

GEORGE T. WILKINSON INC.

Pipeline

Winter 2004

*Specialists in Advanced Combustion
Technology Since 1951*



*Wilkinson converted an existing two-year old problem into an energy-efficient, modern solution at AstraZeneca R&D Boston.
(Photo courtesy of AstraZeneca R&D Boston)*

COMPANY NEWS

Drug firm finds cure in Wilkinson

AstraZeneca Pharmaceuticals Research and Development of Waltham, Massachusetts is well recognized worldwide for its commitments to excellence and standards. It is no wonder then the company refused to accept two-year-old burners that never met specifications, had been virtually inoperable since installation and threatened to compromise the company's quality.

The system – essential for generating high pressure steam for sanitizers, autoclaves and other delicate equipment – was unsafe, unreliable and failed to meet emissions requirements. Last spring, after the original vendors walked away following repeated unsuccessful attempts to resolve the problems, AstraZeneca turned to George T. Wilkinson Inc. for relief.

Wilkinson engineers discovered that, while the heat exchangers were adequate, three factory-supplied Power Flame gas burners were the culprits. Besides safety and dependability issues, the equipment was incapable of meeting specifications for

nitrogen oxide emissions (NOx) of 28 parts per million (PPM). Further, the original mechanical linkage technology, used to match proper air/fuel ratios to meet emissions and to operate the system quietly with no combustion harmonics, was not up to the challenge, said Geoffrey C. Wilkinson, president of the Wilkinson Companies. Over time, problems would be compounded as expected expansion of the facility took place.

SOLUTION: Wilkinson engineers, upon methodical analysis, determined the only solution would be the design of a total replacement system. Within three months, two years of problems were finally put to rest.

Best of all, AstraZeneca Pharmaceuticals will achieve payback in five years thanks to thousands of dollars in natural gas, electricity and operational savings. Even upfront costs were offset thanks to incentives secured by Wilkinson through KeySpan Energy, the local natural

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MOBILE BOILERS Mobile boilers to the rescue

It may be Murphy's Law. It may just be coincidence. But it seems that if something is going to go wrong with your heating system, it will probably go wrong when you need it most – in the fall or in winter.

That's what happened this fall at the Lyman Estate in Waltham. The property, also known as The Vale, is owned by the Society for the Preservation of New England Antiquities (SPNEA). It includes a mansion built in 1793 by shipping magnate Theodore Lyman and several greenhouses as well as historic specimen trees, a 600-foot peach wall and late 19th century rhododendrons and azaleas introduced by the Lyman family.

The house is now a museum that can be rented for weddings and private parties. The greenhouses are well known for the flowers and fruit they produce. The estate holds special plant sales and workshops for the public several times a year.

This fall, the boiler system heating the greenhouses failed. "We needed to get a mobile boiler in an emergency situation because we didn't want the plants inside to freeze," said Sean P. Houlihan,

**Wilkinson Mobile Boilers Inc.
www.mobileboilers.com**

MOBILE BOILERS, continued on page 3

FROM THE PRESIDENT

Customers come first with staff

As the year 2003 comes to a fast close, I want to thank you for supporting us as we enter our 53rd year of service to you, our valued customers.

I also want to tell you how great a team of associates we have. They are dedicated to selling, installing, servicing, and maintaining your systems. Our office support and field technicians and installers have a combined 600 years of experience and have worked very hard to meet your expectations. They will continue to do so.

I am extremely proud of their hard work and am most appreciative that our entire workforce are dedicated professionals who strive to go the "extra mile" to meet your expectations.

We consider this a mutually successful partnership and look forward to servicing you with continued excellence now and well into the future.

Respectfully,

Geoffrey C. Wilkinson, President



INDUSTRY NEWS

New tax law helps companies buy new equipment

If you have been thinking about upgrading your heating system or adding new capital equipment, now is the time to do it.

Under the Jobs and Growth Tax Relief Reconciliation Act of 2003 that went into effect last July, companies can expense up to \$100,000 in new equipment through 2005. The tax cut law includes all purchases made during the year and is retroactive to Jan. 1, 2003.

This is a significant change. Previously, the allowable limit for new equipment investment was \$25,000 with a \$10,000 write-off. Now, a company can take a dollar-for-dollar benefit times its tax rate for the first \$100,000. For purchases over \$100,000, the benefit is 50 cents on the dollar times the company's tax rate for the first year. The remainder depreciates normally.

For example, if your new equipment project costs

\$50,000, you can write off \$50,000. Your tax benefit would be \$20,000, if you are in the 40-percent tax bracket.

If the same company installed a \$200,000 project, it could write off the first \$100,000 and receive a tax benefit of \$40,000.

It could also write off half (50 percent) of the second \$100,000 and receive a tax benefit of \$20,000. In other words, the company could write off \$150,000 of its \$200,000 cost and get a \$60,000 tax benefit. The remaining \$50,000 would

be depreciated normally.

However, there is a catch to all of this. The tax cut has a sunset clause and will expire at the end of 2004. To take full advantage of the law, companies have to invest in new equipment as soon as possible.

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INDUSTRY NEWS

Massachusetts Maritime announces new program

The Massachusetts Maritime Academy, in Buzzards Bay, is offering a master of science degree in facilities management. It is the only degree program in the East designed specifically for people in the facilities industry.

The 30-credit, 10-course executive program is offered in a 15-month format at the Buzzards Bay campus. Courses are offered Friday evenings and all day Saturday, every other weekend. The program emphasizes real world experience, leadership and teamwork skills, with special emphasis in the facilities arena.

For more information, or an application package, contact MMA, Division of Graduate and Continuing Education, (508) 830-5096, or visit the MMA online at www.maritime.edu.

CLIENT SERVICES

College's heating overhaul saves money

Dean College is a 138 year-old college in Franklin, Mass., about 45 miles from Boston. The picturesque campus occupies 100 acres of land and has 1,900 full- and part-time students. More than 90 percent of the students live in on-campus housing.

Dean recently began upgrading its heating system. Originally, it had two large boilers heating six buildings. The boilers were 40 years old, too big, inefficient and obsolete. The college began a project to take some of the load off them by putting two of its buildings on a separate boiler system.

After starting the project, it became clear that the school's two primary boilers had to go. Vincent Bravoco, operations manager at the college, contacted George T. Wilkinson Inc.

Wilkinson evaluated the situation and determined that the boilers were falling apart. They were costing the college too much money to operate and most of the heat was lost.

SOLUTION: Replace the boilers with two new boilers and a new hot water system. Reroute the pipe system as well.

Wilkinson's engineering expertise combined with Bay State Gas Co.'s energy efficiency incentives gave the college a new efficient and cost effective boiler system.

"They were superb," Bravoco said of Wilkinson. "I can't say enough about them. Wilkinson designed and oversaw the job. They were meticulous. They even painted the floor. It's really a work of art."

Two Weil-McLain gas-fired boilers using the Autoflame Mark VI combustion control and boiler management system were installed. They heat Dean's main building, classroom building,



Dean College is saving more than \$40,000 a year in energy bills thanks to a Wilkinson-engineered solution. (Photo courtesy of Dean College)

gym and the fitness center building.

The project took about a month to complete. Payback will take 5.33 years. Over that time, the upgrade will deliver \$41,392 in savings per year. Utility energy efficiency incentives were created about 30 years ago to help conserve energy.

Utilities typically pay for about half the cost of a scoping study to determine whether a company qualifies for the program, and half the qualified installed cost of the upgrade. There are maximum limits on the amounts the utilities will pay.

Wilkinson has helped a number of companies upgrade their heating systems by using their utility's energy efficient programs to defray some of the cost.

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.

Drug firm finds cure in Wilkinson

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gas utility. There is even potential to recover more money by 'trading' stack emissions credits with other power plants that may not be as efficient, Wilkinson said.

Turnkey retrofits were installed on the existing two 1,000 BHP, 150-PSI Burnham 3-pass wetback steel boilers and one 500-horsepower (HP) boiler by installing three new burners by Webster Engineering and Manufacturing's HDRV series. These dual fuel, low NOx (28 PPM) natural gas and transportation diesel (<1/2 of 1% sulfur) burners feature the Posi-Control linkageless combustion system. Adding the Autoflame MK VI "Evolution" combustion management system utilizing servo motor air fuel ratio control, proper air/fuel ratios to 1/10 of 1" throughout the 8-1 modulating range are maintained.

In total, the overall combustion efficiency of the boilers perform at or exceed the design of 85 percent efficiency on natural gas, and in excess of 88 percent on transportation diesel fuel throughout the entire operating range. AstraZeneca now has one of the most efficient power plants in New England.

Thanks to Autoflame's exhaust gas analyzer (EGA) feature, the new installation not only helped eliminate a substantial amount of analog reporting equipment but also eliminated incredibly expensive servicing and maintenance costs. Operators now control and receive reports simply via a PC located in the operations office. Monitoring meets and exceeds all U.S. Environmental Protection Agency (EPA) and state Department of Environmental Protection (DEP) reporting requirements. It is this monitoring, recording and annual totalization of stack emissions of CO₂, O₂, NO_x, SO_x that makes potential trading of emissions credits possible.

AstraZeneca Pharmaceuticals of Waltham, Mass. is the primary R&D arm of the worldwide AstraZeneca PLC, headquartered in London, England - one of the top five pharmaceutical companies in the world. The company focuses on discovering treatments for cancer and infectious diseases. The nearly 3-year-old, 180,000-square-foot Waltham facility is also home to the company's North American Enabling Science and Technology Center.

Mobile boilers to the rescue

MOBILE BOILERS, from page 1

property care manager at the estate. Wilkinson Mobile Boilers Inc. was called and the company provided a mobile boiler the same day.

The greenhouses are connected and contain historic plants. The Grape House, built in 1804, houses extensive grape vines. The Camellia House was built around 1820 to cultivate the exotic plants. The newest greenhouse was added in 1930 to provide fresh flowers for the house. Now the estate sells geraniums, orchids, seasonal flowering plants, herbs and camellias.

"Without heat we could have lost everything in there,"

Mr. Houlihan said. The quick response by Wilkinson and its ongoing boiler service has kept the greenhouses heated with no loss of plants.

Wilkinson Mobile Boilers Inc. also came to the rescue for the Providence, R.I. Housing Authority this fall.

"We had a major cataclysmic condition," said Gary W. Sprague, HVAC systems manager for the authority. "We had 10 feet of water in the boiler room at Manton Heights."

There was no way to produce domestic hot water for 330 apartments at the housing development.

Wilkinson was called and the company provided a mobile boiler



MOBILE BOILERS, continued on page 4

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One ten one hundred rule

John Santos, mechanical supervisor at Northeastern University in Boston, is a firm believer in being prepared. Keeping equipment in top notch condition is just common sense, he says.

In keeping with his philosophy, he has coined this rule: For every dollar you spend in maintenance, you save \$10; for every dollar you don't spend in maintenance, you spend \$100.

George T. Wilkinson Inc., agrees. It just makes sense.

Pipeline

GEORGE T. WILKINSON INC.

Geoffrey C. Wilkinson President
Alan C. Bishop Vice President of Sales
Robert S. Connolly Vice President of Operations
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For changes of address or to suggest story ideas, please contact Paula Packard at 781-335-2622, or email ideas and comments to ppackard@gtwilkinson.com

www.gtwilkinson.com

Trivia

THIS ISSUE'S QUESTION

Q. Who was John Harrison (1693-1776) and what does he have to do with HVAC?

E-mail your answer to ppackard@gtwilkinson.com by March 1, 2004. Please include your address.

Winners will receive a George T. Wilkinson Inc. gift pack and their names will be listed on the Web site (www.gtwilkinson.com) after March 1.

Last Issue's Trivia Question:

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?

A. The Bellefield Boiler Plant in Pittsburgh, Pennsylvania.

Mobile boilers to the rescue

MOBILE BOILERS, from page 3

to generate heat exchange to produce hot water and distribute it throughout the development. Wilkinson also provided a second boiler that was tied into the heating system to send heat to 25 buildings.

"We didn't know what the extent of damage was or how long it would take to recover," Mr. Sprague said.

The housing authority could not let its tenants go without hot water or heat. Renting mobile boilers was the perfect solution.

In both cases, the mobile boilers remained on the job for several months.

Wilkinson Mobile Boilers Inc. has the largest fleet of state-of-the-art mobile boiler rooms in the region. The company prides itself on being able to provide a mobile boiler on a moment's notice. It also services its boilers throughout the rental period.

"Their service and communication were great," Mr. Sprague said. "I'm a strong believer that you get what you pay for. They were good to work with."

Contact Robert Connolly, vice president of operations at 800-777-1629 or via e-mail at rconnolly@gtwilkinson.com for more specific information about Wilkinson Mobile Boilers Inc.

Cut costs...



without breaking a sweat

WILKINSON
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