

## TM151

#### **Course Overview:**

This highly relevant seminar is intended for mechanical engineers and technicians involved in heat exchange, and those are responsible for general mechanical management for maintenance, planning utilizing computer in different aspects of mechanical maintenance procedures, and persons who are interested to work in heat exchange problems area.

## **Course Objective:**

The course presents a systematic approach to the basics of heat exchange,. It first adopts a general approach to the comprehensive heat exchange problems-solving techniques, delivering solutions to oil, gas and chemicals industries.... Then it explains what is meant by heat exchange types. Heat exchangers types and their measurements and maintenance will be deeply involved in this course with some applications in other mechanical utilities.

Upon completion of this course, participants will gain also an understanding of basic utilities related to heat exchange. Also they will be aware of troubleshooting problems and the associated actions to be taken, especially in the cases of shell and tube equipment failure.

#### **Course Outline:**

- -Heat Exchange Fundamentals Of Heat & Fluid Flow
- -Types And Applications
- -Construction
- -Heat Exchange Problems
- -Shell And Tube Heat Exchangers
- -Analysis Of Shell And Tube Heat Exchangers
- -Increased Heat Recovery In Shell And Tube Heat Exchangers
- -Optimum Outlet Water Temperature Analysis
- -Design Of Shell & Tube
- -Fouling In Heat Exchanger
- -Boiling & Condensation Heat Transfer
- -Enhancement In Heat Exchanger & Vibration
- -Design Of Condensers & Evaporators
- -Design Of Plate Heat Exchanger
- -Testing & Inspection
- -Maintenance Of Heat Exchanger
- -Operation

#### Who Should Attend:

- -Electrical, mechanical, and chemical Engineers.
- -Senior technicians who work in the electrical control and power utilities.
- -Technicians who would like to refresh their knowledge.
- -Mechanical and chemical Engineers who are interested in control subjects.

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Training Language: EN / AR

### **Training Methodology:**

- -Presentation & Slides
- -Audio Visual Aids
- -Interactive Discussion
- -Participatory Exercise
- -Action Learning
- -Class Activities
- -Case Studies
- -Workshops
- -Simulation

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