

Frequently Asked Questions

Following are just a few of the many frequently asked questions posted on the McDonnell & Miller and Hoffman Specialty websites.

Q In an old house with steam heat, just part of the radiators were getting warm, so I drained the system and refilled with water. Now the water was spurting out of the radiators. So I drained the system again and I took off all the pressure valves on each one to hopefully release any vacuum. When done I put all the valves back on and refilled the water level again, but the water is still spurting out of the radiators. Can you give me any advice?

A The steam system is supposed to be filled only up to the halfway point on the boiler gauge glass. If you put too much water in the system, or if you're trying to operate it at a higher pressure than needed you'll get leaks. You may need to install a boiler feeder. For complete information on boiler feeder selection and installation, visit www.mcdonnellmiller.com, or contact your local M&M Representative.

Q When should I use a secondary (redundant) low water cut-off?

A We recommend that secondary (redundant) low water cut-off controls be installed on all steam boilers with heat input greater than 400,000 Btu/hour or operating above 15 psi of steam pressure. At least two controls should be connected in series with the burner control circuit to provide safety redundancy protection should the boiler experience a low-water condition. Moreover, at each annual outage, the low water cut-offs should be dismantled, inspected, cleaned, and checked for proper calibration and performance.

Q What is the best way to test a steam trap?

A There are several methods that can be used depending on the type of trap you have:

- The most accurate test for all types is

visual inspection of what is coming through the trap

- Install a test valve in the trap outlet tapping
- Listen to sounds in the trap while using an automotive type stethoscope or an ultrasound device (traps that are blowing steam will have a hissing sound and traps that are passing condensate will have a gurgling sound)
- Instantaneous thermometers work well on thermostatic traps
- Use a stethoscope to listen as bucket traps and thermodisc traps cycle open and closed

Q What is the difference between a probe-type boiler control for a hot water boiler and one for a steam boiler?

A Probe-type boiler controls designed for steam boilers include a time delay function to guard against rapid cycling. The water line in a steam boiler will often fluctuate due to burner operation or header location. This fluctuation in water level will cause a probe-type boiler control to cycle in between "in water" and "out of water" several times a minute, or "rapid cycle." To guard against this situation, a steam boiler control will include a time delay feature which requires the probe to be out of water for a period of time (often 10 seconds) before it registers "out of water." This is known as "delay on break" (DOB). Also in reverse, as water is returning to the probe, the steam boiler control has a "delay on make" (DOM) time delay of 15 seconds. This allows for addi-

tional condensate to return to the boiler so the probe is completely submerged before the burner is allowed to fire. Hot water probe-type boiler controls require no time delay because the entire system including the boiler is completely filled with water, hence there is no fluctuating water line.

Q Can a manual reset low water cut-off (LWCO) be used with a water feeder?

A No. After going into "low water," a manual reset unit locks out, causing the water feeder to remain in feed position until the manual reset button has been depressed. Under normal operation, if a water feeder is wired and controlled with the low water cut-off, the water feeder will continue to add water to the boiler until it receives a signal from the low water cut-off indicating that the boiler has sufficient water (probe is in water). However, as stated above, a level control with a manual reset will not signal the water has returned to the probe until the manual reset button is depressed, resulting in a flooded boiler.

For help with any hydronic or steam heating question, contact your local McDonnell & Miller/Hoffman Specialty Representative, or visit the websites.



M&M LWCO's

To view more FAQs, go to www.mcdonnellmiller.com or www.hoffmanspecialty.com, click on "FAQs", and then enter a key word in the search box.

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