

(5) *Maximum allowable working pressure.* For a definition of maximum allowable working pressure, see § 54.10-5 of this subchapter.

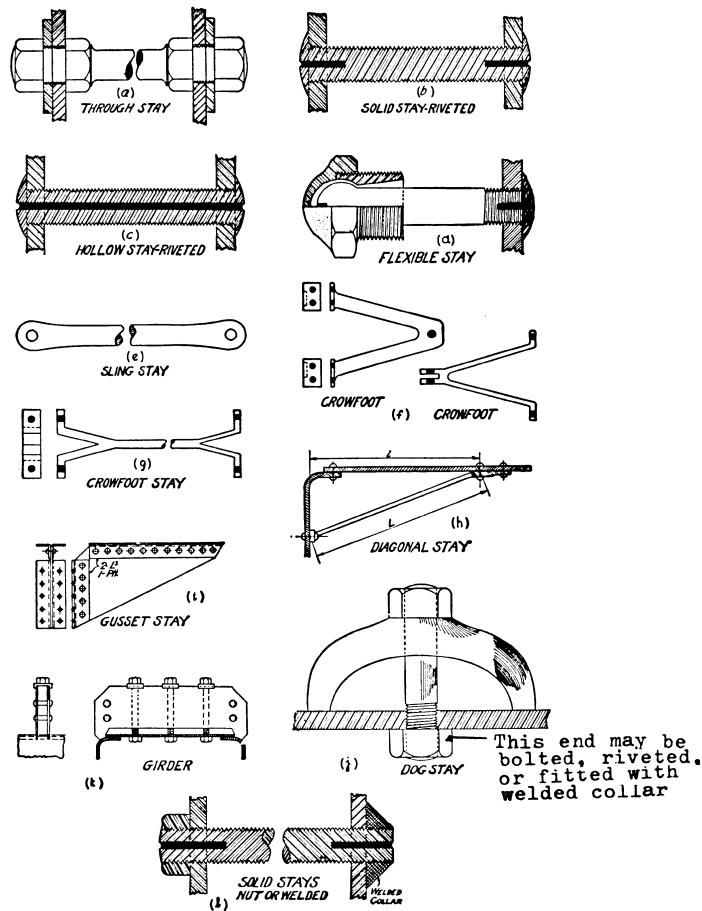


FIGURE 52.01-3—ACCEPTABLE TYPES OF BOILER STAYS

[CGFR 68-82, 33 FR 18815, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9976, June 17, 1970; CGD 81-79, 50 FR 9431, Mar. 8, 1985; CGD 83-043, 60 FR 24772, May 10, 1995]

**§ 52.01-5 Plans.**

(a) Manufacturers intending to fabricate boilers to be installed on vessels shall submit detailed plans as required by subpart 50.20 of this subchapter. The plans, including design calculations, must be certified by a registered pro-

fessional engineer as meeting the design requirements in this part and in section I of the ASME Code.

(b) The following information must be included:

(1) Calculations for all pressure containment components including the maximum allowable working pressure and temperature, the hydrostatic or pneumatic test pressure, the maximum steam generating capacity and the intended safety valve settings.

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(2) Joint design and methods of attachment of all pressure containment components.

(3) A bill of material meeting the requirements of section I of the ASME Code, as modified by this subpart.

(4) A diagrammatic arrangement drawing of the assembled unit indicating the location of internal and external components including any interconnecting piping.

(Approved by the Office of Management and Budget under control number 2115-0142)

[CGD 81-79, 50 FR 9432, Mar. 8, 1985]

### § 52.01-10 Automatic controls.

(a) Each main boiler must meet the special requirements for automatic safety controls in § 62.35-20(a)(1) of this chapter.

(b) Each automatically controlled auxiliary boiler having a heat input rating of less than 12,500,000 Btu/hr. (3.66 megawatts) must meet the requirements of part 63 of this chapter.

(c) Each automatically controlled auxiliary boiler with a heat input rating of 12,500,000 Btu/hr. (3.66 megawatts) or above, must meet the requirements for automatic safety controls in part 62 of this chapter.

[CGFR 68-82, 33 FR 18815, Dec. 18, 1968, as amended by CGD 81-030, 53 FR 17837, May 18, 1988; CGD 88-057, 55 FR 24236, June 15, 1990]

### § 52.01-35 Auxiliary, donkey, fired thermal fluid heater, and heating boilers.

(a) To determine the appropriate part of the regulations where requirements for miscellaneous boiler types, such as donkey, fired thermal fluid heater, heating boiler, etc., may be found, refer to Table 54.01-5(a) of this subchapter.

(b) Fired vessels in which steam is generated at pressures exceeding 103 kPa gage (15 psig) shall meet the requirements of this part.

[CGFR 68-82, 33 FR 18815, Dec. 18, 1968, as amended by CGD 81-79, 50 FR 9432, Mar. 8, 1985]

### § 52.01-40 Materials and workmanship.

All materials to be used in any of the work specified in the various sections of this part shall be free from injurious defects and shall have a workmanlike finish. The construction work shall be

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executed in a workmanlike manner with proper tools or equipment and shall be free from defects which would impair strength or durability.

### § 52.01-50 Fusible plugs (modifies A-19 through A-21).

(a) All boilers, except watertube boilers, with a maximum allowable working pressure in excess of 206 kPa gage (30 psig), if fired with solid fuel not in suspension, or if not equipped for unattended waterbed operation, must be fitted with fusible plugs. Fusible plugs must comply with only the requirements of A19 and A20 of the ASME Code and be stamped on the casing with the name of the manufacturer, and on the water end of the fusible metal "ASME Std.". Fusible plugs are not permitted where the maximum steam temperature to which they are exposed exceeds 218 °C (425 °F).

(b) Vertical boilers shall be fitted with one fusible plug located in a tube not more than 2 inches below the lowest gage cock.

(c) Externally fired cylindrical boilers with flues shall have one plug fitted to the shell immediately below the fire line not less than 4 feet from the front end.

(d) Firebox, Scotch, and other types of shell boilers not specifically provided for, having a combustion chamber common to all furnaces, shall have one plug fitted at or near the center of the crown sheet of the combustion chamber.

(e) Double-ended boilers, having individual combustion chambers for each end, in which combustion chambers are common to all the furnaces in one end of the boiler, shall have one plug fitted at or near the center of the crown sheet of each combustion chamber.

(f) Boilers constructed with a separate combustion chamber for each individual furnace shall be fitted with a fusible plug in the center of the crown sheet of each combustion chamber.

(g) Boilers of types not provided for in this section shall be fitted with at least one fusible plug of such dimensions and located in a part of the boiler as will best meet the purposes for which it is intended.

(h) Fusible plugs shall be so fitted that the smaller end of the filling is in