

Q&A WITH RFMCO BOILER TRAINER JOHN HOLTZ

- **How long have you been in the boiler business?**

I have been associated with boiler operations, repairs and training for 30 years.

- **What was your progression to Corporate Boiler Trainer?**

I received most of my training in the Navy and spent 20 years serving our country working on steam generating systems and boilers. While in the Navy, I received my Master Training Specialist certification and was involved with training at every duty station at different military bases during my time in service. While on active duty, I obtained my Chief Boiler Operators license from the City of Tacoma, Washington and worked as a fill in or relief operator for many different facilities in the Tacoma area. In this position, I had the opportunity to learn about many different types as well as designs of boilers and how they operated. This was an incredible opportunity in that I was able to gain more knowledge associated with different boilers that R.F. MacDonald Co. works on.

I then worked for Hartford Steam Boiler (HSB) for eight years as a National Board Certified Boiler & Pressure Vessel inspector. I was also tasked as a trainer for HSB to train new personnel in achieving their National Board Certification.

After my time with HSB, I accepted a position as the Boiler Operations Supervisor at the Naval Reactors Facility, which is located on the Idaho National Laboratory (INL) near Idaho Falls, Idaho. In this position, I was involved in training boiler operators in the transition from watertube boilers to firetube boilers. I was tasked with training the operators on the operation of the Cleaver-Brooks firetube boilers. I was also involved with training trades personnel in the maintenance required with the firetube boilers.

I then moved on to a mechanical trainer position at the INL at the Advanced Test Reactor where I trained reactor plant operators and trades personnel in systems operations and repairs associated with the test reactor.

As you can see, I have been training people in almost every position I have had for 30 years.

- **Would you say boiler maintenance is more about being able to follow an operations manual or is it more about learning from experience?**

I believe that it is a combination of both. As anybody that has operated boilers knows, these manuals only give you the basics needed to operate your boiler. It doesn't get into how the other systems associated with the boiler can affect its operation. The operations manual doesn't get into the nuances that are found with each individual boiler so the operator must learn from experience – because no two boilers operate the same way.

- **Is the life of a boiler determined by the workload it endures or the maintenance it receives?**

Both the workload as well as the maintenance of the boiler can affect the life of a boiler. If the workload of the system is cyclic with extreme changes in demand on the boiler, these changes put undue stress on the boiler and all of its components, which can shorten the life of a boiler. The most common example of this is when a process needs to have a boiler started up and online in a short period of time without properly heating up the boiler and its associated systems. This puts undue thermal stress on the boiler which will limit the life of the boiler.

The same is true when it comes to boiler maintenance. One of the most common operating practices is to perform a bottom blowdown daily on an operating boiler. By doing this simple maintenance procedure, you remove sludge and other materials that gather in the bottom of a firetube boiler or in the mud drum of a watertube boiler. This sludge and other materials can lead to increased corrosion as well as act as an insulator to the tubes or drum surface resulting in higher temperatures required to transfer heat across

those surfaces. This can cause undue thermal stress on these surfaces and can affect the integrity of the metal, which can shorten the life of a boiler. Another common maintenance issue that can influence a boiler's life is the annual inspection of the fire side of a firetube boiler. If the burner is not operating properly or if you are using a fuel that produces a lot of soot, the soot will collect on the walls of the tubes and act as an insulator. This will put undue thermal stress on the tubes due to requiring higher temperatures to transfer heat through the tubes. As an inspector, I have seen all of these issues effect the life of a boiler.

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- **Why should a facilities team be trained on their specific boiler?**

Each boiler plant and their associated systems are unique. To have one generic training for all boilers will not be specific enough for all situations. Having a facility specific training will provide focused training on their boiler, the associated equipment and its safety devices and how they operate. These trainings can provide an added level of safety for the facility in that the people who are operating the boilers in their facility have a better understanding of how to operate their boiler in a safe manner.

- **Is there anything else you would like to add about Custom Onsite Training?**

These training opportunities provide a much-needed service to our customers that goes beyond just purchasing or maintaining a boiler. It provides our customers with an in-depth understanding of the boiler they purchased and how it works in concert with their businesses process. In addition, onsite training builds a strong bond between our company and our customers – and we're proud of that.