

Going Lead Free

Ahead of the curve

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Franklin, N.H., looks like a little slice of Americana — something that Norman Rockwell may have tried to capture on canvas. And it is here in this charming village that Watts Water Technologies has been operating a factory since 1959. The original factory, a 72,000-square-foot facility that was built under the leadership of the Horne family at the time, has grown

free foundry. This spring, my colleague Brad Burnside and I had the opportunity to take a special guided tour of both foundries with Watts Director of Operations Tyler Stone, Director of Strategic Partnerships & National Lead Free Spokesperson Stephanie Ewing, and Marketing Communications Manager Mike Gaulin. Afterwards, we sat down to talk about Watts' objectives in making this significant investment. We also discussed the role that Watts has taken in educating customers on the

the shifts, capacity, longevity of employees, range of products etc.

Stone: We now have two foundries in Franklin, N.H. — our existing WEFCO 1 foundry and our new WEFCO 2 foundry designed to produce our lead free products. The annual capacity of the WEFCO 1 foundry is 6 million lbs/year of (bronze alloy), while the new WEFCO 2 foundry will have an annual capacity of 9 million lbs/year (LF Bronze Alloy). Both foundries run two shifts and provide additional future capacity. The Franklin campus has the broadest offering of any man-



“Watts felt strongly that we wanted to be able to control the entire process.”

pus employees over 500 employees. The average tenure of employees is roughly 17 years.

As you know, the Franklin campus has been in existence since 1959 (54 years). We have recently had retirements of folks with 44 years of service. We enjoy lots of experience on the

campus and it's our employees' continued dedication that has made our new foundry project a success. We have a great group of folks in Franklin. At our upcoming lead free foundry grand opening event we will have all the current employees and 80 retirees in attendance. At this event, we will recognize employees for their ongoing loyalty to Watts.

MJM: How did Watts make the decision to make such a major investment? (Turn to Preparing... page 136.)

Watts Water Technologies makes significant investment in new lead-free foundry

over four-fold with 400,000-square-feet under roof today — which includes numerous expansions as well as the addition of a foundry in 1977.

The latest addition, continuing their commitment to manufacturing in the U.S., is Watts' new 40,000-square-foot, multi-million-dollar lead

Reduction of Lead in Drinking Water Act, which takes national effect on January 4, 2014.

Following are excerpts from our discussion:

MJM: Please share some specifics on these two foundries, including

ufacturing site in the company with close to 12,000 active part numbers. Our product mix includes: Regulators, Temperature and Pressure Relief Valves, Backflow Preventers, Tempering Valves, Ball Valves, and Check Valves. We ship 280,000 valves per week. The Franklin cam-



“The Franklin campus has the broadest offering of any manufacturing site in the company with close to 12,000 active part numbers.”

Preparing for change

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ment, rather than just refurbishing your existing facility?

Stone: Quite simply, we needed to do this. We knew this facility will really set us apart. It is the only new dedicated lead free facility in the U.S. Nothing in the new foundry will have ever come in contact with leaded alloys.

This investment gives us control of the materials we use, the manufacturing process and the quality of the products we put into our customers hands.

Watts has always had such a great reputation for quality, and we wanted

to ensure that would continue with our new lead free products. Some manufacturers have chosen to go in other directions for their lead free offerings rather than invest in something internally, but Watts felt strongly that we wanted to be able to control the entire process.

MJM: Let's talk about this new foundry. It's amazing how quickly you've been able to get it up and running.

Stone: We wanted to be ready for the legislation and ready for our customers.



Watts Water Technologies has been operating a factory in this slice of Americana, the charming village of Franklin, N.H., since 1959.

This has been a huge project and challenge. The first shovel went into the ground last August, and we were operational in April. I got all the support I needed from management to go as fast as humanly possible on building this facility. In fact, there's a new McDonalds under construction in town that started months before us and is still not completed.

As we reach planned capacity in June and July, throw us any pitch and we're gonna hit it. This is a nimble facility ready and armed.

MJM: How much of your product is being converted into lead free versions?

Ewing: Approximately 60% to 70% of our offerings are going to be available in lead free models. We will, of course, continue to dual inventory some products that are also used in non-potable applications like fire protection, irrigation and industrial.

MJM: What is it about the lead free alloys that are so different — and that makes those products more expensive?

Stone: Lead is soft so it's very easy to work with. The reason it's been such a popular material to use for these products is that when you put it in bronze, it makes it so easy to pour and cut.

The cost differential comes from

"We have taken numerous steps to educate our customers. I have been talking with customers about the impacts of this legislation since 2009."

the new materials that have to be used; they are just much more expensive to source and, because the tensile strength of the material is higher, they are also more difficult to work with.

We are using a silicon-based bronze. Our R&D Department spent a lot of time analyzing different materials. They gave us selections of what to choose from and how the variations would fit our process and meet the requirements. They felt



this choice was best for the applications we are in.

MJM: Watts has also invested a significant amount of time and effort



Director of Operations Tyler Stone shows off one of the lead free castings made at Watts' new foundry.



Director of Strategic Partnerships & National Lead Free Spokesperson Stephanie Ewing says, "We've been a leader in this movement since 2007."

into educating customers on this new legislation. Why has Watts been so passionate about taking on this role?

Ewing: We've been a leader in this (Turn to A nimble... page 139.)

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movement since 2007. For us, at first it was about getting ready for the legislation to take effect in California and Vermont, and then it was about what was to come nationwide. The preparation has been a company-wide effort. We've invested a lot to ensure we have educated and built in flexibility to serve our customers needs effectively. That investment has been greatly appreciated.

Gaulin: To help better educate our customers and the industry we created the website www.WeAreLead-Free.net. It is a great resource to learn about the changes and to help customers in putting together a tran-

Ewing: We have taken numerous steps to educate our customers. I have been talking with customers about the impacts of this legislation since 2009. In 2011, I was appointed the leader



Heating a crucible prior to pouring molten bronze into molds.

'A nimble facility'

sition plan. We have also created a number of informative videos from customers in those states that have already made the change so others can learn from their experiences. Our product lookup tool also lets customers cross reference their current Watts products to the new lead free-equivalent products. I encourage anyone who has not done so already to check out the site.

MJM: *Stephanie, you in particular have been a major voice for Watts on this issue. Talk about some of the steps you've taken to educate customers and various presentations you've given at industry meetings?*

within the company to help in educating customers regarding lead free after the state of Maryland adopted lead free legislation. With my role as a national speaker in industry meetings or at Get The Lead Out Plumbing Consortium speaking events, I always start with the basics. I make sure that customers understand what the

(Turn to Not just... page 140.)

An Act

To amend the Safe Drinking Water Act to reduce lead in drinking water.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Reduction of Lead in Drinking Water Act".

SEC. 2. REDUCING LEAD IN DRINKING WATER.

(a) IN GENERAL.—Section 1417 of the Safe Drinking Water Act (42 U.S.C. 300g-6) is amended—

(1) by adding at the end of subsection (a) the following:

"(4) EXEMPTIONS.—The prohibitions in paragraphs (1) and (3) shall not apply to—

"(A) pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non-potable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; or

"(B) toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger."; and (2) by amending subsection (d) to read as follows:

"(d) DEFINITION OF LEAD FREE.—"(1) IN GENERAL.—For the purposes of this section, the term 'lead free' means— "(A) not containing more than 0.2 percent lead when used with respect to solder and flux; and "(B) not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures. "

(2) CALCULATION.—The weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture shall be calculated by using the following formula: For each wetted component, the percentage of lead in the component shall be multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead of the component. The weighted percentage of lead of each wetted component shall be added together, and the sum of these weighted percentages shall constitute the weighted average lead content of the product. The lead content of the material used to produce. 3874— wetted components shall be used to determine compliance with paragraph (1)(B). For lead content of materials that are provided as a range, the maximum content of the range shall be used."

(b) EFFECTIVE DATE.—The provisions of subsections (a)(4) and (d) of section 1417 of the Safe Drinking Water Act, as added by this section, apply beginning on the day that is 36 months after the date of the enactment of this Act ●

Not just compliance. It's a total philosophy

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new law references and furthermore the definition of lead free. Everyone is still in a learning process. So, that information is always a good starting point. I then focus on what the impacts of this change mean to them, depending on their position in the supply chain: distributor, contractor, engineer, inspector, or code official. I tailor my discussions to assist all in truly understanding their responsibility for compliance and provide some guidance on readiness.

MJM: Overall, what are your thoughts as we are now just six months from the legislation effective date?

Ewing: The market is in active transition right now. Some customers are beginning to stock new lead free inventory and also trying to get rid of

their old inventory — which is a huge challenge. Customers are really looking to manufacturers to be partners in the process. They need help making the transition less complex and mitigating their risk and potential scrap rate. With the investment in the new foundry and good quality control we have simplified the transition for them. Our customers have truly appreciated this.

Stone: We are ready. For customers who want to feel good about who they are partnered with for compliance, we are the right choice.

MJM: What have been some of your biggest frustrations during this process?

Stone: It feels like we've been in the trenches doing hand-to-hand combat! So much has had to be done to make this significant change.

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The labeling proudly proclaims Watts' commitment to lead free products. "All of our lead free products come in cases that are clearly marked 'lead free' with a bright blue color," says Marketing Communications Manager Mike Gaulin.

Ewing: Managing the ambiguous parts of the new law. We've been asking the EPA for guidance on certain areas and specifics. We have great clarity around the actual lead content, but there are still questions around the scope of the new law and enforce-

ment. We look forward to additional guidance from the EPA as we approach January 4, 2014.

MJM: Are you doing anything different with your packaging for (Turn to State-of-the-art... page 142.)

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 the lead free versions to make them easily identifiable?

Gaulin: Yes, all of our lead free products come in cases that are clearly marked lead free with a bright blue color. We are also marking individual product packaging where it exists. Many of our products also include an “LF” cast into their bodies to identify them as lead free. We want to ensure there is no confusion about which of our products are lead free.

MJM: What are some of your projections and growth plans for the near term, especially based on what you foresee as demand for these products?

Ewing: We expect a 1 to 1 transition for lead free products. Meaning for every affected product we expect to have equal demand for the lead free version. We also expect that some customers will want to do more with Watts given our lead free foundry investment. This entire project is really about protecting our customers and ensuring we will continue to provide them with the best products that will protect their businesses and reputation. We continue to strive to be a value added partner to our customers. ■



State-of-the-art foundry puts Watts at the forefront



The top photo illustrates Watts' plan for its modern, clean, well-lit new WEFCO 2 foundry with an annual capacity of 9 million lbs/year running lead-free bronze alloy. Both of Watts' foundries run two shifts and provide additional future capacity. Above, an employee packages product for shipment, while upper right, Tyler Stone and a Watts employee ready some of the facility's production machinery for operation. At right, a lineup of core patterns await placement in molds prior to pouring the silicon-based bronze material chosen by Watts' R&D department for lead-free products. Although Watts' new foundry has the latest in production equipment and controls, the actual casting process dates back centuries.