GEORGE T. WILKINSON CO. INC.

Pipeline

Winter 2003

Specialists in Advanced Combustion Technology Since 1951

Limited floor space and the need for no disruptions were conditions easily met by Wilkinson

INDUSTRY NEWS

Boston's 'Grande Dame' Warms to Disruption-Free Installation

The Fairmont Copley Plaza Hotel is one of the oldest and most recognized luxury hotels in Boston. It is a hotel with old traditions, but now it also sports a modern and highly efficient new steam boiler plant.

George T. Wilkinson Co. Inc. was contracted late last summer by the hotel and it's Chief Engineer, Edward Dustin, to install two 200 BHP, 15 psig Wilkinson Centurian™ steel firebox boilers with advanced combustion technology Webster/ Autoflame dual fuel burners.

This was not a simple installation, as the boiler room has limited floor space and the egress to the boiler room was complicated.

SOLUTION: In order to achieve an installation of high quality with efficient steel firebox boilers, the boilers would have to be cut elsewhere and shipped/erected in manageable pieces on site as opposed to factory manufactured. This is a complicated, yet simple process thanks to the use of high-technology steel cutting by CAD plasma cutters at the steel fabrication shop. Wilkinson, working with EASCO Boiler Co. of Bronx N.Y., installed these boilers, which exceed all ASME and ABMA codes and regulations, and are in full compliance with all U.L. certifications.

The hotel had an additional dilemma; how could they remove the old boilers without disrupting their kitchen and laundry steam requirements while the new boilers were installed?

SOLUTION: Wilkinson Mobile Boilers Inc. provided a 150 BHP trailerized fully self-contained mobile boiler room on site as primary steam for the entire duration of the project. This not only saved the hotel from the major added expense of performing the boiler replacement piecemeal, it allowed the project to proceed at a reasonable pace. Additionally, Wilkinson installers were able to show the customer that a quality installation is the most important result of dedicated hard work. Wilkinson and Copley personnel worked in a spirit of cooperation and partnership to achieve uninterrupted success that benefited

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CLIENT SERVICES

Energy efficiency incentives one solution during budget crisis

As tight budgets become a way of life in both the public and private sectors, facilities managers find themselves in the difficult position of desperately needing to upgrade or replace heating equipment, but having no funds. Still others recognize they could save on rising energy and operating costs or make environmental improvements if only they could find an initial source of capital.

There's good news on both fronts. George T. Wilkinson Co. Inc. is helping a growing number of organizations replace outdated equipment, improve comfort and reduce environmental concerns while staying within – or actually reducing – existing operating budgets! These organizations may be eligible to receive incentives from natural gas and electric utilities, and Wilkinson can help businesses and institutions determine if they qualify. Beginning around the time of the energy crisis 30 years ago, utilities were encouraged by regulators to conserve energy both on the distribution, or "supply" side, and the end-user or "demand" side. As such "demand side management" (DSM) incentives were created, and today are simply known as energy efficiency programs.

"Typically, utility energy efficiency programs pay for up to half of the difference in cost between standard and high-efficiency equipment. Utilities will also consider other improvements short of full replacement that generate significant energy savings. Combining good engineering, incentives from utilities and overall energy savings from more efficient equipment, one can expect a speedy return on investment," said Steve Zilonis, Wilkinson sales engineer.

At Phillips Academy Andover, for example, more than half of a recent project was funded by local natural gas and electric utilities, and full payback will occur within three years. (*See related story on page 2.*)

Bay State Gas Co. DSM Manager Derek Buchler advises, however, that funds are limited and proposed projects must be pre-qualified in order to be eligible for incentives. "There is a formula that takes into account the

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Trivia

THIS ISSUE'S QUESTION

Q. Completed in 1907, it was the largest plant of its kind, with twin smoke stacks at 150 and 200 feet tall. Still in operation today, burning 60,000 tons of coal per year, what boiler plant is this and where is it located?

E-mail your answer to ppackard@gtwilkinson.com. If you are correct you will receive a George T. Wilkinson gift pack. Please include your address with your answer. (Answer to the previous question at www.gtwilkinson.com)

COMPANY NEWS

Independent Engineers Find Wilkinson Microprocessor-Based Technology Delivers Huge Energy Savings

George T. Wilkinson and its highly trained and dedicated installers and service technicians lead the industry in installation and service of advanced combustion technology microprocessor-based servo motor based combustion control systems.

More than 500 control systems have been installed by Wilkinson utilizing the Autoflame servo motor-based systems during the past seven years. This is recognized in the industry not only as a major accomplishment in New England, but across the United States!

To illustrate the difference between technology employed in modern and advanced combustion control systems and older installations, consider the difference between "fuel injection" and the old use of carburetors for automobiles. The advent of microprocessor-based combustion controls has, and continues to, save Wilkinson clients millions of dollars in energy savings! The reliability of these controls is phenomenal. Energy savings, by use of these controls vs. old style linkage controls, conservatively exceeds 13% minimally, proven by independent third party engineers. In fact, if you have an old style linkage burner that is more than five years old, and is rated to utilize 3,000,000 BTU's or greater, you may be eligible for almost a 50% cost of the installation rebate from your local natural gas utility under the Demand Side Management Program (DSM).

This opportunity for rebate monies may not last forever and it is especially important to take advantage of this opportunity now. If you require a free engineering analysis please don't hesitate to contact Al Bishop,vice president of sales, at abishop@gtwilkinson.com. This is the best action that you can take for your energy and operational budget.

Boston University is one of many Wilkinson clients enjoying the benefits of advanced microprocessor-based combustion control systems.

Energy efficiency incentives one solution during budget crisis

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potential for energy savings vs. the costs associated with the customer's investment in high-efficiency equipment. Wilkinson understands how these programs operate and can provide the exact information necessary to make an evaluation," Buchler explained. In short, only those projects that otherwise wouldn't be feasible without the utility's help are eligible, he said. "These are incentives, not rebates. Everything is on a case-by-case basis."

Wilkinson works with organizations to conduct an initial audit and then follows through with a cost-benefit analysis of proposed improvements. Projects might involve savings by installing new, high-efficiency boilers or by simply updating controls and motors. More directly, as an NSTAR Electric Registered Instant Rebate Dealer, Wilkinson is able to disburse rebates directly to clients for installation of qualifying electric motor replacements.

On the natural gas side, a majority of Wilkinson's clients fall within the territories of KeySpan Energy Delivery New England, NSTAR Gas or Bay State Gas Company. Besides replacing boilers with high-efficiency models, incentives may be available for installing Autoflame burner controls, for example, that deliver maximum fuel efficiency, emissions control and automation. Autoflame boiler controls deliver dramatic fuel and maintenance savings, reduced emissions and enhanced performance. These modern controls are recognized for fast payback and utility acceptance (*see sidebar below for a specific example*).

On the electric side, most customers fall within the Massachusetts Electric and NSTAR Electric territories. Adding variable speed drives (VSD) to blower motors, for example, can pay for themselves in electricity savings in less than one year. Replacing 1 to 200 horsepower motors that operate at least 2000 hours a year with premium efficiency models may also qualify for incentives.

As energy costs continue to rise, now is the time for savings. Call or email Al Bishop, vice president of sales, at 800-777-1629 or abishop@gtwilkinson.com for information specific to your situation.

Energy savings at Phillips Academy

Picturesque Phillips Academy Andover delivers a top-rated secondary education to more than 1,000 students on a campus of more than 170 buildings and 1.8 million square feet of heating space. The private, residential school, founded in 1778, boasts such notable alums as Presidents George H.W. Bush and George W. Bush, John F. Kennedy Jr. and Rhode Island Congressman Patrick J. Kennedy. Despite its stature, though, Phillips Academy is not unique in its desire to achieve energy efficiency and savings within tight budgets.

Although the campus' central heating plant is comprised of three relatively new boilers (each less than five years old), the school still sought to improve overall plant performance, decrease energy costs, and ensure repeatability and reliability. The combination of engineering expertise at George T. Wilkinson Co. Inc. and local utilities' demand side management (DSM) or energy efficiency programs proved essential in achieving the school's goals.

Wilkinson spearheaded the project by providing Phillips Academy with utility contacts and providing estimated savings based on previous project experience. If not for the incentives, the project would not have been as feasible.

Completed over two seasons, the upgrade delivers annual energy savings, plus added reliability, reduced maintenance costs and

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Energy savings at Phillips Academy

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reduced staff overtime associated with maintenance of older technology. Best of all, just over half of the $210,468 total cost of the project was funded by utility incentives. Bay State Gas Co. provided $92,650 over a two-year period, while Massachusetts Electric contributed $15,268. Businesses and organizations with older heating plants typically enjoy savings as great as 12 percent or more, depending on fuel usage, hours of operation and other factors. As for Phillips Academy, the school can expect to enjoy complete payback of its investment within three years.

The project involved fitting the three existing 1,000 horsepower Johnston firetube boilers with modern controls and installation of variable speed drives (VSD) on the 75 horsepower forced draft fans. The selected control for each unit was the Autoflame Mk. 6 (a micromodulation system controlling air-to-fuel ratios and boiler temperatures and pressures) with exhaust gas analysis (enabling monitoring and minute corrections to the air damper position) and data transfer interface (allowing monitoring and control of the boiler house on a PC). The Autoflame units resolved a multitude of problems with the older technology – namely jack shafts, linkages, modulating motors and non-linear performance.

"Phillips' retrofit was eligible for incentives because the plan generated enough energy savings thanks to the high-tech controls," explains Bay State Gas Co. DSM Manager Derek Buchler. Bay State Gas has had its energy efficiency programs in place since 1993 and Buchler has been instrumental in implementing them for the past six years.

COMPANY NEWS

Mass. Maritime Honors Geoffrey Wilkinson

Geoffrey Wilkinson, president of George T. Wilkinson Co. Inc., has been named Alumnus of the Year for 2002 by Massachusetts Maritime Academy (MMA).

Mr. Wilkinson is past chairman of the MMA Board of Trustees. He is also vice chairman and past chairman of the MMA Foundation. He graduated from the Academy in 1972 and his military service includes achieving lieutenant in the Naval Reserve. Mr. Wilkinson also served in the U.S. Coast Guard.

He has served as president of the Wilkinson Companies since 1985.

TECHNOLOGY UPDATE

Wilkinson's Advanced Technology to the Rescue

When Trammell Crow and Partners Health Care had a boiler system designed for their building, they thought they had all the pieces of the puzzle. Along with a local engineer they had the leading steel boiler manufacturer in the U.S. supplying the system and consulting on the process.

Upon commissioning the building, however, they found that the high-pressure boiler required an on-site operator to be present every weekend. This added expense and inconvenience that hadn't been anticipated, and this was only the beginning. They discovered the boilers had been grossly oversized and were short cycling every 20 seconds.

After going round and round with the manufacturer it was decided they would install a small low pressure Ajax boiler for the weekend load. This too was problematic since it was undersized for the load. After fighting with the system and the manufacturer they had had enough and called in George T. Wilkinson Co. Inc.

Building Engineer Paul Grey called on Wilkinson's Engineering Department to assist him. Within five weeks a new advanced technology burner system was installed, accurately tracking the process steam load. Besides a well-running system, they received a $5,500 rebate from the local utility over and above the fuel savings, enabling the project to pay for itself within a year.

"We had problems with the system since day one! Wilkinson came in and cured the major problems, simply, quickly, and effectively while saving us money," said Grey.

Pipeline

GEORGE T. WILKINSON CO. INC.

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FROM THE PRESIDENT

A True 'New England' Winter

Global warming? I don't think so, at least not this winter! The winter of 2002-2003 certainly has been an interesting and a cold one, so far, as I write this early February 2003.

The past five winters, as we all know, have been relatively mild in comparison to the 100-year normal weather data. The winter of 2002-2003 year-to-date per degree-day is running 10 percent higher than the 100-year norms and 40 percent over the winter of 2001-2002.

In other words, we are finally experiencing a true "New England winter."

I wish to thank all of our associates for "a job well done!" Our technicians have been working very long and arduous hours to make sure that you, our customers, are rapidly serviced 24-hours-a-day, seven-days-a-week. Our service support staff, led by John Sieminski, has given 125 percent to keep everyone warm and comfortable.

I am proud to say that all of our customer's systems installed in the past six years finally saw "winter," and all systems performed as designed and met, or exceeded, expectations. I am proud of our service and installation operations and we are especially pleased that all of our customers systems worked as designed and met old man winter head on!

We thank you for allowing us to work with you over many years to meet the challenges of a real "New England winter"!

Has anyone booked a tee time yet?

Respectfully,

Geoffrey C. Wilkinson, President

SALES AND SERVICE

Intel Boilers Go Hi-Tech

Digital Equipment Corp., acquired by Intel Corporation a few years ago, installed the Autoflame Micromodulation Combustion Control system on multiple boilers in their New Mexico plant four years ago. Based upon the positive performance of the Autoflame at that site, Intel made a corporate decision to install the Autoflame on every boiler they owned and operated in the world.

The project managers at Intel, Hudson, Mass. contacted GTW in early 2002, and requested a proposal to convert three 700 H.P. Cleaver Brooks hot water boilers. The final boiler went on line in August without a hitch, and there have been no issues or service problems after the initial start up.

"GTW delivered exactly what was requested, their technicians were knowledgeable and professional throughout the process," said Intel Project Manager Jerry Culbert. "We look forward to working with them again in the future."

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the guests of The Fairmont Copley Plaza Hotel. The Wilkinson Companies are proud of the design and installation team that made this project such an overwhelming success.

Clients of the Wilkinson Companies always receive the most effective solutions and the leadership to bring the best in 'world class' combustion technology and innovation to every project. Effective partnerships that provide for mutual successes is one way Wilkinson has been satisfying customers for more than 52 years!

For additional information, please contact Geoff Wilkinson or Al Bishop at 1-800-777-1629 or gwilkinson@gtwilkinson.com or abishop@gtwilkinson.com respectively.

If you have story ideas for *Pipeline*, contact Paula Packard by calling (781) 335-2622, or via e-mail at ppackard@gtwilkinson.com

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