



LIPTEN™

ENERGY SOLUTIONS

the LIPTEN™ *advantage*

Third Quarter, 2013 Newsletter

HISTORIC QUOTES:

"The herd instinct among forecasters makes sheep look like independent thinkers."

-Edgar R. Fiedler

"It takes as much energy to plan as it does to wish."

-Eleanor Roosevelt

"You can't operate a company by fear, because the way to eliminate fear is to avoid criticism. And the way to avoid criticism is to do nothing."

-Steve Ross

Power Plant Efficiency Savings at a Fortune 500 Automotive Company



Lipten recently provided an engineering Investment Grade Audit (IGA) related to increasing the efficiency of a power plant through the use of updated feedwater economizer systems. Currently, the powerhouse has four boilers. A single economizer is located in the common exhaust duct of three of the boilers. Lipten was tasked with investigating the capital costs and potential fuel savings from adding individual economizers to the boilers.

Steamin' Hot NEWS

-Lipten was awarded an engineering contract for a hydrogen purification plant.

-Startup successfully completed for a 210,000 lb/hr boiler Lipten converted from coal to natural gas.

-Lipten is now a utility company (DTE Energy) trade ally.

-Lipten recently signed a teaming agreement with a major national AE to provide energy center engineering assistance.

The investigation process included: document the boiler operational data, visually observe the condition and dimensions of the existing equipment and ductwork, determine the scope associated with new economizers and determine financial savings.

Lipten lead project engineer, Randy Flanagan, was instrumental in conducting the engineering analysis. Lipten Proposal Development Manager, John Ingraham, noted that, "Too often power plant operators forge ahead with projects without conducting the first-stage engineering required to start the project in the right direction. By hiring Lipten to conduct this Investment Grade Audit the end user is better positioned to make substantiated project implementation decisions."

Lipten determined the following project financial implications. Armed with this information, the end-user can evaluate this project against other potential capital improvement projects to ensure they are getting the most value for their capital investment dollars.

	Boiler 1	Boiler 2	Boiler 3	Total
Fuel Savings, cu ft/Yr	13,168,614	10,534,891	10,534,891	34,238,396
Savings, \$/Yr.	\$80,592	\$64,474	\$64,474	\$209,540
Installed Cost	\$131,400 2	\$131,400 2	\$131,400 2	\$394,200
Payback, Years	1.6	2.0	2.0	1.9



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Lipten Spotlight On ... Mukda Musa, Lipten Mechanical Engineer



With 20 years of progressive experience in power plant and related systems engineering, design and maintenance as well as having a Master of Mechanical Engineering degree, Mukdad is an accomplished mechanical engineer. Mukdad is a specialist in heat transfer and finite element analysis. He is also well versed in preparing procedures for the startup and operations of complex power plant systems. Throughout his career Mukdad has continually obtain technical training and certifications. He has achieved much recognition for his expertise and dedication to his work. Lipten is pleased to have the services of such an accomplished engineer.

Major accomplishments:

- Mechanical design for a power plant overhaul consisting of four new boilers totaling 69,000 lbs/hr of steam and new feedwater equipment
- Lead systems startup and operations engineer for a 3MW waste-to-energy facility
- Lead engineer for a 1,300 SCFM hydrogen purification project
- Instructed GE frame 9 turbine training for over 200 personnel

DTE Energy Designated Trade Ally Program



The DTE Energy Designated Trade Ally Program connects DTE Energy customers with contractors, engineers, ESCOs, architects, suppliers, distributors and other trade allies who have been educated on energy efficiency programs, approved through an application process and agree to follow program rules and processes. The following trade allies can assist customers with energy efficiency upgrades and provide support on program applications, including:

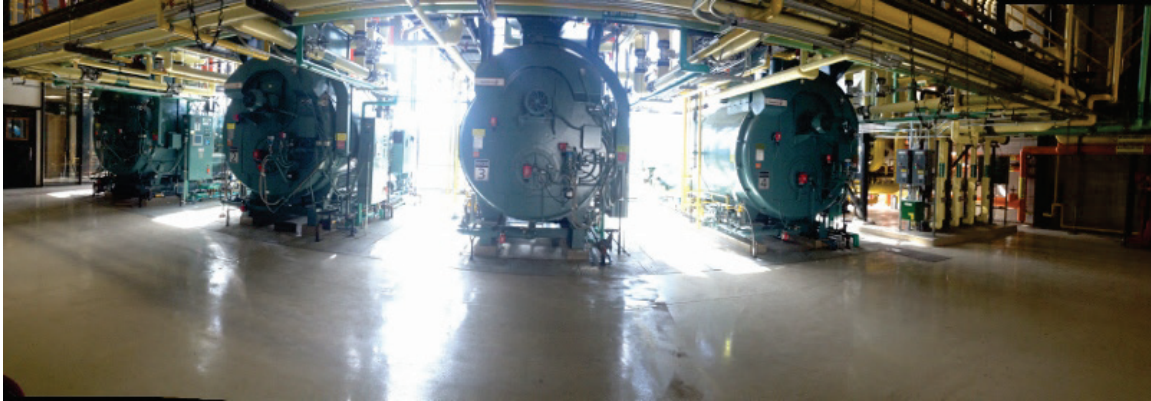
- Understanding requirements for installations
- Selecting qualifying equipment
- Completing the application process

Lipten is an official Designated Trade Ally, noted for our expertise in steam systems, chillers, compressed air, consultanting, electric motors, VFD's, controls, engineering, new construction, boilers tune-ups, and boiler installation.

DTE Energy (NYSE: DTE) is a diversified energy company involved in the development and management of energy-related businesses and services nationwide. Their largest operating subsidiaries are DTE Electric and DTE Gas. Together, these regulated utility companies provide electric and/or gas services to more than three million residential, business and industrial customers. The electric and gas utility businesses have each been in operation for over a century. DTE Energy has leveraged that wealth of experience and assets to develop a number of non-utility subsidiaries which provide energy-related services to business and industry nationwide.

<https://www2.dteenergy.com>

Photo Highlight



Four new boilers Lipten recently installed at the Detroit Metropolitan Airport (DTW).

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Lipten is an Engineering, Procurement and Construction (EPC) firm that specializes in Central Energy Plant (CEP) design and construction. Lipten also has a controls group that provides standard and custom control solutions.

Lipten provides steam generation, power generation, chilled water systems, compressed air systems, water treatment systems, controls and related Energy Center equipment and services. Lipten's level of support can vary from an advisory role to complete turn-key facility construction. Services include: design, engineering, drafting (CAD), equipment specifications, procurement, installation, construction management, site audits, start-up, operator training and maintenance.



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