



Lochinvar Water Heating Solutions

Case In Point



Michigan Lutheran Seminary Upgrades High School with Lochinvar High Efficiency Boilers

With new science comes new technology. When Michigan Lutheran Seminary decided to add a new science wing, the private high school also chose to modernize the science used to heat the entire facility. The outdated technology of live steam was to be converted into a high efficiency hot water system, using the most modern Lochinvar® technology.

The mission of Michigan Lutheran Seminary (MLS) is to train high school students for public ministry and, upon graduation, to enroll them at Martin Luther College in Minnesota. Although MLS was founded in Saginaw, Michigan, in 1885, the current facilities first opened in 1950 and have been expanded upon three times—in 1963, 1985, and most recently in 2002. The 103,000-square-foot preparatory school serves 300 students, 30 teachers, and 25 staff members.

With construction about to begin on the new science wing, school officials had the foresight to merge this project with an extensive renovation of their existing facilities, including a cost-saving upgrade to an overwhelmed 50-year-old live steam heating system. “The old boilers simply couldn’t keep up with the demand,” explains John Beyersdorf, assistant superintendent of maintenance and grounds at MLS. “We wanted to do away with the entire live steam system.”

In Brief:

Project:

Michigan Lutheran Seminary

Location:

Saginaw, Mich.

Products Used and Number of Units Installed:

2 – Lochinvar Intelli-Fin® Boilers
(IBN-1500)

For More Information:

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Lebanon, Tenn. 37090

Michigan Lutheran Seminary
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Engineering Applications, Inc.
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About Lochinvar

Lochinvar® Corp. is a leading manufacturer of high efficiency water heaters, boilers and pool heaters, ranging in capacity from small residential units to two million Btu/hr models. Lochinvar's world headquarters is located in Lebanon, Tenn

Other facilities include Detroit, Mich.; Tampa, Fla.; Orlando, Fla.; Philadelphia, Pa.; and Dallas, Texas. Lochinvar stocks equipment at all locations.

For more information regarding Lochinvar's line of high efficiency water heaters, boilers and pool heaters, contact: Lochinvar Corporation, 300 Maddox Simpson Parkway, Lebanon, Tenn. 37090; Phone: (615) 889-8900; Fax: (615) 547-1000; www.Lochinvar.com.



The Built-In Advantage™



1.5 million Btu/hr Lochinvar Intelli-Fin® (IBN-1500) boilers to replace the school's 1950 Kewanee and 1980 Weil-McClain steam boilers.

"Lochinvar has a well-earned reputation for quality, reliability, and service," says Knox. "Plus, they're priced competitively and leave a smaller footprint." The school's mechanical room is 20 feet long by 20 feet wide with 12-foot ceilings. "The vertical boilers really simplified the installation process, and they freed up plenty of room for the switch gear and additional pumps."

"The old boilers took up half of the room," adds Beyersdorf. "The new Lochinvar boilers opened up a lot of space, and the installation went very smoothly."

The new system also allowed the school to remove two antiquated steam-to-water heat exchangers, but the school's most critical requirement was the ability to deliver an unvarying level of comfort quickly and consistently despite Michigan's often-bitter winters. "With the old steam system, we had to wait as much as three hours for it to get up to speed. The Lochinvar system takes just thirty minutes," remarks Beyersdorf.

The Intelli-Fin models operate at 97 percent thermal efficiency, which means 97 cents out of every fuel dollar are used to create heat. MLS also chose to install a Metasys automated control system from Johnson Controls. By switching to the new high efficiency Lochinvar system, the school was able to add 11,000 square feet of classroom space without raising heating costs a cent. Based on heating degree day comparisons, the school now heats its entire expanded facility with the same amount of energy consumed by the old steam boiler system before the expansion. According to Beyersdorf, the new system also provides remarkably even distribution of heat throughout the entire school, rectifying a major concern of MLS.

The full retrofitting of the live steam heating system at Michigan Lutheran Seminary was complete in September 2002, and Engineering Applications was able to finish the project under budget. "We went through a brutal winter just months after the new Lochinvar boilers were installed at MLS, and then another one this year," recalls Knox. "I didn't hear one complaint or concern from the school. No problems at all."

"We are really impressed with these things," Beyersdorf confirms. "Yes, we are very satisfied."

Engineering Applications, Inc., of Lansing, Michigan, accepted the challenge of retrofitting the entire school with a hot water system. Engineering Applications has a long history with Lochinvar, and the maintenance department at MLS independently urged the school to choose Lochinvar boilers after receiving positive feedback from other local schools involved in similar construction projects. Brian Knox, the mechanical engineer for the project, elected to install two

