, Dec. 18, 1968, as amended by CGD 74–102, 40 FR 27460, June 30, 1975]

Subpart 57.02—General Requirements

§ 57.02–1 Incorporation by reference.

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a document in the FEDERAL REGISTER and the material must be available to the public. All approved incorporation by reference (IBR) material is available for inspection at the U.S. Coast Guard and the National Archives and Records Administration (NARA). Contact U.S. Coast Guard Headquarters at: Commandant (CG–ENG), Attn: Office of Design and Engineering Standards, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE, Washington, DC 20593–7509; phone (202) 372–1375; email *typeapproval@uscg.mil*. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*. The material may be obtained from *American Society of Mechanical Engineers* (*ASME*), Two Park Avenue, New York, NY 10016–5990; 800–843–2763; *CustomerCare@asme.org; www.asme.org:*

(a) ASME Boiler and Pressure Vessel Code, Section IX, Qualification Standard for Welding, Brazing, and Fusing Procedures; Welders; Brazers; and Welding, Brazing, and Fusing Operators, 2019 Edition, issued July 1, 2019 (''Section IX of the ASME BPVC''); IBR approved for §§ 57.02–2; 57.02–4(a); 57.03–1(a) and (b); 57.04–1; 57.05–1(a); 57.06–1(c); 57.06–4(h).

(b) [Reserved]

[CGD 88–032, 56 FR 35823, July 29, 1991, as amended by CGD 95–072, 60 FR 50462, Sept. 29, 1995; 60 FR 54106, Oct. 19, 1995; CGD 96–041, 61 FR 50728, Sept. 27, 1996; USCG–1999–6216, 64 FR 53224, Oct. 1, 1999; USCG–2009–0702, 74 FR 49229, Sept. 25, 2009; USCG–2012–0832, 77 FR 59778, Oct. 1, 2012; USCG–2013–0671, 78 FR 60148, Sept. 30, 2013]

§ 57.02–2 Adoption of Section IX of the ASME BPVC.

(a) The qualifications for all types of welders and brazers, the qualification of welding procedures, and the production tests for all types of manual and machine arc and gas welding and brazing processes used in fabricating power boilers, heating boilers, pressure vessels and piping must be in accordance with Section IX of the ASME BPVC (incorporated by reference; see § 57.02–1), as limited, modified, or replaced by specific requirements in this part. For general information, table 1 to § 57.02–2(a) lists the various paragraphs in Section IX of the ASME BPVC which are limited, modified, or replaced by regulations in this part.

TABLE 1 TO § 57.02–2(a)—LIMITATIONS AND MODIFICATIONS TO THE ADOPTION OF SECTION IX OF THE ASME BPVC

Paragraphs in section IX of the ASME BPVC, and disposition	Unit of this part
QW–100 replaced by	57.01–1(a).
QW–201 modified by	57.03–1(a).
QW–202 modified by	57.04–1
QW–202.1 modified by	57.03–1(b).
QW–210 modified by	57.04–1.
QW–211 modified by	57.02–4.
QW–253 modified by	57.03–1(g).
QW–254 modified by	57.03–1(g).
QW–255 modified by	57.03–1(g).
QW–305 modified by	57.01–1(b).
QW–451 modified by	57.03–1(b) and 57.04–1.
QB–100 replaced by	57.01–1(a).
QB–103 replaced by	57.02–3(a).
QB–201 modified by	57.03–1(a).
QB–202 modified by	57.04–1.
QB–305 modified by	57.01–1(b).

(b) References to the ASME Code, like paragraph QW–131.1 indicate:

(1) Q = Section IX, Welding and Brazing Qualifications, ASME BPVC.

(2) W = Part containing requirements for welding procedure, welder, and welding operator qualifications.

(3) 131 = Major division within the part.

(4) 131.1 = Specific subparagraph within the part.

(c) When a paragraph or a section of the regulations in this part relates to material in Section IX of the ASME BPVC, the relationship with the code will be shown immediately following the heading of the section or at the beginning of the paragraph as follows:

(1) (Modifies Q____.) This indicates that the material in Q____ is generally applicable but is being altered, amplified, or augmented.

(2) (Replaces Q____.) This indicates that Q____ does not apply.

(3) (Reproduces Q____.) This indicates that Q____ is being identically reproduced for convenience, not for emphasis.

[CGFR 68–82, 33 FR 18872, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9980, June 17, 1970; CGD 74–102, 40 FR 27460, June 30, 1975. Redesignated by CGD 88–032, 56 FR 35823, July 29, 1991; CGD 95–012, 60 FR 48050, Sept. 18, 1995]

§ 57.02–3 Performance qualifications issued by other agencies.

(a) Within the limits of the qualification tests passed, the Officer in Charge, Marine Inspection, may accept welders who have been qualified by other agencies of the Federal Government; by the American Bureau of Shipping; or by the fabricator concerned.

(b) [Reserved]

[CGFR 68–82, 33 FR 18872, Dec. 18, 1968. Redesignated by CGD 88–032, 56 FR 35832, July 29, 1991]

§ 57.02–4 Fabricator's responsibility.

(a) (Replaces QW 103 and QB 103.) Each manufacturer or contractor is responsible for the welding and brazing done by their organization and must conduct tests required in this part to qualify the welding and brazing procedures used and the performance of welders and brazers who apply these procedures. The manufacturer must bear the expense of conducting the tests. Each manufacturer must maintain a record of the test results obtained in welding and brazing procedure and welder and brazer performance qualifications. These required records, together with identification data, must be maintained by the manufacturer or contractor on the recommended forms illustrated in Section IX of the ASME BPVC (incorporated by reference; see § 57.02–1), or on any other form acceptable to the Officer in Charge, Marine Inspection. Upon request, duplicate forms must be furnished by the manufacturer or contractor to the marine inspector.

(b) Except as otherwise provided for in § 57.02–2, the fabricator must notify the Officer in Charge, Marine Inspection, prior to conducting performance or procedure qualification tests, and arrange a suitable time and place for conducting the tests, so that a marine inspector may be present.

[CGFR 68–82, 33 FR 18872, Dec. 18, 1968, as amended by CGD 74–102, 40 FR 27460, June 30, 1975. Redesignated by CGD 88–032, 56 FR 35823, July 29, 1991]

§ 57.02–5 Filler metals.

(a) Except as provided for in paragraph (b) of this section, when filler metal is used in a welded fabrication that is required to meet the requirements of this part the filler metal must be one that has been approved by the American Bureau of Shipping.

(b) In instances where a fabricator desires to use a filler metal which has not been approved by the American Bureau of Shipping the approval of the filler metal can be made by the Officer in Charge, Marine Inspection on the basis of the fabricator passing the weld procedure qualification tests as outlined in this part. This alternate means of approval applies to wire-gas and wire-flux combinations as well as to stick electrodes. Filler metal approvals given in this manner will extend only to the specific fabricator to whom they are granted.

[CGD 74–102, 40 FR 27460, June 30, 1975. Redesignated by CGD 88–032, 56 FR 35823, July 29, 1991]

Subpart 57.03—Procedure Qualifications

§ 57.03–1 General requirements.

(a) (Modifies QW 201 and QB 201.) In order to obtain Coast Guard approval of a weld procedure to be used on welded fabrication that is required to meet the requirements of this part each manufacturer or contractor must do the following:

(1) Each manufacturer or contractor must submit to the cognizant Officer in Charge, Marine Inspection, for approval, a welding or brazing procedure specification for the particular welding or brazing process to be used. The welding or brazing procedure specification must include a sketch showing joint preparation. Suggested forms showing the information which is required in the welding or brazing procedure specification are in Form QW 482 and Form QB 482 of Section IX of the ASME BPVC (incorporated by reference; see § 57.02–1).

(2) Each manufacturer or contractor must submit to the cognizant Officer in Charge, Marine Inspection, for approval, the results of the physical tests required by Section IX of the ASME BPVC.

(b) (Modifies QW 202.1 and QW 451.) To obtain approval of the welding procedure, fabricators desiring to use any welding process for applications involving temperatures below −18 °C (approx. 0 °F) must conduct a procedure qualification test in accordance with the requirements of paragraph (a) of this section and the following additional requirements:

(1) The test piece must be large enough so that sufficient material is available for the tests prescribed in QW 451 of the ASME BPVC, plus toughness tests and a macro-etch specimen.

(2) To obtain approval the fabricator must conduct toughness tests and qualify in accordance with § 54.05 of the subchapter. Results of toughness tests must be submitted for approval to the cognizant Officer in Charge, Marine Inspection.

(3) The macro-etch specimen must be submitted with the test results required by paragraph (a) of this section. Macro-etch specimens must not be obtained by flame or arc cutting from the test piece. Weld reinforcement must remain in place unless the production welds are to be machined or ground. Backing rings must also be left in place unless they are to be removed in production.

(4) Low temperature procedure qualification thickness ranges are as indicated in table 1 to § 57.03–1(b).

TABLE 1 TO § 57.03–1(b)—LOW TEMPERATURE WELD PROCEDURE QUALIFICATION THICKNESS RANGES

Thickness, "t" of test plate or pipe as welded (inches)	Range of thickness of materials qualified by test plate or pipe (inches)	
	Minimum	Maximum
1/16 to 3/8, inclusive	1/16	3/8
Over 3/8 but less than 3/4	[1] 3/8	3/4
3/4 to 3, inclusive	3/4	[2] t

[1] For thicknesses less than 5/8 inch, the thickness of the test plate or pipe is the minimum thickness qualified.
[2] Where "t" is the thickest material over 3/4 inch to be used in production.

(5) The limits for heat input production, as measured in Joules/inch, must be at or below the maximum heat input applied to the procedure test plate. The word ''maximum'' must not be interpreted as either nominal or average.

(c) For quenched and tempered steels, the Commandant may prescribe special testing to assure that the welding procedure produces weldments which are not prone to low energy fracture through the heat affected zone.

(d) Welding procedures that utilize type E 6012, E 6013, E 6014, E 6024, E 7014, or E 7024 electrode will be approved only for the specific type, size, and brand electrode used. If a different type, size, or brand of electrode is used, a new procedure qualification test must be conducted.

(e) Welding or brazing procedure approvals cannot be transferred from one plant to another plant of the same company or from one company to another.

(f) (Modifies QW 253, QW 254, and QW 255.) Item QW 402.4 is an essential variable for all procedure specifications.

[CGD 74–102, 40 FR 27461, June 30, 1975]

Subpart 57.04—Procedure Qualification Range

§ 57.04–1 Test specimen requirements and definition of ranges (modifies QW 202, QW 210, QW 451, and QB 202).

The type and number of specimens that must be tested to qualify an automatic, semiautomatic, or manual procedure specification must be in accordance with QW 202, QW 210, or QB 202 of Section IX of the ASME BPVC (incorporated by reference; see § 57.02–1) as applicable, except as supplemented by §§ 57.03–1(b) and (d).

[CGD 74–102, 40 FR 27461, June 30, 1975]

Subpart 57.05 Performance Qualifications

§ 57.05–1 General.

(a) This subpart supplements the various paragraphs in Section IX of the ASME BPVC dealing with Performance Qualifications (see § 57.02–2).

(b) [Reserved]

[CGFR 69–127, 35 FR 9980, June 17, 1970]

§ 57.05–2 Transfer of performance qualifications.

(a) The performance qualification records of a welder may be transferred from one plant to another of the same company or from one company to another company provided the following requirements are met:

(1) The transfer is authorized by the cognizant Officer in Charge, Marine Inspection;

(2) A copy of the qualification test records of each welder together with employment records and identification data are transferred by the plant or company which qualified the welder to the new plant or company; and,

(3) The new plant or company accepts the welder as qualified.

(b) [Reserved]

§ 57.05–3 Limited space qualifications.

When a welder is to be qualified for welding or torch brazing of piping on board ship in a limited or restricted space, the space restrictions shown in connection with figures 1 or 2 to § 57.05–3 must be used when welding and brazing the test joint.

FIGURE 1 TO § 57.05–3—LIMITED SPACE RESTRICTION FOR PIPE WELDING PERFORMANCE QUALIFICATION

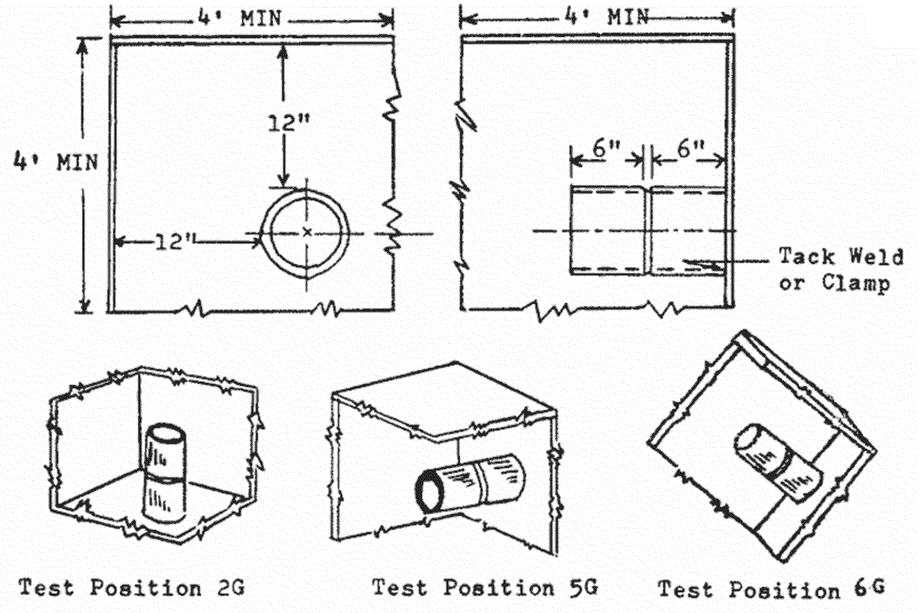


FIGURE 2 TO § 57.05–3—LIMITED SPACE RESTRICTION FOR PIPE BRAZING PERFORMANCE QUALIFICATION

[CGFR 68–82, 33 FR 118872, Dec. 18, 1968, as amended by CGD 74–102, 40 FR 27461, June 30, 1975]

§ 57.05–4 Welder qualification by procedure tests.

Qualification tests of welders may be omitted for welders who weld satisfactory procedure qualification test assemblies as required by subpart 57.03.

§ 57.05–5 Low temperature application.

For low temperature application, each welder must demonstrate their ability to weld satisfactorily in accordance with procedures qualified in accordance with § 57.03–1(b). Manual welding must be qualified in the position prescribed by the procedure.

Subpart 57.06—Production Tests

§ 57.06–1 Production test plate requirements.

(a) Production test plates must be provided for Class I, Class I–L, Class II, and Class II–L pressure vessels are specified in this section.

(b) Main power boilers must meet the test plate requirements for Class I pressure vessels.

(c) Test plates are not required for heating boilers or Class III pressure vessels. Test plates are not required for main power boilers or pressure vessels constructed of P1 material as listed in QW/QB 422 of Section IX of the ASME BPVC (incorporated by reference; see

§ 57.02–1) whose welded joints are fully radiographed as required by part 52 or 54 of this subchapter as applicable except when toughness tests are required in accordance with § 57.06–5. When toughness tests are required, all prescribed production tests must be performed.

[CGFR 68–82, 33 FR 18872, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9980, June 17, 1970; CGD 72–206R, 38 FR 17229, June 29, 1973; CGD 74–102, 40 FR 27461, June 30, 1975; CGD 95–012, 60 FR 48050, Sept. 18, 1995]

§ 57.06–2 Production test plate interval of testing.

(a) At least one set of production test plates must be welded for each Class I or Class I–L pressure vessel except as follows:

(1) When the extent of welding on a single vessel exceeds 50 lineal feet of either or both longitudinal and circumferential joints, at least one set of test plates must be welded for each 50 feet of joint.

(2) When the extent of welding on vessels welded in succession exceeds 50 lineal feet of either or both longitudinal and circumferential joints, at least one set of test plates must be welded for each 50 feet of aggregate joint of the same material where the plate thicknesses fall within a range of one-fourth inch. For each 50-foot increment of weld, test plates must be prepared at the time of fabrication of the first vessel involving that increment.

(b) Production test plates for Class II–L pressure vessels must be prepared as for Classes I and I–L vessels except that the provisions of paragraphs (a)(1) and (2) of this section are applicable to each 150 lineal feet of welded joint in lieu of each 50 lineal feet.

(c) In the case of Class II pressure vessels, no more than one set of production test plates need be prepared for each 300 lineal feet of either or both longitudinal and circumferential joints. In the case of single vessel fabrication, a set of test plates is required for each 300 lineal feet of weld or fraction thereof. In the case of multiple vessel fabrication where each increment of 300 lineal feet of weld involves more than one pressure vessel, the set of test plates must be prepared at the time of fabrication of the first vessel involving that increment.

§ 57.06–3 Method of performing production testing.

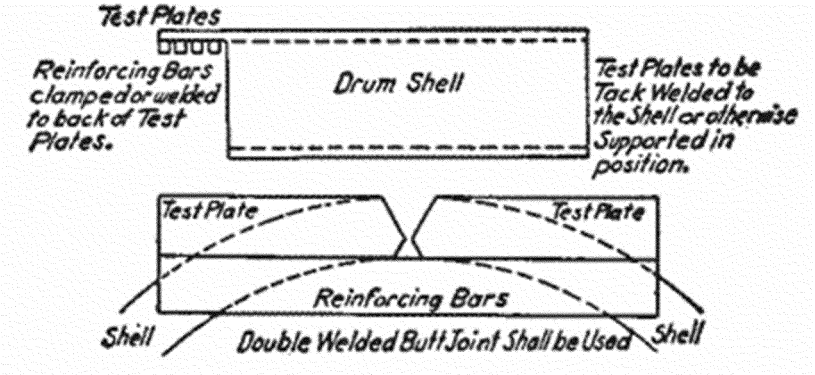
(a) Except as otherwise specified in this section a test plate must be attached to the shell plate on one end of the longitudinal joint of each vessel as shown in figure 1 to § 57.06–3(d), so that the edges of the test plate to be welded are a continuation of and duplication of the corresponding edges of the longitudinal joint. For attached test plates, the weld metal must be deposited in the test plate welding groove continuously with the weld metal deposited in the groove of the longitudinal joint. As an alternate method, the marine inspector may permit the use of separate test plates, provided the same welding process, procedure, and technique employed in the fabrication of the longitudinal joint are used in welding the test plates.

(b) All test plates, whether attached to the shell or separate in accordance with paragraphs (a) and (d) of this section, must be prepared from material of the same specification, thickness, and heat treatment and, for Class I–L and Class II–L vessels, the same heat as that of the vessel for which they are required. However, except when required to be from a specific heat, test plates may be prepared from material of a different product form, such as plate in lieu of a forging, provided the chemical composition is within the vessel material specification limits and the melting practice is the same.

(c) Test plates are not required for welded nozzle attachments.

(d) In the case of vessels having no longitudinal welded joints, at least one set of test plates must be welded for each vessel, using the circumferential joint process, procedure, and technique, except that the provisions of § 57.06–2(a) also apply for Classes I and I–L vessels, and that the provisions of § 57.06–2(a) and (c) also apply for Classes II and II–L vessels.

FIGURE 1 TO § 57.06–3(D)—(PW–53.2) METHOD OF FORMING LONGITUDINAL TEST PLATES



(e) Test plates must be made by the same welder producing the longitudinal and circumferential joints. If more than one welder is employed in the welding of the pressure vessel(s), the test plates must be made by the welder designated by the marine inspector. The test plates must be of the same thickness as the material being welded and must be of sufficient size to provide two specimens of each type required, except that in the case of pressure vessels having no longitudinal seams, the test plate need be only of sufficient length to provide one set of test specimens, and if a retest is necessary, an additional set of test plates may be welded separately.

§ 57.06–4 Production testing specimen requirements.

(a) For test plates three-fourths inch or less in thickness one reduced section tensile specimen and two free-bend specimens must be tested. For plates exceeding three-fourths inch in thickness one reduced section tensile specimen, one free-bend specimen and one guided side bend specimen must be tested. In addition, boiler drums of thickness five-eighths inch or greater must have a tension test specimen of the weld metal as required by paragraph (f)(2) of this section. Toughness tests are required for Classes I–L and II–L pressure vessels as specified in § 57.06–5.

(b) The test plates must be so supported that the warping due to welding does not throw the finished test plate out of line by an angle of over 5°.

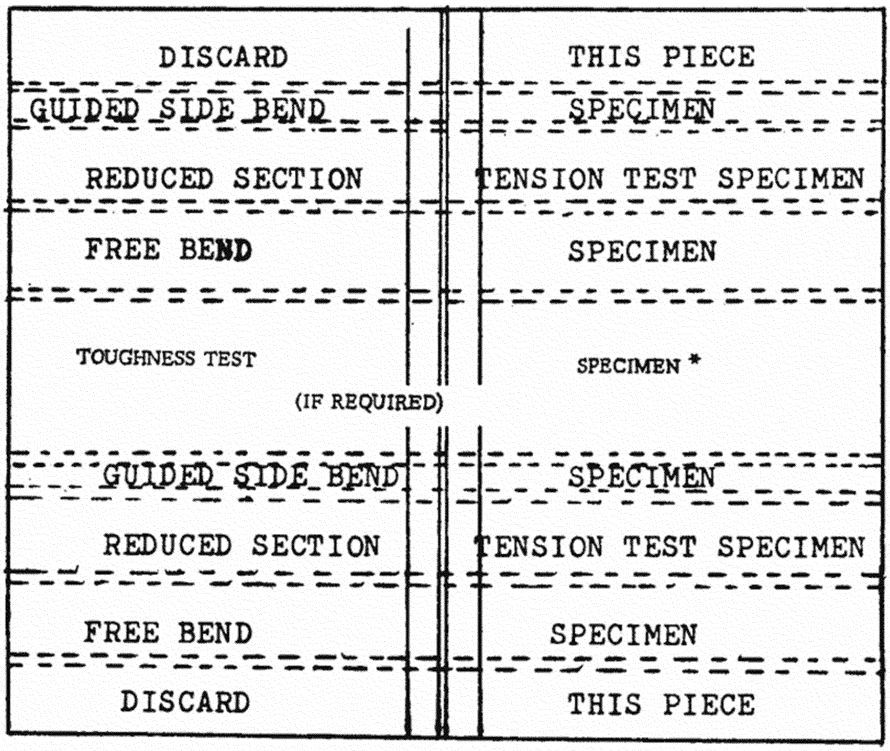
(c) Where the welding has warped the test plates, the plates must be straightened before being stress-relieved. The test plates must be subjected to the same stress-relieving operation as required by this subchapter for the pressure vessel itself. At no time must the test plates be heated to a temperature higher than that used for stress-relieving the vessel.

(d) The bend specimens must be taken from opposite sides of the reduced-section tensile specimen in their respective test plates as shown in figures 1 and 2 to § 57.06–4(d).

FIGURE 1 TO § 57.06–4(D)—WORKMANSHIP TEST PLATES FOR MATERIAL THREE-FOURTHS INCH OR LESS IN THICKNESS

DISCARD		THIS PIECE
FREE BEND		SPECIMEN
REDUCED SECTION		TENSION TEST SPECIMEN
FREE BEND		SPECIMEN
TOUGHNESS TEST OR ALL WELD METAL (IF REQUIRED)		SPECIMEN [1] TENSION SPECIMEN
FREE BEND		SPECIMEN
REDUCED SECTION		TENSION TEST SPECIMEN
FREE BEND		SPECIMEN
DISCARD		THIS PIECE

FIGURE 2 TO §57.06–4(D)—WORKMANSHIP TEST PLATES FOR MATERIAL THREE-FOURTHS INCH OR LESS IN THICKNESS



(e) In submitting the samples for test the manufacturer must state the minimum and maximum tensile range of the base metal.

(f) The external appearances of the welds and the amount of weld reinforcement shall conform to the requirements for fabrication, and the maximum reinforcement for the test plates must not exceed the maximum permitted for construction.

(1) The tension-test specimen of the joint must be transverse to the welded joint and must be of the full thickness of the plate after the weld reinforcement has been machined flush. The form and dimensions must be as shown in figure 3 to §57.06–4(f). When the capacity of the available testing machine does not permit testing a specimen of the full thickness of the welded plate, the specimen may be cut with a thin saw into as many portions of the thickness as necessary, as shown in figure 4 to §57.06–4(f) each of which must meet the requirements. The tensile strength of the joint specimen when it breaks in the weld must not be less than the minimum of the specified tensile range of the plate used. If the specimen breaks in the plate at not less than 95 percent of the minimum specified tensile range of the plate and the weld

shows no sign of weakness, the test is considered acceptable.

(2) Boiler drums fabricated of plate of thicknesses of five-eighths inch or greater 2 to § have a tension-test specimen of the weld metal machined to form as shown in figure 5 to § 57.06–4(f) taken entirely from the deposited metal. The all-weld tension test specimen 2 to § have a tensile strength of not less than the minimum of the range of the plate which is welded and 2 to § have a minimum elongation in 2 inches of not less than 20 percent.

FIGURE 3 TO § 57.06–4(F)—(PW–53.1) REDUCED-SECTION TEST SPECIMEN FOR TENSION TEST OF WELDED JOINT

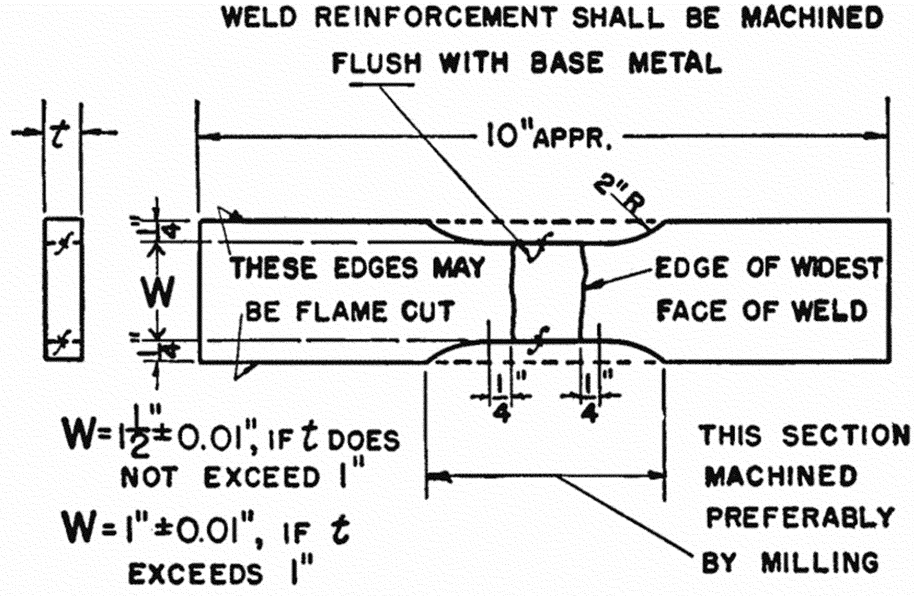


FIGURE 4 TO §57.06–4(F)—(PW–53.3) CROSS SECTION OF BEND-TEST SPECIMENS FROM VERY THICK PLATE

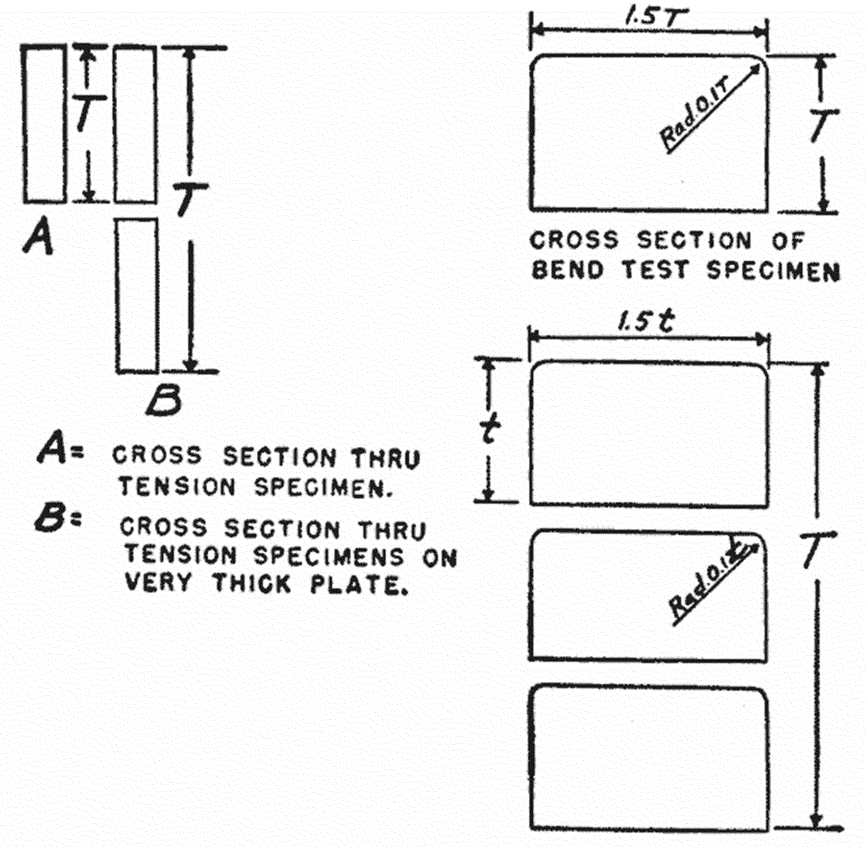
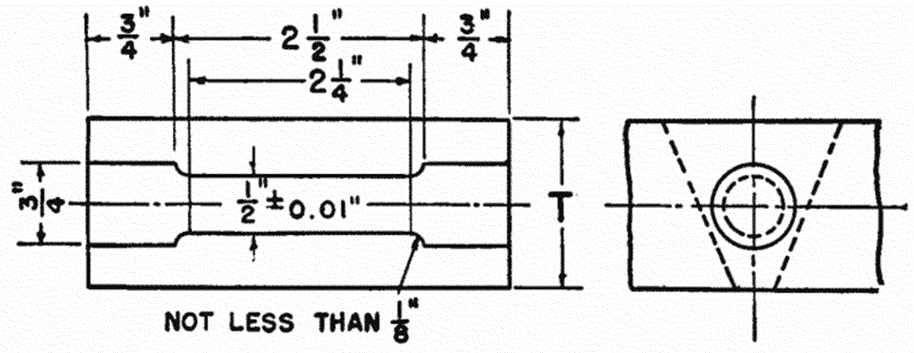
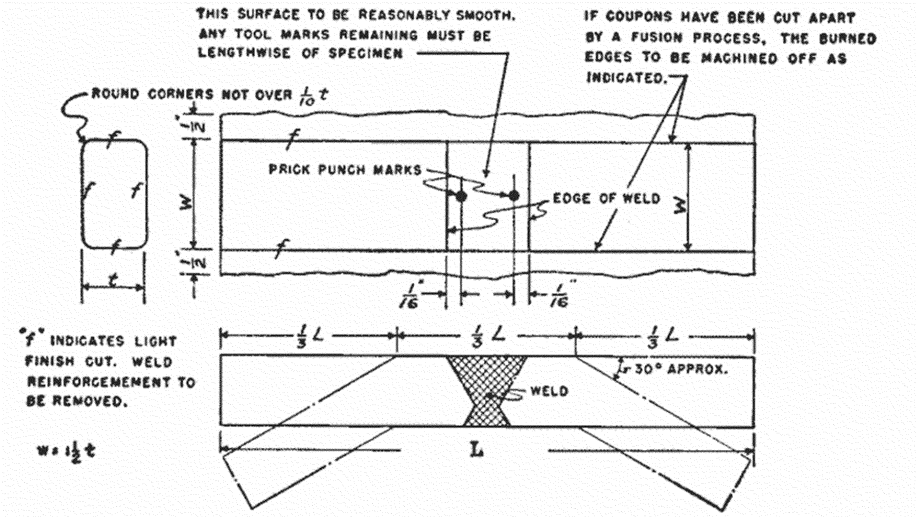


FIGURE 5 TO §57.06–4(F)—(PW–53.3) ALL WELD METAL TENSION-TEST SPECIMEN



(g) The freebend specimens must be of the form and dimensions shown in figure 6 to § 57.06–4(g). For plates of three-fourths inch or less in thickness one of the specimens must be bent with the face of the weld in tension. Each freebend specimen must be bent cold under freebending conditions until the elongation measured within or across approximately the entire weld on the outer surface of the bend is at least 30 percent, except that for Class II and Class II–L pressure vessels, the minimum elongation must be 20 percent. When the capacity of the available testing machine will not permit testing a full thickness specimen, the specimen may be cut with a thin saw into as many portions of the thickness as necessary as shown in figure 4 to § 57.06–4(f), provided each such piece retains the proportion of 1.5 to 1, width to thickness, each of which must meet the requirements. Cracks at the corners of the specimens or small defects in the convex surface, the greatest dimensions of which do not exceed one-sixteenth inch need not be considered as failures.

FIGURE 6 TO § 57.06–4(G)—(PW–53.8) SPECIMEN FOR FREE-BEND TEST



(h) The guided-bend specimen must be bent with the side of the weld in tension, its width must be equal to the full thickness of the plate and its thickness, after machining, must be 0.350 inch to 0.380 inch to permit bending in a jig having the contour of the standard jig as shown in Figure QW 466.1, QW 466.2, or QW 466.3 of Section IX of the ASME BPVC (incorporated by reference; see § 57.02–1). The specimen must withstand being bent cold to the full capacity of the jig without developing any crack exceeding one-eighth inch in any direction. Where the plate thickness exceeds two inches, the specimen must be cut in two so that each portion does not exceed 2 inches in

width. Each such portion must be tested and must meet the requirements.

(i) One retest must be made for each of the original specimens which fails to meet the requirements. Should the retests fail to meet the requirements, the welds which they represent must be chipped out, rewelded and new test plates provided.

[CGFR 68–82, 33 FR 18872, Dec. 18, 1968, as amended by CGFR 69–127R, 35 FR 9980, June 17, 1970; CGD 74–102, 40 FR 27461, June 30, 1975; CGD 80–004, 45 FR 10796, Feb. 19, 1980; CGD 95–012, 60 FR 48050, Sept. 18, 1995]

§ 57.06–5 Production toughness testing.

(a) In addition to the test specimens required by §57.06–4(a), production toughness test plates must be prepared for Classes I–L and II–L pressure vessels in accordance with subpart 54.05 of this subchapter.

(b) For nonpressure vessel type cargo tanks and associated secondary barriers as defined in §38.05–4 of subchapter D of this chapter, production toughness test plates must be prepared in accordance with subpart 54.05 of this subchapter.

[CGD 68–82, 33 FR 18872, Dec. 18, 1968, as amended by CGD 72–206R, 38 FR 17229, June 29, 1973; CGD 95–012, 60 FR 48050, Sept. 18, 1995]

PART 58—MAIN AND AUXILIARY MACHINERY AND RELATED SYSTEMS

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