

## **Shippensburg Pump Company, Inc.**

BOILER FEED • CONDENSATE • DEAERATOR • VACUUM

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## Feedwater ASME Code Requirement

Excerpt taken from Section I of the 2015 ASME Boiler and Pressure Vessel Code.

## **PG-61 Feedwater Supply**

PG-61.1 Except as provided for in PG-61.2 and PG-61.4, boilers having more than 500 ft<sup>2</sup> (47 m<sup>2</sup>) of water-heating surface shall have at least two means of feeding water. Except as provided for in PG-61.3, PG-61.4, and PG-61.5, each source of feeding shall be capable of supplying water to the boiler at a pressure of 3% higher than the highest setting of any pressure relief valve on the boiler proper. For boilers that are fired with solid fuel not in suspension, and for boilers whose setting or heat source can continue to supply sufficient heat to cause damage to the boiler if the feed supply is interrupted, one such means of feeding shall not be susceptible to the same interruption as the other, and each shall provide sufficient water to prevent damage to the boiler.

**PG-61.2** Except as provided for in PG-61.1, a boiler fired by gaseous, liquid, or solid fuel in suspension, or heated by combustion turbine engine exhaust, may be equipped with a single means of feeding water, provided means are furnished for the shutting off of its heat input prior to the water level reaching the lowest permissible level established by PG-60.

[Shipco note: PG-60 refers to "Design and Application Requirements for Miscellaneous Pipe, Valves, and Fittings" and is not referenced here.]

**PG-61.3** For boilers having a water-heating surface of more than 100 ft<sup>2</sup> (9.3 m<sup>2</sup>), the feed water connection to the boiler shall not be less than NPS ¾ (DN 20).

For boilers having a water-heating surface of 100 ft $^2$  (9.3 m $^2$ ) or less, the feed water connection to the boiler shall be not less than NPS ½ (DN 15).

Boilers with 20 ft<sup>2</sup> (1.9 m<sup>2</sup>) or less of water heating surface may have the feed water delivered through the blow-off opening.

- **PG-61.4** High-temperature water boilers shall be provided with means of adding water to the boiler or system while under pressure.
- **PG-61.5** A forced-flow steam generator with no fixed steam and waterline shall be provided with a source of feeding capable of supplying water to the boiler at a pressure not less than the expected maximum sustained pressure at the boiler inlet, as determined by the boiler Manufacturer, corresponding to operation at maximum designed steaming capacity with maximum allowable working pressure at the superheater outlet.