

Kansas Administrative Regulations

Department of Labor

Article 52.—Low Pressure Heating Boilers

49-52-11. Feedwater connections, automatic low water fuel cutoff, and water-feeding devices.

(a) Feedwater, makeup water, or water treatment materials shall be introduced into a boiler through the return piping system or through an independent feedwater connection that does not discharge against parts of the boiler exposed to direct radiant heat from the fire. Feedwater, makeup water, or water treatment materials shall not be introduced through openings or connections provided for any of the following:

- (1) Inspection or cleaning;
- (2) safety valves or safety relief valves; or
- (3) surface blowoff, or the water column, water gauge glass, pressure gauge, or temperature gauge.

(b) The feedwater pipe shall be provided with a check valve near the boiler and a stop valve or cock between the check valve and the boiler or return pipe system.

(c) Each automatically fired steam or vapor system boiler shall be equipped with an automatic low water fuel cutoff located in a manner that will automatically cut off the fuel supply when the surface of the water falls to the lowest safe water line. The boiler shall also have a secondary low water cutoff that will cut off the fuel supply and lock out the burner and shall be equipped with a manual reset. If a water-feeding device is installed, it shall be constructed so that the water inlet valve cannot feed water into the boiler through the float chamber. The interfeeding device shall be located to supply requisite feedwater. The lowest safe water line shall not be lower than the lowest visible part of the water glass.

(d) A fuel or feedwater control device may be attached directly to a low pressure boiler on the tapped openings in low pressure boilers that are provided for attaching a water glass directly to the boiler. The connections between the boiler and the water glass shall be nonferrous tees or Y's of not less than ½ inch pipe size. The water glass

shall be attached directly, and as closely as possible, to the boiler. The water glass fittings shall be attached to the straightway topping of the Y or T. The fuel cutoff or water-feeding device shall be attached to the side outlet of the Y or T. The ends of all nipples shall be reamed to full-size diameter.

(e) Designs using a float and float bowl shall have a vertical, straight-away valve drain pipe at the lowest point in the water-equalizing pipe. The connections in this installation shall permit the bowl and the equalizing pipe to be flushed and the device tested. A low water fuel cutoff control device shall be installed in all hot water heating systems with inputs exceeding 400,000 BTUH. Blowdown valves and pipe attachments shall be a minimum of $\frac{3}{4}$ inches.

(f) A low water fuel cutoff shall be installed on all hot water heating systems, including systems under 400,000 BTUH that are not exempted. The low water cutoff shall be a float type, flow switch, or probe type installed in the boiler or piping above the boiler.

(g) Low water cutoffs installed on all hot water heating boilers shall be installed above the boiler and shall be equipped with a manual reset, with no intervening valves between the boiler and the low water cutoff.

(Authorized by and implementing K.S.A. 1998 Supp. 44-916; effective May 1, 1987; amended April 28, 2000.)

***** Authenticated Kansas Administrative Regulation *****