

## § 52.01-100

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

### § 52.01-100 Openings and compensation (modifies PG-32 through PG-39, PG-42 through PG-55).

(a) The rules for openings and compensation shall be as indicated in PG-32 through PG-55 of section I of the ASME Boiler and Pressure Vessel Code (incorporated by reference; see 46 CFR 52.01-1) except as noted otherwise in this section.

(b) (*Modifies PG-39.*) Pipe and nozzle necks shall be attached to vessel walls as indicated in PG-39 of section I of the ASME Boiler and Pressure Vessel Code except that threaded connections shall not be used under any of the following conditions:

(1) Pressures greater than 4,137 kPa (600 psig);

(2) Nominal diameters greater than 51 mm (2 in.); or

(3) Nominal diameters greater than 19 mm (0.75 in.) and pressures above 1,034 kPa (150 psig).

(c) (*Modifies PG-42.*) Butt welding flanges and fittings must be used when full radiography is required by § 56.95-10.

[CGD 81-79, 50 FR 9432, Mar. 8, 1985, as amended by USCG-2003-16630, 73 FR 65161, Oct. 31, 2008]

### § 52.01-105 Piping, valves and fittings (modifies PG-58 and PG-59).

(a) Boiler external piping within the jurisdiction of the ASME Boiler and Pressure Vessel Code must be as indicated in PG-58 and PG-59 of section I of the ASME Boiler and Pressure Vessel Code (incorporated by reference; see 46 CFR 52.01-1) except as noted otherwise in this section. Piping outside the jurisdiction of the ASME Boiler and Pressure Vessel Code must meet the appropriate requirements of part 56 of this subchapter.

(b) In addition to the requirements in PG-58 and PG-59 of section I of the ASME Boiler and Pressure Vessel Code, boiler external piping must:

(1) Meet the design conditions and criteria in § 56.07-10 of this subchapter, except § 56.07-10(b);

(2) Be included in the pipe stress calculations required by § 56.35-1 of this subchapter;

(3) Meet the nondestructive examination requirements in § 56.95-10 of this subchapter;

(4) Have butt welding flanges and fittings when full radiography is required; and

(5) Meet the requirements for threaded joints in § 56.30-20 of this subchapter.

(c) Steam stop valves, in sizes exceeding 152mm (6 inch) NPS, must be fitted with bypasses for heating the line and equalizing the pressure before the valve is opened.

(d) *Feed connections.* (1) Feed water shall not be discharged into a boiler against surfaces exposed to hot gases or radiant heat of the fire.

(2) Feed water nozzles of boilers designed for pressures of 2758 kPa (400 psi), or over, shall be fitted with sleeves or other suitable means employed to reduce the effects of metal temperature differentials.

(e) *Blowoff connections.* (1) Firetube and drum type boilers shall be fitted with a surface and a bottom blowoff valve or cock attached directly to the boiler or to a short distance piece. The surface blowoff valve shall be located within the permissible range of the water level, or fitted with a scum pan or pipe at this level. The bottom blowoff valve shall be attached to the lowest part of the boiler or fitted with an internal pipe leading to the lowest point inside the boiler. Watertube boilers designed for pressures of 2413 kPa (350 psig) or over are not required to be fitted with a surface blowoff valve. Boilers equipped with a continuous blowdown valve on the steam drum are not required to be fitted with an additional surface blowoff connection.

(2) Where blowoff pipes are exposed to radiant heat of the fire, they must be protected by fire brick or other suitable heat-resisting material.

(f) *Dry pipes.* Internal dry pipes may be fitted to the steam drum outlet provided the dry pipes have a diameter equal to the steam drum outlet and a wall thickness at least equal to standard commercial pipe of the same diameter. Openings in dry pipes must be as near as practicable to the drum outlet and must be slotted or drilled. The width of the slots must not be less than 6mm (0.25 in.). The diameter of the holes must not be less than 10mm (0.375 in.). Where dry pipes are used, they must be provided with drains at each