

Manufacturing with Miura Boilers

Quick Steam, Convenient Load-Pattern Matching, In-Service Efficiency, and Computer Control Make Miura Boiler the Choice of a Worldwide Leader in Performance Fabric Manufacturing

Founded over a century ago, Glen Raven is today a global leader in the creation of performance fabrics used for awnings, casual furniture, sails and boat canopies, and many other demanding outdoor applications. Based in Glen Raven, North Carolina, Glen Raven Technical Fabrics, LLC recently upgraded its textile dyeing and finishing infrastructure by installing five Miura EX-300 industrial steam boilers. Engineered for quick start-up, fuel economy, and reduced emissions, Miura boilers provide Glen Raven with the flexibility it needs to meet the ever-changing demands of its manufacturing processes.

"We made a lot of system changes when we went from our two previous large boilers to our smaller bank of five Miura Boilers," states Mike Harrington, Project Engineer for Glen Raven's

Technical Fabrics Group. "The new system is paying off and Miura Boilers are a big part of that. We have seen increased efficiencies."

"We're running anywhere from 80 to 87 percent efficient with the Miura boilers," says Steve Holt, recently retired Head Operator and Plant Engineer at Glen Raven. "We have an erratic steam load, but you can bring these boilers up fast and have them online in about ten minutes."

Glen Raven's multiple installation (MI) of five compact Miura EX-300 steam boilers can be turned on or off in varying numbers to match prevailing load patterns, thus saving fuel and water, as well as minimizing the emissions typically produced by idling boilers. In addition, the NOx (nitrogen oxide) rating of Miura's EX Series



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boilers can be as low 30ppm, depending on the model of the boiler.

Miura Boiler also offers an MI Controller that turns boilers on or off to match load patterns and achieve the highest possible in-service efficiencies, which are a measure of overall boiler performance (regardless of load profile) that takes into account all factors of boiler operation (combustion efficiency, thermal efficiency, fuel-to-steam efficiency, etc.) and total operation cycles.

The "once-through" design of Miura boilers turns water to steam in just five minutes and, on average, saves 20 percent in fuel costs over other boiler designs (based on today's fuel costs). At a 20 percent fuel savings, Miura can save about \$200,000 per year in fuel for a typical 600 BHP steam system (based on the price of natural gas at \$0.09/therm).

Harrington explains that Glen Raven's five Miura boilers supply steam to the company's process dye houses. "We're heating water, and getting to temperatures of 265 degrees F in pressure vessels to do textile dyeing," he explains.

"We send steam about a quarter of a mile down the road to the other plant," says Holt, "and we don't have any problems with wet steam. Miura boilers are also safer and a lot easier to operate than the old boilers, with not near as much maintenance."

"With their computer controls, on-board diagnostics, and the safeties that are in there, Miura boilers just don't require the high level of manual observation that old, larger boilers did," agrees Harrington.

"We continue to be very positive about our investment in Miura boilers, and look forward to many years of payoff with it," Harrington concludes. "We know we are getting a return."

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