GP STRATEGIES™

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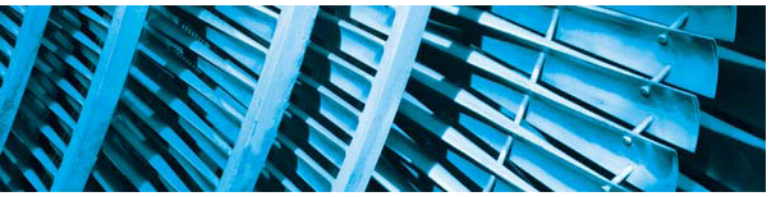
Performance Knowledge™ Series



Fundamentals of Power Plant Performance for Utility Engineers

Course DESCRIPTION (4½ Days)

This 4½-day course teaches attendees how to test and monitor power plant equipment and improve unit heat rate. The course presents design and operating theories of power plant equipment. It also emphasizes efficiency and testing with full consideration given to the expectations and limits of component equipment. The laws of thermodynamics and the principles of heat transfer are reviewed and applied to equipment operation and efficiency. Actual test data is used to calculate turbine efficiency, condenser cleanliness, turbine cycle heat rate, turbine cycle heat rate corrections, boiler efficiency, and feedwater heater performance.

Prerequisites

Good working skills in algebra and graphical interpretation.

Who Should Attend?

This course is designed for engineers, engineering managers, and plant engineers.

Course CONTENT

- Overview of ASME Performance Test Codes
- Thermodynamics Review
- Boilers
- Turbines
- Feedwater Heaters
- Test Instrumentation
- Data Evaluation
- Pumps
- Condensers
- Cooling Towers

Course OBJECTIVES

At the end of this course, students should be able to:

- Recognize and use standard testing methods
- Determine the performance levels of major plant equipment
- Test performance accurately and interpret results
- Improve the efficiency of plant operations

Course MATERIALS

The textbook *Fundamentals of Power Plant Performance* and steam tables are provided. Attendees are advised to bring a scientific calculator to class with them.

REGISTRATION

To register for open enrollment courses or to obtain more information, contact GP Strategies™ Energy Services at +1 716.799.1080 or 800.803.6737. Visit us online at http://fossilfuelcourses.gpstrategies.com/crs.aspx

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Ref. Code: ILT PKS FundPwrPlntPerfUltEngrs 3.26.13.pmd