Texas Industries of the Future

April 2019 Newsletter

** REMINDER - ONLY 1 WEEK LEFT TO REGISTER FOR **

2019 SPRING
TENAS INDUSTRIAL ENERGY MANAGEMENT FORUM
APRIL 11, 4 TO 6 PM

Theme:
Energy Efficiency’s Role in Reliability – What’s in it for us and what can we do about it?

We are looking forward to another excellent and informative forum and have three extremely knowledgeable presenters who will speak on heating, compressed air and cooling systems role in plant reliability. Here they are and abstracts on what they will share with you at the forum.

Title: Smart Dampers Save Energy and Improve Reliability of Fired Heaters
Presenter: Ashutosh Garg, Vice President, Furnace Improvements Services Inc.

Fired heaters are major consumers of energy in the refining and petrochemical industries. Almost 40 to 70% of the total energy consumption in a refinery or petrochemical plant is in fired heaters. While most of the plant operators are aware of the importance of controlling excess oxygen in the fired heaters, the draft control in fired heaters is often over looked. High draft in fired heaters causes tramp air and messes up the controls. Stack dampers are used for controlling draft in fired heaters. Most of the stack dampers are manually operated and owners are trying to install pneumatic operators to automate stack dampers. Our analysis indicates that current design of stack dampers is not designed for optimum control of draft fired heaters. The stack dampers are highly oversized (like control valves) and cannot control draft correctly. Our smart dampers (patent pending) overcome that problem by adjusting the damper control characteristics. The concept is very simple and just by installation of multiple actuators, we can achieve the required control of draft effectively. FIS will present a couple of cases and CFD modeling to demonstrate the smart damper functioning. Existing dampers can be easily converted into smart dampers. Proper control of draft will eliminate the tramp air from fired heaters and make the overall operation more reliable. Combustion quality should improve substantially with proper draft available at the burners. Operators will not have to struggle anymore with the stack dampers.

Title: Increasing the Reliability of Your Compressed Air Systems
Presenter: Thomas Theising, M.S., C.E.M., C.D.S.M., President, Sustainable Energy Systems, LLC (presenting for Petro Chemical Energy)
This will be a two-part presentation. The author will present a seasoned methodology for improving the reliability of your compressed air systems while also increasing efficiency and instilling sustainability. The presentation will cover both the service offerings of Petro Chemical Energy in leak detection and the business practices of a large chemical manufacturer having developed a specific process for addressing reliability and redundancy of multiple energy systems. Determining and addressing the interdependency of these systems is a critical factor in avoiding unscheduled outages. Examples of having improved reliability will be presented.

**Title: Key Strategies for improving cooling tower Efficiency and Reliability**
Presenter: Brad Vickers, Director of Engineering, International Cooling Tower

Cooling Towers are large evaporative cooling devices that form an integral part of a plant's utility system. Unfortunately, due to the relatively high mechanical and thermal reliability of cooling towers, they are largely ignored until reliability issues become significant enough that the plant's efficiency is negatively impacted. This presentation will focus on key maintenance and performance strategies that cooling tower operators can implement to ensure their cooling tower's efficiency is maintained and, in some cases, improved.

To learn more or to access the Energy Forum Program, go to: [http://texasiof.ceer.utexas.edu](http://texasiof.ceer.utexas.edu)

The forum will be held on April 11, 4 -6 pm in Houston, TX (Shafaii Hall and Garden, 1622 Federal Rd. #30, Houston, Texas 77015) in conjunction with the AIChE Southwest Chapter monthly meeting. Please plan on attending and register to attend the forum at:

[https://texasiof.ceer.utexas.edu/forms/TIOFevent_registration.cfm](https://texasiof.ceer.utexas.edu/forms/TIOFevent_registration.cfm)

*The forum is free, but you must register so that we plan accommodations accordingly.*

**MARK YOUR CALENDARS!**

**TEXAS INDUSTRIES OF THE FUTURE UPCOMING EVENTS IN 2018**

- Texas Industrial Energy Management Forum, April 11, 2019, Shafaii Hall and Garden, Houston, Texas

- One Day Technical Workshops this Summer – Stay tuned for announcement of topics and schedule

Professional development hours are available for participation in all programs.

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Thank you for your interest and support!

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