Texas Industrial Energy Management Forum  
Nov. 1, 2007  
Brady’s Landing  
8505 Cypress St.  
Houston, Texas

Program, 4:00 to 6:00 pm

STS-AIChE Welcome

Moderator

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

Presentations

Talking to Management About Energy
Aamir Farid, General Manager  
Shell Deer Park Refinery

Securing upper management support for energy projects is one of the biggest challenges faced by plant engineers tasked with improving plant efficiency. Hear from the manager of one of the area’s leading refineries on how to get and keep management support for your program.

Using Advanced Monitoring Tools to Minimize Specific Energy Consumption
Peter J. Ryan, Ph.D., P.E.  
Engineering Consultant  
Bayer Technology Services Americas

A process optimization method, based on heuristics and Principle Component Analysis (PCA) of the unit’s historical process data is presented. The process heuristics determine if the unit is operating at its installed equipment potential (as designed). The PCA analysis results indicate regions of the unit’s response surface that correspond to optimal specific energy consumption and throughput. A further examination of the optimal clusters reveals the process variables that most influence the favorable performance of the unit, and what patterns in the process variables are associated with the unit’s improved performance. The information gathered from the heuristics and PCA cluster analysis is then expanded upon with steady-state simulations. The steady-state simulations confirm that the indicated area of the search space is stable, and details of the
unit’s operation at this point are established. Using the steady-state simulation results, plant trials are developed to demonstrate the unit’s optimal performance.

A case study of a commodity monomer facility completed in 2006 will be presented. A Six-Sigma methodology provided the framework for this optimization project, where the optimization goals were defined, measured, analyzed, improved and controlled (DMAIC). Results of the optimization project will also be discussed.

*Dow Plant Energy Assessment Process*
Bill Behr  
Site Energy Conservation Leader  
Texas Operations  
The Dow Chemical Company

In 2005 Dow decided to perform energy assessments of all its ethylene plants globally. A decision had to be made to use outside consultants, or to develop an internal process. To take advantage of the learning potential and to achieve buy-in from those involved, it was decided to develop an internal assessment tool. Based on Six Sigma methodology, this process takes advantage of readily available energy efficiency best practices and DOE web resources to identify energy efficiency opportunities.

*Questions & Answers*

**Networking**, 6:00 to 7:00 pm

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