

Spring Issue
April
2007

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The

LIPTEN LETTER

A QUARTERLY REPORT FROM THE "HANDS ON" EPC ENERGY SOLUTIONS COMPANY

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Lipten Installs High Temperature Heat Exchanger & Controls

Francesville, Indiana.

Lipten Company was contracted by Blue Moon Energy to design & build a turnkey controls upgrade and an air to air heat exchanger project for Rose Acre farms at the Pulaski County egg production facility. The project consisted of a new stainless steel, high temperature heat exchanger that would provide process air for an egg drying operation. Included in this project was the temporary air fan that would enable



Stainless Steel Heat Exchanger

the factory to remain on-line through the construction period. Lipten provided a new heat exchanger that is capable of withstanding temperatures in excess of 1800 degrees Fahrenheit that provides the plant with a controlled and continuous process air temperature of 400 degrees Fahrenheit.

In addition, the project consisted of a controls upgrade for a dual-feed wood combustor and the replacement of a failed heat exchanger. The CombustionPac™ controls are PLC based with a 10.4" operator HMI station, full instrument package and seven variable frequency drives for precise motor control. The Lipten CombustionPac™ PLC control system

automated the entire process including the delivery of the wood fuel needed for the furnace.



CombustionPac™ Controls

Within the project scope was the installation of new dampers that would allow the operator to modulate the air flow to the dryer in the automatic or manual mode. This control option included the fabrication and installation of a new 50 foot dump stack located outside the facility and 2 exterior/interior ducting systems for air to be diverted into the dump stack while fresh air could be brought in through a filtered fresh air intake louver.



Rose Acre Farms

LIPTEN IS GROWING AGAIN:

The Lipten Company recently expanded its staff again in our headquarters office in Detroit to support the increase in requests for proposals that we have been receiving from our sales rep network in the Industrial Division.



Pictured above from left to right are:

Michael Hazzard: Project Manager
James Heer: Project Proposal Engineer
Caryn Robinson: Administrative Assistant
John Ingraham: Project Proposal Engineer
Adam Kepa: Mechanical Engineer

Our BioFuels Division has also experienced an increase in requests for project proposals. We are interviewing new personnel in this area to support the level of new project opportunities that are being presented in this very important vertical market segment.

Announcement!

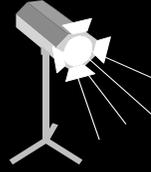
We are pleased to announce that we are now capable of providing your company with a new service:

An **"ON-DEMAND—ON-LINE"** PowerPoint Presentation. See how Lipten can provide you EPC services for your next Central Energy Plant project.

Call anytime and schedule your Personal Online Conference:

800-860-0790

Ask For Frank Casteel



Spotlight On ... Campbell-Sevey Minneapolis, MN.



Campbell-Sevey has been a successful rep organization since 1937 and has proven that there is no substitute for quality and experience. Few companies can match Campbell-Sevey's long history of providing quality products and services. "The proof is in the manufacturers we represent", says Brian Ross, Campbell-Sevey President. "We *only* promote products & services that are industry leaders in performance and reliability such as Lipten EPC Services and Superior or RenTech boilers."

Another critical component to their success is their people. Their sales engineers pictured above have the technical knowledge and field expertise it takes to maximize the efficiency of steam systems. They are left to right: Mark Heilman, Jeff Hoel, Steve Graves, John Arvig, Brian Ross, John Magnuson, Steve Evenson, Kevin Howell, Charlie Thomas and Tom Pietsch.

Customers can profit from the product knowledge, field expertise and technical skills of Campbell-Sevey. They feel they can find improved steam productivity and reduced maintenance costs for their customers. From Central Energy Plants to steam distribution and condensate return systems to hot water systems and Emission Monitoring Systems, Campbell-Sevey is committed to helping their clients have the most efficient, reliable systems possible.

"We are excited about adding the Lipten name to our growing list of "Best in Class" suppliers that we proudly represent", states Brian Ross. The Lipten Company is also excited about having a rep of the caliber that Campbell-Sevey offers to our sales team. Give them a call and let them assist you with your Central Energy Plant needs.

You can reach Campbell-Sevey at: 952-935-2345.

Steam Traps

Unfortunately, when it comes to steam traps, people often ignore them. There is a complacency about them that is costing steam users much more than they realize. The hard reality of a plant maintaining its boiler and forgetting about the rest of the steam system can be a horribly wasteful proposition. Losses can include not only wasted energy, but replacement of damaged equipment and misuse of man-hours. It is not uncommon to discover system losses in the hundreds of thousands of dollars.

Fortunately, much of these potential losses can be averted by a vigilant steam management system that includes a program for steam trap surveys. A steam trap survey creates a window into a steam system. Once the maintenance engineer can see what is going on, he or she can take corrective action. Corrective actions can add substantially to a company's bottom line as "found money." In some business circles, it has been estimated that \$ 10.00 in-house savings is the equivalent of \$ 1,000 in sales. In other words, if a steam system generated \$ 10,000 in savings, it would be the same as achieving \$ 1 million in sales for that company.

What is a steam trap?

Simply put, steam traps are automatic valves that release condensed steam (condensate) from a steam space while preventing the loss of live steam. They also remove air and non-condensables from the steam space. Steam traps are designed to maintain steam energy efficiency by performing specific tasks such as heating a building or maintaining heat for process. Once steam has transferred Btus and becomes hot water, it is removed by the trap from the steam side as condensate and either returned to the boiler via condensate returns lines or discharged to the atmosphere (a wasteful practice).

When a steam trap fails

Most traps fail in the open mode. When this occurs, at times, a boiler may begin to work harder to produce the necessary energy to perform a task which, in turn, can create high back pressure to the condensate system. This inhibits the discharge capacities of some traps, which may be beyond their rating, and cause a system inefficiency. While most traps operate with back pressure, they will do so only at a percentage of their rating, affecting everything down the line of the failed trap. Steam quality and the product is affected.

How failure affects equipment

When steam traps cause a back-up of condensate in a steam main, the condensate is carried along with the steam. It lowers steam quality and increases the potential for water hammer. Not only will energy be wasted, but equipment can be destroyed.

Testing methods

Before testing a steam trap, inspectors should be familiar with the particular function, review typical types of traps and know the various pressures within the system. This can help avoid a misdiagnosis and allow proper interpretation of the trap conditions.

There are three main categories of online trap inspection: Visual, thermal and acoustic.

Record Keeping

Good record-keeping is essential. It is one thing to just inspect traps, another to be able to determine costs, efficiencies, inefficiencies and trouble spots. To begin with, traps should be tagged and mapped. All too often many traps in a system are forgotten about. A mapping and tagging system will assure that these traps are maintained.

Surveys

Ideally, a survey will be conducted by an in-house trained inspector who will routinely inspect their steam traps. However, even in plants that have trained inspectors, steam traps often are neglected. This is because, in many plants, maintenance departments have been scaled back to a point where they are always "putting out fires" and do not have the time or the manpower for surveys. In these situations, plants can benefit from using professional services.

Professional services can conduct the surveys and issue reports without involving the in-house staff. In facilities with large staffs, an expert can be brought in to set up the program and train personnel. In-house staff can be trained to maintain and inspect the traps while the professional can assure that the program is running effectively.

In summary, any plant with a steam trap system should set up a comprehensive survey program. Whether it has 50 traps or 5,000 traps, substantial savings can be generated in the energy, equipment, man-hours and the product by keeping on top of the systems efficiencies.

If you have any questions regarding your steam systems efficiency or you would like to discuss some other aspect of your current system, please contact us at the phone number listed below. We have steam experts on staff that would be happy to assist you in any way you choose.

To address the specific concerns that you may have regarding these issues, please contact Lipten at: 800-860-0790. Our engineering staff will be happy to assist you in any way we can.

Find us at: www.lipten.com

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Richmond	Dominion Sales	804-755-6007
Alabama	Hughes Machinery	205-424-4600
Atlanta	Boiler Supply	770-664-0766
N. Carolina	W.C.Rouse & Sons	336-299-3035
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