

Date: April 21, 2015

Bulletin Number: HP608

Subject: CSD-1 Controls and Safety Devices for Automatically Fired Boilers

Scope

The rules of this Standard cover requirements for the assembly, installation, maintenance, and operation of controls and safety devices on automatically operated boilers directly fired with gas, oil, gas-oil, or electricity, having fuel input ratings under 12,500,000 Btu/hr.

Requirements

Although there are many requirements within the code, we will focus on the 2 main parts that pertain to the boiler.

Part CW: Steam and Waterside Controls – discusses the requirements for water level controls, fuel cut-off devices, pressure controls, temperature controls, safety valves, and modular boilers.

Part CF: Combustion Side Controls – discusses the requirements for combustion side controls for oil, gas, gas-oil, and electric boilers.

Part CW for water boiler controls:

1. One low water cut-off with manual reset equipped with a means of testing its operation without draining the system. The M&M 751P-MT probe type low water cut-off is a CSD-1 approved control (a float type low water cut-off, M&M 63M would require the M&M TC-4 test-n-check valves).
2. One operating temperature control with its own sensing element and operating switch (Honeywell L4006A).
3. One manual reset high temperature limit control with its own sensing element and operating switch (Honeywell L4006E).

Modular/Multiple Water

1. Same as #1 above for each boiler module.
2. One system operating temperature control with its own sensing element and operating switch. This could be a simple L4006A or a staging control such as a Tekmar.
3. Same as #3 above for each boiler module.

Part CW for steam boiler controls:

1. Two low water cut-offs, one of which may be a combined feeder/cut-off device or a pump controller such as a M&M 150. Each shall be attached to the boiler by a separate pipe connection. The lower of the two cut-off controls shall be manual reset. Low water cut-off selection will be based on type of steam system (gravity or pumped return).
2. One operating pressure control (Honeywell L404F).
3. One high steam pressure limit control with manual reset (L4079B).

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Part CF: Combustion Side Controls

Oil Fired – Inputs 3 gph and over require oil filter. Auxiliary oil valve (standard with Burnham supplied burner). Also check Optional Price Book for alternate flame safeguard change. Minimum combustion flame safeguard R7284P. Over 20 gph, RM7897A. Over 27 gph, RM7840L.

Gas Fired – All inputs – Dual gas valves (standard with Burnham supplied burner), two ¼" leak test cocks. Main and leak test valves with permanently attached handles. Main and pilot regulators must be equipped for venting. Also check Optional Price Book for alternate flame safeguard change. Minimum combustion flame safeguard, RM7897A. Over 2500 mbh, RM7897C.