

pressure may not be less than 1.20 nor more than 1.25 times the maximum allowable working pressure of the piping subassembly system.

(g) *Maximum permissible pneumatic test pressure.* When a system is tested pneumatically, the test pressure may not exceed the maximum test pressure of any component such as vessels, pumps or valves in the system.

(h) *Pneumatic test pressure holding time.* The pneumatic test pressure must be maintained for a minimum total time of 10 minutes and for such additional time as may be necessary to conduct the examination for leakage required in § 56.97-30(d).

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

**§ 56.97-38 Initial service leak test (reproduces 137.7).**

(a) An initial service leak test and inspection is acceptable when other types of test are not practical or when leak tightness is conveniently demonstrable due to the nature of the service. One example is turbine extraction piping where shut-off valves are not available for isolating a line and where temporary closures are impractical. Others may be systems for service water, low pressure condensate, plant and instrument air, etc., where checking out of pumps and compressors afford ample opportunity for leak tightness inspection prior to fullscale operation.

(b) The piping system must be gradually brought up to design pressure. After inspection of the piping system has proven that the installation is complete and all joints are leak-tight, 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 shall be hydrostatically leak tested in the presence of a marine inspector at a pressure of 1½ 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 shall be subjected to the same hydrostatic pressure to which

the boiler is tested. The maximum allowable working pressures of boiler feedwater and blowoff piping shall be the design pressures specified in §§ 56.50-30(a)(3) and 56.50-40(b), respectively.

(2) Fuel oil discharge piping between the pumps and the burners, but not less than 500 pounds per square inch.

(3) High-pressure piping for tank cleaning operations.

(4) Flammable or corrosive liquids and compressed gas cargo piping, but not less than 150 pounds per square inch.

(5) Any Class I, I-L, II-L piping.

(6) Cargo oil piping.

(7) Firemains, but not less than 150 pounds per square inch.

(8) Fuel oil transfer and filling piping.

(9) Class I compressed air piping.

(10) 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 shall 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

### Subpart 57.01—Scope

Sec.

57.01-1 Qualifications and production tests.

### Subpart 57.02—General Requirements

57.02-1 Incorporation by reference.

57.02-2 Adoption of section IX of the ASME Code.

57.02-3 Performance qualifications issued by other agencies.

57.02-4 Fabricator's responsibility.

57.02-5 Filler metals.

### Subpart 57.03—Procedure Qualifications

57.03-1 General requirements.

## § 57.01-1

### 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).

### Subpart 57.05—Performance Qualifications

57.05-1 General.  
57.05-2 Transfer of performance qualifications.  
57.05-3 Limited space qualifications.  
57.05-4 Welder qualification by procedure tests.  
57.05-5 Low temperature application.

### Subpart 57.06—Production Tests

57.06-1 Production test plate requirements.  
57.06-2 Production test plate interval of testing.  
57.06-3 Method of performing production testing.  
57.06-4 Production testing specimen requirements.  
57.06-5 Production toughness testing.

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, unless otherwise noted.

### Subpart 57.01—Scope

#### § 57.01-1 Qualifications and production tests.

(a) (Replaces QW 101 and QB 101.) The regulations in this part shall 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.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). To enforce any edition other

## 46 CFR Ch. I (10-1-04 Edition)

than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and make the material available to the public. All approved material is on file at the U.S. Coast Guard, Office of Design and Engineering Standards (G-MSE), 2100 Second Street SW., Washington, DC 20593-0001 and is available from the sources indicated in paragraph (b) of this section or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(b) The material approved for incorporation by reference in this part and the sections affected are:

*American Society of Mechanical Engineers (ASME) International*

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Boiler and Pressure Vessel Code, section IX, Welding and Brazing Qualifications, July 1989 with 1989

addenda.....57.01-1; 57.02-2; 57.02-3; 57.02-4; 57.03-1; 57.04-1; 57.05-1; 57.06-1; 57.06-3; 57.06-4

[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]

#### § 57.02-2 Adoption of section IX of the ASME Code.

(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 shall be in accordance with section IX of the ASME (American Society of Mechanical Engineers) Code, as limited, modified, or replaced by specific requirements in this part. For general information Table 57.02-1(a) lists the various paragraphs in section IX of the ASME Code which are limited, modified, or replaced by regulations in this part.