

Boiling Up A Pot Of Conservation



As part of its compliance with a PepsiCo corporate mandate on resource conservation, the Quaker Oats Bridgeview Division food manufacturing plant has installed two Miura Boiler LX200 gas-fired steam boilers to reduce fuel and water consumption, increase energy efficiency, and cut emissions. The 400,000 sq. ft. facility, located just west of Chicago, is where Pasta Roni and Rice-a-Roni are made. Steam from the two Miura boilers is used for manufacturing and for heating the plant during winter months.

“The efficiency of the Miura boilers has enabled us to realize a 20 percent reduction in fuel consumption, which amounts to a savings of approximately \$80,000 a year,” states Terry Hronec, facility engineer at the Bridgeview Division. “The two 200-h.p. Miura boilers are so efficient that we’ve eliminated two older fire-tube boilers, a 750- and a 300-h.p. unit.”

“The recovery time of the Miura boilers is also very fast,” Hronec adds. “People don’t believe me when I tell them that it’s two minutes. Then I bring them out here, pull out a stopwatch, hit the ‘start’ button, and they see that within two minutes the boilers are up to 135 psi — online and running.”

Miura boilers produce steam in just five minutes (or less) due to their exclusive “once-through” design, which provides fast response and high in-service operational efficiency. This Miura-exclusive technology also produces BHP outputs comparable to much larger units, but with far less water consumption and a more compact footprint, which can reduce new construction costs and better utilize existing boiler-room space.

“We poured a concrete pad and put in the necessary piping and valves for a third Miura boiler, which we will use as a back-up,” Hronec notes. “The pad for our three Miura boilers is actually smaller than the footprint for the one 300-h.p. boiler we’re removing. Plus, we now have space to walk around the boilers, and the room is a lot

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cooler than it was with the old fire-tube boilers.”

In addition to their increased energy efficiency and smaller size, Miura boilers also feature a “green” design that reduces harmful emissions such as nitrous oxide (NOx). Miura Boiler’s gas-fired/Low-NOx LX Series steam boilers are designed to eliminate 75 percent of the harmful emissions of standard gas-fired boilers. Miura Boiler’s LX Series steam boilers also deliver a Low-NOx rating of 20 ppm (standard gas-fired boilers, however, produce pollutants at a rate of 80 ppm).

“The low NOx output is another great benefit,” Hronec says. “And we have an Economizer on the stack of both Miura boilers, which is also a plus. It pre-heats the make-up water coming back to the boilers, which further increases their efficiency.”

System monitoring and diagnostics are also integral to Miura boilers. A panel on the front of Miura’s LX and EX boilers presents instant, easy-to-read status information about multiple monitoring points measured by the boilers’ built-in BL Mirco Controller Boiler Control System. Should a problem arise, the system identifies it and suggests a solution in plain, descriptive English. Featuring simple, intuitive programming and operation, the system is easy to set up, program, and operate. Boiler operations can also be monitored via an online maintenance system with a “sliding window feature” that records events four seconds before they occur for quick identification and correction.

Hronec continues: “We have the capability of monitoring the boilers anywhere from a PC. The system stores data and you can pull reports off of it. It tells you what the gas consumption is, how many therms are being generated, and it’s constantly monitoring the conductivity of the water, which is very important. And as far as our steam usage goes, we can monitor how often it’s running low fire, high fire, and directly coordinate that with our production schedule. When we see a trend in gas consumption we can directly correlate that with how many pounds of steam we use. It’s all good information.”

“Miura boilers are fantastic,” Hronec concludes. “Miura Boiler has its act together. I’m very impressed with them. They really did their homework in designing these steam boilers.”

***Miura Boiler** was founded in 1927 and has grown to become one of the largest industrial steam boiler manufacturers in the world. In 2009, Miura opened a new U.S. manufacturing facility in Polk County, Georgia. For more information on Miura boilers, call in the USA 1-888-309-5574. In Canada call 1-800-666-2182. Visit Miura online at www.miuraboiler.com [1].*

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