MIURA

MIURA success stories

MARKET:
College/Universities

USAGE:
Efficient Steam Generation, Energy Savings, Reduced Emissions

CUSTOMER:
University of Arkansas, Texas Southern University

The University of Arkansas Chooses Miura Boilers to Meet Varying Load Demand

When it comes to generating steam to provide heat and hot water for a major university campus, load demands can vary greatly in a short span of time. This is why the University of Arkansas installed six Miura LX-300 natural-gas-fired steam boilers to handle the On-Demand Steam requirements of the many buildings on its 350-acre Fayetteville campus.

"Being in Northwest Arkansas, we have weather and temperatures that can vary widely," explains Scott Turley, the University's Director of Utility Operations and Maintenance. "Also, being a university campus, we have high morning warm-up loads when students are getting up for class and taking showers, but that drops off pretty quickly throughout the day. Trying to accommodate that varying load demand with old, large, central-stationed boilers is not the most efficient approach. Replacing them with Miura's modular, rapid-start, step-fired boilers that can match our load profile much more closely is more appealing to us."

"On-Demand Steam is a great asset for us," Turley adds. "To be able to spool the boiler up very quickly, and then take it back down offline when the load dies down is really helpful. Another advantage of the Miura boilers is that if, by chance, we lose a boiler for some reason, we only lose a sixth of our production capacity.

If you lose a large packaged boiler, you can lose it all. That additional reliability factor of a multiple installation of Miura boilers is also something we liked."

"The other nice fit that the Miura boilers provide is that through our performance contract with Johnson Controls, who installed the system, we added a centrifugal heat pump," Turley continues. "Part of the heating on campus is now being done by this heat pump, and since the Miura boilers have the ability to start up very quickly and get up-to-load fast, they are a great complement to that technology."

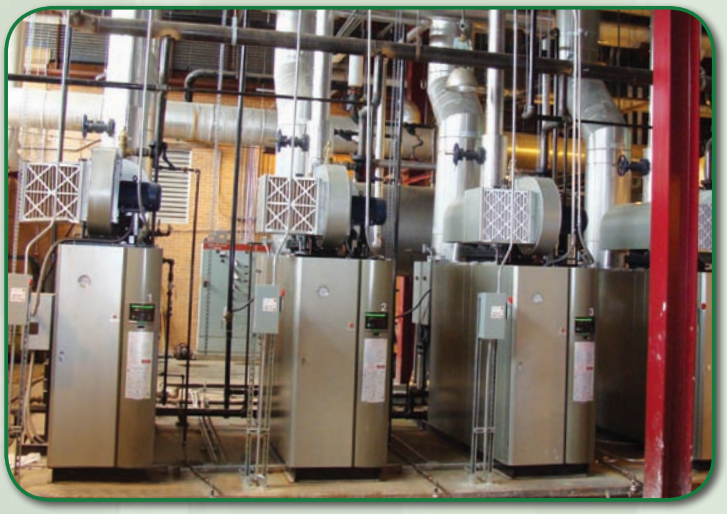
With the installation of the six Miura LX-300 steam boilers, the University of Arkansas has not only upgraded its physical plant with the advantages of On-Demand Steam and a reduced environmental footprint, it has also saved money. Preliminary measurement and verification of project savings conducted by Johnson Controls found that the University of Arkansas has saved approximately $280,000 since the installation of its six Miura boilers.

Further contributing to their energy-saving, green performance is Miura's innovative use of precision computer technology. Each Miura boiler is equipped with a BL Micro Controller Boiler Control System that measures multiple individual monitoring points and provides operational status on pressure, temperature, and other factors on an easy-to-read digital display. A self-diagnostic feature can identify issues, should they arise, and the Miura Online Maintenance feature that comes standard with every Miura boiler provides remote monitoring and control via the Internet. The system can also interface with Miura's Colormetry system, which monitors water quality to prevent the build-up of scale inside the boiler. (Users can opt to use Miura's own BOILERMATE® water-treatment chemicals, the main ingredient of which is silicate, an environmentally friendly corrosion inhibitor.) ●

Miura Ultra-Low NOx Modular On-Demand Steam Boilers Deliver Multiple Advantages To Texas Southern University

Texas Southern University upgraded a central steam plant with the installation of four gas-fired LX-200 boilers from Miura, the world leader in ultra-low NOx modular on-demand steam solutions. According to Tim Rychlec, TSU's Executive Director of Facilities and Maintenance Services, the Miura boilers have brought numerous benefits in terms of convenience, reliability, "green" operation, and – most important – economy.

"We were spending around $1.2 million annually on natural gas consumption with our old fire-tube boilers, but that has dropped to about $400,000 since the Miura boilers were installed," Rychlec says. "Installation of the Miura boilers provides a 66 percent reduction in natural gas usage and it has also increased our overall steam production. We no longer have problems getting steam to any of the buildings on campus."



"The university is getting ready to add additional structures, but we won't have to upsize the Miura steam plant because we have more than enough capacity right now."

Tim Rychlec, Texas Southern University
Executive Director of Facilities and Maintenance Services

Miura boilers produce fewer emissions than conventional boilers, outputting reduced levels of nitrogen oxides (NOx), a major contributor to air pollution, as well as carbon dioxide (CO_2), the most prevalent of greenhouse gases.

On-Demand Steam

Miura's exclusive technology enables its boilers to go from a cold start to full steam in less than five minutes. This on-demand steam-generation performance is easily scalable to very large output capacity applications by utilizing its modular "MI" system, in which multiple Miura boilers can be sequentially staged on or off as needed to match load fluctuations, as opposed to consuming energy while constantly idling in stand-by.

"Miura's on-demand steam capabilities are important to us," Rychlec explains. "Last winter was the coldest we've had in quite a few years. We had a long stretch of below-zero temperatures and a lot of icing conditions, but every morning we were able to start all four Miura boilers at once and warm our structures very quickly because of the on-demand steam feature, which made a huge difference."

Diagnostics and Automation

Miura's BL Micro Controller boiler control system keeps track of multiple individual monitoring points. This system can also be accessed via the Internet (Miura Online Maintenance, or "MOM") for remote monitoring and diagnostics.

"We have MOM tied to our campus automation system and can access the boilers remotely through a VPS [virtual private server] and secure VPN [virtual private network]," Rychlec says. "This has made things a lot better in our whole HVAC world. Temperatures are more stable inside classrooms and throughout the university."

"We have more capacity than we will ever need, which is a good thing," Rychlec adds. "The university is getting ready to add additional structures, but we won't have to upsize the Miura steam plant because we have more than enough capacity right now. Not only that, but we put four Miura boilers and a feed tank in the same footprint that just one of the old fire-tube boilers used to occupy. Now we have this huge extra space in our central plan that we can use for other things. Plus, the reliability of our Miura boilers allows our steam engineer to get more done."

To learn more about the American College & University Presidents' Climate Commitment go to: ***http://www.presidentsclimatecommitment.org/about/mission-history***

View Miura's Virtual Start-Up Video

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Miura Steam is Engineered for Greater Efficiency, Lower Costs, and Reduced Environmental Impact.

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