Texas Industrial Energy Management Forum

Thursday, April 3, 2008
Brady's Landing
8505 Cypress St.
Houston, Texas 77012

3:30 to 4:00 pm	**Forum Registration and Visit with Exhibitors**
4:00 to 6:00 pm	**Energy Management Forum** See program below.
6:00 to 7:00 pm	**Optional Networking and Exhibition** (sponsored by AIChE-STS – info below)
7:00 to 9:00 pm	**Optional AIChE-STS Dinner and Speaker on Energy** (non-members are welcome – info below)

Forum Moderator

Sean Diamond, Texas Petrochemicals LP
Chair, Chemical and Refining Advisory Committee, Texas IOF

Presentations

Boiler Case Study: Minimizing NOx without Sacrificing Efficiency
Tim Morrison
Pavillion Technology on behalf of Sterling Chemicals

This presentation describes the application of advanced process control and optimization technology to a Sterling Chemicals boiler with the goals of operating within the carbon monoxide (CO) limits while simultaneously reducing NOx emissions. Controlling to stack CO allowed Sterling to operate as close as possible to the permit limit and automatically minimizes combustion oxygen (O2). This increases efficiency and simultaneously reduces NOx production. Additionally, controlling the O2 content in the mixed combustion air to the minimum allowable limit also reduces NOx emissions. The presentation will describe the project objectives, project team, implementation timeline, technology solution, infrastructure requirements, lessons learned and benefits.

Olefins Cold Ends DMCplus™ Application
Dave Hokanson, Process Control Specialist
ExxonMobil Corporation

Advanced Process Control (APC) technology, implemented using DMCplus™, was applied on the Beaumont Olefins Cold Ends unit in a very short period of time. SmartStep™, an automated testing software package, was used with a methodology called "Rapid Application Development" (RAD) to speed the implementation of this DMCplus™ application. Annualized energy savings were 10% (per unit of feed to Deethanizer tower), equivalent to 98,287 MMBtu, with associated CO_2 emissions reductions of 6,200 tons.

Process and Energy Optimization at Eastman Texas Operations
Carroll Greenwaldt, Superintendent, Utilities and Cogen Operations
Eastman Chemical Company

In 2005, the Eastman-Texas Operations Energy Management Team (EMT), in response to rapidly increasing energy prices, initiated a new energy optimization program to reduce the site's energy intensity. This new program utilized a standard process for identifying energy improvement projects. The projects identified and documented during these assessments ranged from energy savings projects to production improvement projects where energy usage was optimized to improve production. In all areas assessed, there were both non-capital (behavioral) projects, as well as capital projects, with paybacks that were normally less than two years. Overall, the site initiative in 2006 resulted in additional annualized energy savings of 4.4%, equivalent to 1,366,498 MMBtu, with associated CO_2 emissions reductions of 79,257 tons.

Questions & Answers

There is no cost for attending the Energy Forum; however, pre-registration is requested so that we can provide adequate facilities. To register, go to http://clearinghouse.ces.utexas.edu/tiof/TIEMForum.asp

If you are interested in exhibiting at the event, contact Frank Kleinschrodt, STS-AIChE at 713 807-8510 for exhibits and advertising. Frank.Kleinschrodt@OperationsEfficiency.com

Funding for the Energy Management Forum is provided by the US Department of Energy, under a contract with the State Energy Conservation Office of the Texas Comptroller of Public Accounts.

Networking and Exhibition Session, 6 – 7 pm

A number of companies who bring value to energy conservation efforts will have tabletop exhibits set up as a focal point for a networking session. A cash bar will also be available.

STS AIChE Dinner and Speaker on "Global Energy Demand and Greenhouse Gas Reductions: How much at what cost?" 7 pm

Following the Networking event, you are invited to attend the South Texas Section of AIChE's dinner meeting at Brady's Landing. The speaker will be Pedro Haas, who is a Senior Practice Consultant with McKinsey & Company. Mr. Haas has expertise in trading and risk management in the petroleum industry, as well as mergers and acquisitions, exploration and production, refining, and gas. He is an annual lecturer at the Oxford Energy Seminar and is a member of the Oxford Energy policy Club.

Abstract: Global Energy Demand is set to grow at a higher rate (over 2% p.a.) than historically (1.7% p.a.), unless ways are found to increase energy productivity across the world. Furthermore, consensus is growing among scientists, policy makers, and business leaders that concerted action will be needed to address rising greenhouse gas (GHG)emissions worldwide. The discussion is now turning to the practical challenges of where and how energy productivity can be increased and emissions reductions can best be achieved, at what costs, and over what periods of time. Mr. Haas will be presenting the results of a 2007 McKinsey study of energy demand productivity potential and of 250 options (including efficiency gains, shifts to lower-carbon energy sources, and expanded carbon sinks) to reduce US GHG emissions. In the US

case, the study concludes that the United States could reduce GHG emissions in 2030 by 3.0 to 4.5 gigatons of CO2e using tested approaches and high-potential emerging technologies. These reductions would involve pursuing a wide array of abatement options with marginal costs less than $50 per ton, with the average net cost to the economy being far lower if the nation can capture sizable gains from energy efficiency. Achieving these reductions at the lowest cost to the economy, however, will require strong, coordinated,economy-wide action that begins in the near future.

You register and pay for this dinner separately on the STS-AIChE website at http://www.sts-aiche.org/ Registration for the dinner will open the second week in March. There is a charge for dinner and can be paid for with a credit card on the website at a discount or at the meeting in cash or check.