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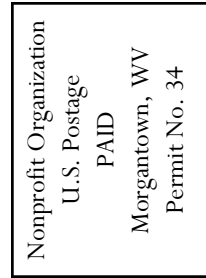
Registration Fee: \$100 per person

- Check (sent prior to the event with pre-registration)
- Credit Card (information sent via fax, e-mail or phone)
- Cash (day of the event with pre-registration)

Mail, email, fax or phone registrations to:

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Market Enhancement & Program Development
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WASTE HEAT RECOVERY

INDUSTRIAL TRAINING WORKSHOP

WEST VIRGINIA UNIVERSITY
NRCCE
385 EVANSDALE DRIVE
MORGANTOWN, WV 26506



JUNE 3, 2008

Overview

The workshop will cover several aspects of waste heat recovery using examples and case studies from Dr. Banta's experience. The workshop will emphasize how to identify and evaluate potential waste heat recovery projects in your plant, from both the engineering and financial viewpoints. There will be some review of basic energy balance methods, combustion fundamentals and heat transfer. Charts and rules of thumb will be provided to simplify calculations. Dr. Banta will give an introduction to PHAST—free DOE software for analysis of Process Heating Systems

Instructor

Dr. Larry Banta holds a B.A. Degree in Physics from Kalamazoo College and M.S. and Ph.D. Degrees in Mechanical Engineering from Georgia Tech. He is a registered Professional Engineer in the state of West Virginia.

Since beginning his academic career in 1986 at West Virginia University, Dr. Banta has taught courses in Automatic Controls, Vibrations, Thermodynamics, Instrumentation and Measurement, Statics, Dynamics and Design. His research is primarily in the areas of industrial energy efficiency, process automation and automatic control. Since 1998, Dr. Banta has served as leader in the West Virginia Industries of the Future program, with emphasis in the aluminum industry, glass and forest products sectors. He was the project director for a three-year DOE funded research project to develop new, state-of-the-art instrumentation and control systems for the aluminum reduction process. He has performed detailed energy audits in numerous industries including aluminum, steel, glass, food processing, chemicals and mineral processing.

Agenda

- Background : Examples of waste heat streams/assessment of potential savings opportunities
- Benchmarking Processes, Instrumentation and Monitoring
- Minimize Waste Heat Generation: combustion efficiency, burner selection, HX maintenance, process control
- Stack Heat Recovery: economizers, regenerators recuperators, cascading processes, Combined Heat and Power
- Recycle Working Fluids: Annealing furnace air, curing oven air, dryer air, boiler condensate, wash water
- Use energy in another process: low temperature drying, comfort heat, absorption refrigeration, ORC bottoming cycles
- Introduction to PHAST software

CEU's

This workshop has been approved for 0.23 Continuing Education Units (CEUs) by the West Virginia University Extension Service Office of Community, Economic and Workforce Development and may be equivalent to a similar amount of Professional Development Hours (PDHs). The State Board of Registration for Professional Engineers of West Virginia has final authority for approval of credit and courses.

Registration Form

First Name

Last Name

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Street Address

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State

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Email Address

Credit Card Number and Expiration Date (if paying by credit card)

Signature (if paying by credit card)

Accommodations

A block of rooms has been reserved at the Euro-Suites Hotel in Morgantown, WV. A rate of \$85 + tax per night, including breakfast is available until May 19, 2008. Call 1-800-678-4837 to make your room reservations. Please mention "WHR" to obtain this rate.