

Course Overview:

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 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.

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Course Outline:

1. HEAT EXCHANGE FUNDAMENTALS OF HEAT & FLUID FLOW
2. HEAT EXCHANGE PROBLEMS
3. BOILING & CONDENSATION HEAT TRANSFER
4. FOULING IN HEAT EXCHANGER
5. COMBUSTION IN STEAM GENERATION AND FUEL ANALYSIS
6. MAINTENANCE OF HEAT EXCHANGER
7. DESIGN AND OPERATION OF COOLING TOWERS
8. WATER TREATMENT – CLEANING, DISINFECTION AND CORROSION CONTROL
9. WATER SYSTEMS
10. REFRIGERANTS, REFRIGERATION CYCLES, AND REFRIGERATION SYSTEMS
11. AIR SYSTEMS: COMPONENTS—FANS, COILS, FILTERS, AND HUMIDIFIERS
12. SYSTEM CLASSIFICATION, SELECTION, AND INDIVIDUAL SYSTEMS
13. EVAPORATIVE COOLING SYSTEMS AND EVAPORATIVE COOLERS

Who Should Attend:

1. Electrical, mechanical, and chemical Engineers.
2. Technicians who would like to refresh their knowledge.
3. All Technical categories of personnel who deals with boilers.
4. Engineers, boiler inspection engineers.

Training Language:

EN / AR

Training Methodology:

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