

HYDRONICS

FROM THE FIELD

Things I Like...and Don't

This is a rundown of my experience with water treatment, piping kits, limited lifetime warranties,

BY DAN FOLEY CONTRIBUTING WRITER

Over the years, I have had the opportunity to try various manufactures' products. Some I have liked, and some I have not liked. Many of these products have left an indelible impression on me, both good and bad. Here are a few I would like to share with you:

The things I like: HydroLevel VXT water feeder

We install many steam boilers annually. I install a VXT feeder on all of them. I do not believe a feeder takes the place of maintenance or homeowner involvement. The water level on a steam boiler should be checked a minimum of once a week.

I certainly do not believe a water feeder to be a safety control. We typically install two low water cutoffs on our steam boilers. Commercial steamers get a second manual reset pressure control. I do look at a feeder as one more level of control to maintain minimum safe water levels in a boiler. I have seen the results of a dry-fired boiler in an apartment building, and I hope I never see it again.

One problem with an auto feeder is installing it on a leaking system. Typically it is a buried wet return that is leaking, but there could also be a hole in a boiler section

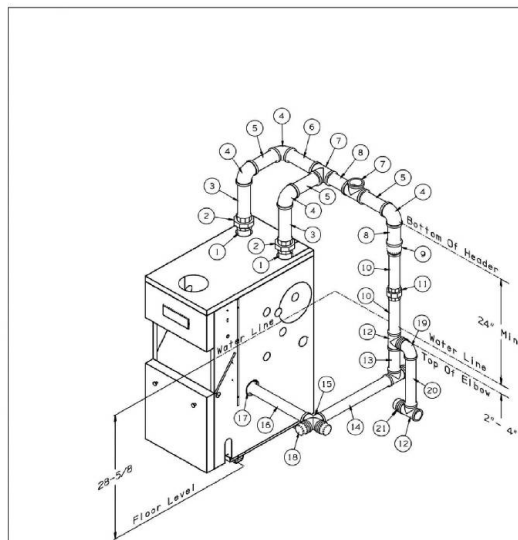
above the water line. The feeder does its job maintaining a minimum water line. Soon, all of the fresh water added to replace the leaking water rots the boiler from the inside out.

The VXT solves this with a built-in water meter. At every service call, the amount of fresh water added is noted on the service sticker. Excessive water use is quickly evident by noting the amount of fresh water that is added. This device avoids the need to add a separate water meter on your boiler feed line.

Fernox water treatment

We have treated the water in our hydronic systems for more than 15 years. This is even more important with modulating condensing boilers, especially when installed with radiant floor systems.

In the past, we purchased treatment chemicals in one-gallon jugs or five-gallon buckets. The chemicals were transferred to the system using short washing machine hoses, a pony pump, buckets and a hose-end ball valve connected to a boiler drain or purge port. This worked okay but could be messy and required your attention to



BSI Kit 5	Number	Quantity	Description
	1	1	2" x 8" Pipe Nipple (See Note 2)
	2	2	2" Union
	3	2	2" x 9" Pipe Nipple
	4	4	2" - 90° Elbow
	5	3	2" x 7" Pipe Nipple
	6 (103)	1	2" x 7-3/4" Pipe Nipple
	6 (138)	1	2" x 11-1/4" Pipe Nipple
	6 (172)	1	2" x 14-3/4" Pipe Nipple
	7	2	2" - Tee
	8	2	2" x 5-1/2" Pipe Nipple
	9	1	2" x 1-1/2" Reducer
	10	2	1-1/2" x 9" Pipe Nipple
	11	1	1-1/2" - Union
	12	3	1-1/2" - Tee
	13	1	1-1/2" x 6" Pipe Nipple
	14	1	1-1/2" x 18-1/2" Pipe Nipple
	15	1	1-1/2" - Cross
	16	1	1-1/2" x 15-1/2" Pipe Nipple
	17	1	2" x 1-1/2" - Hex Bushing
	18	4	1-1/2" - Cap
	19	1	1-1/2" - Elbow
	20	1	1-1/2" x 12" Pipe Nipple
	21	5	1-1/2" x Close Nipple

NOTE: 1. INCLUDE A COPY OF THIS DRAWING IN BSI KIT 5.
2. ONE 2" X 8" NIPPLE ALSO SHIPS WITH BOILER.

A Revised Quantity of Item 3		JP 10-25-14
BSI Kit 5 Near Boiler Piping With 2 Risers For Models 103, 138 & 172		
THE CROWN BOILER CO.	CROWN BOILER CO.	
INC.	NA	IND-034
DATE 11-19-14	REV. NA	
PART NO. 050099	IND-034	

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avoid pumping air bubbles into the system. From setup to the cleanup, the entire operation would take about 30 minutes.

Fernox recently came out with hydronic system cleaner and treatment chemicals in small pressurized cans. Hose adaptors and pipe-thread adapters are included. It now takes literally 30 seconds to inject the chemicals into the system with no chance of introducing air. You simply screw the hose adapter onto the boiler drain and squeeze the lever. It could not be any easier. I have used these cans to treat our systems for almost a year now and have not looked back.

Crown piping kits

Crown Boiler is one of our primary vendors. We have used its gas and oil fired steam boilers for years. In the past, when we had a steam boiler going in, I would empty the shop of black fittings and send them to the site in our box truck. Often, multiple trips to the supply house were made to retrieve the exact nipples or fittings needed to complete

I wrote about vent dampers in a column almost two years ago. Nothing has changed since then. They are the bane of my existence as they seem to fail only on nights, weekends or holidays. They are of minimal benefit, and they are the weak link in the system.

the job. Cutting and threading three-inch and four-inch steel pipe is messy and time-consuming but was often necessary to complete the near boiler piping.

Crown innovated a piping kit for many of its steam boilers that simplifies this process. You can order a piping kit that matches the specific boiler. It contains the exact fittings, nipples and pre-cut pipe required to pipe the boiler to the specified standard. A material list and piping diagram is included in the kit (see drawing). No more cutting and threading. No more trips to the supply house. Everything you need is included.

This really speeds up the piping process. It also allows my less skilled crew to pipe the boiler to the same standards as my number one boiler crew. No more having to re-pipe a boiler that may not have been installed exactly the way I wanted it to be piped. We now order piping kits for all of our steam jobs if available for that particular model.

And, things I don't like: Vent dampers

I wrote about vent dampers in a column almost two years ago. Nothing has changed since then. They are the bane of my existence, as they seem to fail only on nights, weekends or holidays. They are of minimal benefit, and they are the weak link in the system. Either the damper motor fails or the end switch no longer makes contact. The result is the same: no heat and, in many cases, no hot water

if you have an indirect.

If you replace one damper over the life of the boiler, you have erased any potential savings. I no longer replace them when they fail. I do my clients a favor and lock the damper open and jump out the end switch. I will continue to do this until a reliable vent damper is included with the boiler. I have yet to see one and I am not holding my breath.

CycleGard LWCOs

I love almost all HydroLevel products and have used them for many years. I have used its feeders, limit controls, low water cutoff safeties and flow switches for years, with excellent results. The one product I do not care for is the CycleGard LWCO. Unfortunately, it comes from the factory on many packaged steam boilers.

After a long day of piping a steam boiler, you just want to wrap up, get paid and go home. You fire the boiler and start the combustion test. The boiler starts steaming and the radiators start to get hot. Just as you are trying to finish up the combustion test and print the results, the burners shut down. What happened? Did someone flip the switch? Did the owner turn down the thermostat? No, it was the CycleGard shutting down the burner, purportedly to get a good water level reading. Time to start the combustion test all over again.

This is an example of a product that is designed around the lowest common denominator. Some contractors may not properly clean and skim a steam boiler, leading to foaming and dirty, volatile water conditions in the boiler. Rather than implore contractors to properly clean the boiler, a CycleGard is specified instead. My solution is to properly clean and skim my steam boilers and replace the CycleGard with a SafGard LWCO.

Warranties that are not for life

I won't pick on one manufacturer, as it applies to several I have used over the years. The consumer brochures prominently display the wording "Limited Lifetime warranty." The key word is "limited." Better read the fine print.

One example is a product I installed in a client's home. The decision to purchase this product was based at least partly on the lifetime warranty. Needless to say, it failed and the owner was looking to take advantage of the lifetime warranty. Only in this case, it was over ten years. After ten years, the warranty is pro-rated. The manufacturer offered \$235 credit towards a replacement, which would cost over \$4,000.

My customer declined, and we installed another manufacturer's product which came with a true, non-pro-rated lifetime warranty. He was not a happy camper, and neither was I. I no longer use any of this manufacturer's products as I feel its marketing materials were grossly misleading at best.

These are a few examples of the things I like and don't like. If you agree, or disagree, please share your thoughts with me. And add a few of your own. ●

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