

A limited number of seats are available for

2.5 Day Short Course

**HEAT EXCHANGER PERFORMANCE
ASSESSMENT AND MAINTENANCE**

**Carl Kuester
Bill Closser
Allen Gallaher
Paul Koss
Lindon Thomas**

*December 7 to 9, 2010
8:00 a.m. Tuesday to Noon Thursday*

To be presented at

**North Anna Power Station
Mineral, Virginia**

Course Fee: \$1000

For Information

**Lindon Thomas
Thermal Engineering Associates
Knoxville, Tennessee**

**(865) 357-2002
lthomas@thermalea.com**

***On-Line Registration*
www.thermalea.com**

THERMAL ENGINEERING ASSOCIATES

2.5 Day Short Course

HEAT EXCHANGER PERFORMANCE ASSESSMENT AND MAINTENANCE

North Anna Power Station
December 7 to 9, 2010

Course Outline

Introduction	<i>Tuesday Morning</i> Jennifer Gezymalla
North Anna Heat Exchanger Program <i>Including overview of type heat exchangers in system.</i>	
Construction and Operation Practice	Carl Kuester / Paul Koss <i>3 hours</i>
Shell and Tube Heat Exchangers	
Feedwater Heaters	
Condensers	
Performance Monitoring and Trending	<i>Tuesday Afternoon</i> Carl Kuester <i>1.5 hours</i>
Tube and Other Failures: Materials and Degradation Mechanisms	Paul Koss / Allen Gallaher <i>2 hours</i>
Eddy Current Assessment	<i>Wednesday Morning</i> Allen Gallaher <i>2 hours</i>
Visuals Inspections	Paul Koss / Carl Kuester <i>2 hours</i>
Preventative and Corrective Maintenance	<i>Wednesday Afternoon</i> Carl Kuester <i>2 hours</i>
Basic Heat Transfer and Heat Exchanger Analysis Methods:	Lindon Thomas <i>1 hour</i>
Performance Testing: Generic Letter 89-13 Issues	<i>Thursday Morning</i> Bill Closser <i>2.5 hours</i>
Open Forum	

INSTRUCTORS

Carl Kuester

- Owner, Carl K. Kuester Engineering Consultant and Exchanger Repairs.
- Past president of Turbine Exchanger Condenser Company, Dynamic Energies Inc., and Condenser Technologies, Inc.
- Extensive consulting experience in all phases of large power plant engineering, operation, maintenance, and construction, with special interest in heat exchanger equipment, repairs, and removal of sample tubing for analysis.
- BSE, Brown University.

Bill Closser

- President of NuClear Services Group, Inc. providing consulting, testing and support services to the utility industry.
- Extensive experience in the areas of condition monitoring, plant performance, equipment reliability.
- Eight years experience with EPRI. Program Manager, Nuclear Applications and Services; Director of Nuclear and International Services, EPRI Solutions.
- Member of ASME OM-21 and ASME PTC 12.5 committees, and co-author of EPRI NP-7552.
- BSME and BSNE, Ohio State University; MBA, Regis University.

Allen Gallaher

- Project Manager – BOP Heat Exchanger Inspection and Assessment, Anatec International Inc.
- Over 30 years experience in project management of heat exchanger inspection, eddy current testing, and assessment programs in the nuclear and fossil power, chemical, and processing industries.
- Extensive experience in BOP heat exchanger training.
- Eddy Current Level III NDE inspector.
- BA/MA Mathematics, Northeastern University.

Paul Koss

- Project Manager-Field Services and Heat Exchanger Inspection, Anatec International Inc.
- Over 25 years of experience in heat exchanger inspection and assessment primarily in fossil and nuclear applications.
- Eddy Current Level III NDE inspector.
- BS Geology, Western Kentucky University.

Lindon Thomas

- President of Thermal Engineering Associates.
- Forty years experience in college engineering teaching and research.
- Has taught Heat Exchanger Analysis to practicing engineers over the past 17 years.
- Author of *Heat Transfer*, standard and professional versions, Outstanding Academic Title, 2000 Choice (American Library Association).
- BSME, Tulsa University; PhD ME, Kansas State University.