Spring 2005

www.lipten.com

The LIPTEN LETTER

A PERIODIC REPORT FROM LIPTEN COMPANY

Inside this issue:

News Bits:

Lipten has been contracted to provide powerhouse upgrades at a General Motors plant in Flint, Michigan. The work includes upgrading the instrumentation on two boilers, furnishing VFD panels for three draft fans and changing the monitoring computer over to a full server system.

✧ ✧ ✧

Two new sales firms sign on to represent Lipten. See page 2.

✧ ✧ ✧

Lipten has received an order to provide boiler control upgrades for a Rockford Forge Plant in Illinois.

✧ ✧ ✧

Powerhouse Upgrades for General Motors

Oshawa, ON.— Lipten Company, through its subsidiary Lipten Energy Canada, Inc., has just completed a contract to provide engineering, equipment, installation and construction services for the General Motors - Oshawa, Ontario Power House. This upgrade project increased the performance of four coal-fired boilers while keeping them below the environmental limits for flue gas particulates and opacity. Three of the boilers had control system upgrades while the fourth, Boiler #6, also received extensive changes to both the coal feed and fly ash systems.

One of the biggest efforts of this project was the replacement of an old mechanical dust collector with a new, 24" tube, plug resistant, high-efficiency unit. This required cutting an opening into an exterior wall to remove the old unit and move the new collector into the building. The collector hopper was fitted with new dust level sensors and ash discharge valves that tied into the existing ash handling system.

Reworking the coal feeders

Lipten also provided new stoker equipment for Boiler #6. This included applying the latest available design in individual stoker drives to four (4) existing 27" chain type feeders. The new feeder drives were integrally mounted to the feeder housings and included new chain driven conveyors, belt driven rotors, guards, and mounting brackets. New feeder drive motors were supplied for conveyor and rotor drum assemblies.

New feeder drive with control panel in background

New rotor shaft tachometers were supplied to monitor speed and initiate shutdown of the coal feed conveyors in case of a stalled rotor condition. The individual speeds of the coal feeders are controlled by variable frequency drives. The variable frequency drives optimized the efficiency and performance at partial load conditions typically encountered in stoker feeder applications.

A new stoker drive control panel was furnished containing AC adjustable frequency drives and tachometer displays. The new system permits easy individual speed adjustments. Four 4-20 mA signals are tied into a Distributive Control System configured to provide coal feeder speed variations from the boiler master.

Further changes to Boiler #6 included the Elimination of the existing fly ash reinjection system and installation of a new intermediate ash hopper. Lipten also supplied, installed, and commissioned five new pneumatic actuators to

(Continued on page 4)

Lipten Sign Two New Sales Representatives

Wixom, MI — Lipten is please to announce two new sales Representatives. The first is Thermal Power Products, Inc. headed by Paul Reiter. Paul will represent Lipten in Ohio, West Virginia and western Pennsylvania. You can read more about Paul in the Spotlight section.

The second is Bemark Associates, Inc., headed by Mark Macknis. Mark, along with Bernie Macknis, Joel Dean and Scott Macknis, will represent Lipten in the eastern seaboard states of Maryland, Delaware, New Jersey and eastern Pennsylvania.

Did you know …

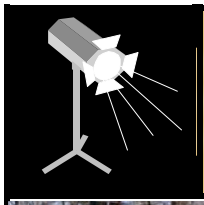
The high cost of dragging your feet ?

Imagine if you will, taking a $100 bill and putting a match to it. Then, two hours later do it again. And again. And again, every two hours, every day for a year. That's $480,000 up in smoke in just one year. Why would anyone do such a thing? The sad truth is that they do. Many companies, in their zeal to cut cost, kill capital projects like boiler replacements or upgrades. Yet those aged boilers and burners cost them hundreds every day in excess fuel cost.

This example is a true case. A factory that could save $480,000 a year in operating costs. Sure there is a capital expenditure, but the payback is about *two years!* The third year and every year after, nearly *half a million dollars* goes right back to the bottom line! Not to mention reduced NOx and CO emissions. They could save money and save the environment. But, corporate won't allocate the funds. Like so many companies, the focus is on the short-term results, not long-term gains. It seams that the bean counters have forgotten that to have beans to count, you need to take care of the bean plants. You need to replace the old plants that don't produce. You need to spend money for new plants and they take time to grow. But, in the end, you end up with more beans then you ever would have had with the old plants.

Let's face it; fuel costs are not going down. Steel prices keep rising. That forty-year-old equipment is going to cost more and more to keep in operation. The facility in the example could have put almost half a million dollars in their pocket this year. They are on track to drop another half million this year because they won't act. Maybe they can afford it. It must be nice to be rich! Are you that rich, or can you stand to save hundreds of dollars a day? If so, I know a company that can help…

Contributed by Frank Hrlic, PE, MBA



Spotlight On …

Paul Reiter

Paul is president of Thermal Power Products, Inc., (TPP) a manufacturers' representative firm serving the utility, industrial and institutional marketplace by offering products and services associated with the generation of steam for power, process and heating applications. As announced to the left, TPP has just formally become a sales representative for Lipten, though both companies have collaborated on past projects, most notable the supply of two new boilers for Wheeling Pittsburgh Steel Corporation.

TPP has been in business for 15 years under Paul's leadership, covering a sales territory consisting of the western half of Pennsylvania, eastern part of Ohio, West Virginia and several western counties of Maryland. Paul started the company in 1990 after many years working for three major boiler manufacturers.

Employment History

Babcock & Wilcox
Proposal Engineer and Field Service Engineer

Foster Wheeler
Regional Service Manager and District Sales Manager

Zurn Energy
Sales Manager

Education / Training

Bachlor of Science in Mechanical Engineering
Lafayette College

Professional Engineer - State of Ohio

Personal

Paul has two married daughters, who together have made him a grandfather five times. Besides playing golf and tennis, Paul spends a good part of his leisure time on home improvement projects.

New CEMS for City of Flint Facility

by Jim Marshall, Regional Manager

Flint, Michigan – to meet the USEPA 40 CFR 503 standards for Sewage Incineration, the City of Flint Water Pollution Control Facility contracted Lipten Company as the Design-Builder to engineer, procure and install two (2) Continuous Emission Monitoring Systems (CEMS) to measure the amount of Total Hydrocarbon Content (THC) corrected for Oxygen and

New CEMS equipment enclosure

Water content. This facility operates four (4) multiple hearth sewage sludge incinerators, exhausting through a common single stack with two (2) flues. Incinerators 1 & 2 share one flue, while Incinerators 3 & 4 share the other flue. The dual CEM systems are

Rack mounted analyzers

mounted outdoors within a HVAC conditioned self contained modular shelter.

Each CEM consists of a probe mounted in the exhaust flow path within the flue; a pre-insulated heated tube bundle for temperature conditioning of the extracted gas sample & calibration path for the probe; control valves for sample extraction routing or calibration; a PLC to sequence sampling, calibration, data acquisition, Alarm-faults; a Flame Ionization Detector (FID) for THC measurement; an Oxygen Analyzer for compensation of sample; and a Data Acquisition System (DAS) PC to archive, report, print and provide for operator interface.

Very strict guidelines are provided by the USEPA and the Michigan Department of Environmental Quality relating to insuring the analyzers are calibrated on a consistent basis, the reported data format, the duration of data archiving and the overall functionality of the CEM systems. To insure this criterion is met, each CEM has the capability of Automatic

Flue gas probe on stack

Calibration, Automatic Report Generation & printing, Automatic Data Archiving and Automatic Fault Diagnostics. To further enhance the system, a remote DAS PC was included to monitor and allow remote calibrations communicating to the main CEM PC over fiber optics network.

Lipten would like to thank the following organizations for their assistance in making this a successful project:

- Environmental Concerns, Inc.
- Platinum Mechanical, Inc.
- Weinstein Electric
- Ameri-Construction & Concrete
- Derenzo & Associates

✧ ✧ ✧

LIPTEN COMPANY
28054 Center Oaks Ct.
Wixom, MI 48393

(Continued from page 1)

automate the existing over fire air dampers. The over fire air lances and coal feeder refractory throats were repaired, then, Lipten de-scaled and high-pressure water washed the furnace tubes, generation tubes and air heater inlet and outlet breeching to improve overall boiler efficiencies. Lipten's engineering scope included demolition and installation drawings, along with equipment design drawings. Lipten provided engineering services to integrate the new combustion controls for all four boilers into a Bailey Infi-90 DCS. The Bailey Infi-90 DCS controls the boilers and various other parts of the coal and ash handling systems.

The following company participated in the success of this project:

Detroit Stoker Company
Process Equipment Inc.
Engineered Solutions Corp.
MBB Power Services
The State Group
United Conveyor Corp.
Fenton Systems

LIPTEN

Hands-on EPC Energy Solutions

Corporate Office
28054 Center Oaks Court, Wixom, MI 48393
Jim Marshall, Regional Operations Manger (Midwest)
Phone (800) 860-0790 Fax (248) 374-8906
Lipten@lipten.com

Eastern Office
98 Guinea Road, Monroe, CT 06468
Glen Altpfart, Regional Operations Manager
Phone (203) 452-7117 Fax (203) 452-7017
galtpfart@lipten.com

Lipten Energy Canada, Inc.
561 Duncan Ave., Greenfield Park, QC J4V 1E4
Paul Henry, Regional Operations Manager
Phone (450) 676-3222 Fax (450) 676-5997
phenry@lipten.com

Local Sales Representatives

THERMAL POWER PRODUCTS, INC.
12300 Perry Highway, Wexford, PA 15090
Paul Reiter
Phone (724) 935-6900 Fax (724) 935-8199
preiter@nauticom.net

BEMARK ASSOCIATES, INC.
700-A Larkin Street
New Castle, DE 19720
Mark Macknis
Phone (302) 322-7900 Fax (302) 322-1352
mark@bemark.us

Find us on the web at www.lipten.com

NFPA MEMBER 05-06

ISA MEMBER

CHP EPA COMBINED HEAT AND POWER PARTNERSHIP