§ 56.30–5 Piping joints (reproduces 110).

The type of piping joint used shall be suitable for the design conditions and shall be selected with consideration of joint tightness, mechanical strength and the nature of the fluid handled.

§ 56.30–5 Welded joints.

(a) General. Welded joints may be used for materials for which welding procedures, welders, and welding machine operators have been qualified in accordance with part 57 of this subchapter.

(b) Butt welds—general. Butt welds may be made with or without backing or insert rings within the limitations established in § 56.70–15. When the use of backing rings will result in undesirable condition such as severe stress concentrations, corrosion or erosion, then:

(1) The backing rings shall be removed and the inside of the joint ground smooth, or

(2) The joint shall be welded without backing rings, or

(3) Consumable insert rings must be used. Commonly used types of butt welding end preparations are shown in ASME B16.25 (incorporated by reference; see 46 CFR 56.01–2).

(4) Restrictions as to the use of backing rings appear for the low temperature piping systems and should be checked when designing for these systems.

(c) Socket welds (Modifies 127.3.3A.).

(1) Each socket weld must conform to ASME B16.11 (incorporated by reference; see 46 CFR 56.01–2), to applicable standards listed in 46 CFR 56.60–1, table 56.60–1(b), and to Figure 127.4.4C in ASME B31.1 (incorporated by reference; see 46 CFR 56.01–2) as modified by § 56.30–10(b)(4) of this part. A gap of approximately one-sixteenth inch between the end of the pipe and the bottom of the socket must be provided before welding. This may best be provided by bottoming the pipe and back off slightly before tacking.

(2) Socket welds must not be used where severe erosion or crevice corrosion is expected to occur. Restrictions on the use of socket welds appear in § 56.70–15(d)(3) of this part for Class I service and in § 56.50–105 of this part for Class II service.