

"Eddy's Boilerhouse News"
By Eddy Emerson, Emerson Boiler

NEWSLETTER ASME CSD-1 Controls and Safety Devices for Automatically Fired Boilers – Series CSD-1 Letter 6.

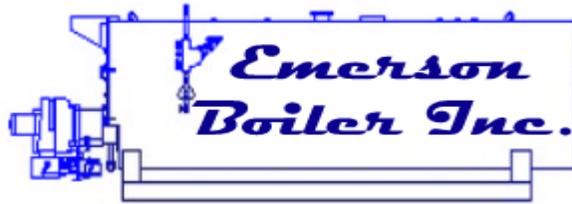
CSD-1 Part CW – Steam and Waterside Control is a very important section and we shall continue in this newsletter where we left off last month. If you remember in the last newsletter we covered operating controls and high limits for steam boilers. In this letter we will cover operating controls and high limits for hot-water heating and supply boilers (hydronic boiler).

Paragraph CW-410 Requirements for Temperature Control for Hot-Water Heating and Supply Boilers – This section states that, "Each automatically fired hot-water boiler ... shall have at least one temperature-actuated control to shut off the fuel supply when the system water reaches a preset operating temperature." This is the operating control. This control will have a set point and a differential. The differential may be a fixed (built into the control) or it may be adjustable. This control works similar to a pressuretrol on a steam boiler but it senses temperature instead of pressure. Example: If the set point is at 180 degrees F and the differential is set at 10 degrees F, the burner will shut down at 180 degrees F and then restart at 170 degrees F.

The code goes on to state that, "In addition to the temperature control required above, each individual automatically fired hot-water boiler unit shall have a high temperature limit control that will prevent the water temperature from exceeding the maximum allowable temperature. The upper set point limit shall not exceed the maximum allowable temperature. Functioning of this control shall cause a safety shutdown and lockout." This is what is called a high limit with manual reset. This control usually sets somewhere between 20 to 50 degrees F above the operating control. In the example, the high might be set at 200 or 210 degrees F. If the operating control were to fail then when the temperature at the high limit rises to its set point, it will shut down the boiler but must be manually reset.

CSD-1 goes on to say, "Each limit and operating control shall have its own sensing element and operating switch." This means that an aquastat with two settings and only one probe (sensing element) can no longer be used. You may come across some older installations that have such controls and they must be changed out. Also, you may come across some older installations that have high limit without a manual reset. These must be replaced also.

I have been asked if modular hot-water heating boilers need controls on each boiler. The answer to that question is addressed in section CW-640 which states "Modular hot-water boilers shall comply with CW-410, with the following differences: The assembled modular boiler shall have a temperature control that complies with CW-410 (high limit). Operation of this control shall shut off the fuel or energy supply to all modules. Each module shall have a temperature control (operating control) that complies with CW-410." So what is the answer to the question? It has to have an operating limit on each modular boiler.



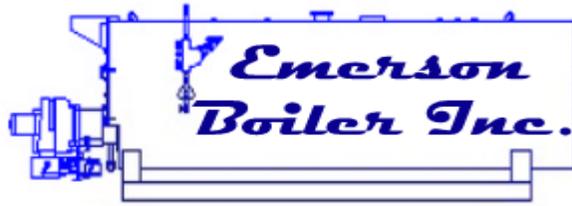
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But, only one high limit is required on the system that will shut down all boilers. That does not mean that a high limit on each boiler is wrong or against code.

Important stuff: Don't forget to feed the dog; he may be your only friend.

TRAINING CLASSES STILL AVAILABLE:

OKLAHOMA CITY, OK (OCTOBER 5-9, 2009) 40 HOUR BIA RECERTIFICATION
PHOENIX, AZ (DECEMBER 8, 2009) BOILER, OPERATOR & TRAINING
PHOENIX, AZ (DECEMBER 9, 2009) UNIT I
PHOENIX, AZ (DECEMBER 10, 2009) UNIT II
PHOENIX, AZ (JANUARY 25-FEBRUARY 5, 2010) 80 HOUR BIA CERTIFICATION
PHOENIX, AZ (FEBRUARY 22-26, 2010) 40 HOUR BIA RECERTIFICATION



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Why being a Boilermaker is better than being the President of the United States:

By Catherine Senior, Emerson Boiler

As President, public tours are held at your place of work every day.

As a Boilermaker, no one even knows where the boiler room is.

As President, you are always in hot water.

As a Boilermaker, you are a hero when you provide hot water.

As President, with every decision you make, at least 150 million people think you mad a mistake.

As a Boilermaker, most people do not even know what a boiler is let alone whether or not you have made a mistake.

As President, ten people have to prepare you for every word you say.

As a Boilermaker, you do not even need to answer the phone if you don't feel like it.

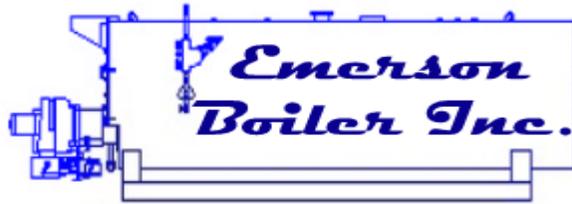
As President, you can not show anger, only diplomacy.

As a Boilermaker, you can grab a wrench out of your toolbox and slug something with it.

As President, Secret Service Agents follow you into the bathroom.

As a Boilermaker, everyone clears out of the bathroom.

As President, after every doctor's appointment, a thirty minute press conference must be held to delicately explain every procedure.



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As a Boilermaker, you share your visits to the doctor's office to gross everyone out.

As President, when you visit foreign countries, you hope the food you are served will be edible.

As a Boilermaker, you know there is a Burger King right around the corner.

As President, you have to be careful not to mince your words or offend anyone.

As a Boilermaker, you can say... "That stupid piece of #@\$% is giving me a Flame Signal Failure when I can see the @#%* thing is lit," and no one will think twice about it.

And finally, as President, you can not attend the Super Bowl.

As a Boilermaker, if the boiler is down, you get a police escort into the facility.