

Training Title

Heat Exchangers Design, Performance & Operation & Troubleshooting

Training Venue and Dates

Heat Exchangers	5	07-11 March	\$3,300	Abu Dhabi
Heat exchangers /heat transfer	5	11-15 April	\$3,300	Dubai
Heat Exchangers Operation, Selection, Troubleshooting and Maintenance	5	20-24 June	\$3,300	Abu Dhabi
Heat Exchangers	5	19-23 September	\$3,300	Abu Dhabi

In any of the 5 star hotel. Exact venue will be informed soon.

Training Fees

- 3300\$ per participant for Public Training including Course Materials/Handouts, Tea/Coffee, Refreshments & International Buffet Lunch
- Training will be held at any 5 Star Hotels

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

Who should attend?

Power Plant Engineers & Operators, Plant and Maintenance Craftsmen, Building or Energy Managers, Air conditioning engineers, Industrial and Environmental Engineers, General Mechanical and Process Engineers

Training Description

This course will introduce the fundamental concepts of Heat exchangers and their applications in Power Industry, water desalination and Air conditioning. It deals with the design considerations and the operations of typical heat exchangers in power, potable water production systems and air conditioning for human comfort. It will also outline typical types of heat exchangers, basics, applications in power plants, seawater desalination technologies, air conditioning and their components. The course critically examines the energy efficiency and usage in different engineered heat exchangers systems. The environmental issues will be also considered. The basic heat exchangers design procedures, estimation and calculations of system design will be introduced. Practical hands-on exercises will be included in the workshop.

Course Outline

- ◆ Introduction to Heat Exchangers Design
- ◆ Fundamentals of Heat Transfer Calculations
- ◆ Heat exchangers design improvement estimation tips
- ◆ Factor governing efficient heat exchangers designs in power generation applications
- ◆ Power Plant heat exchangers Selection Criteria
- ◆ Boilers Heat Exchanging Surfaces
- ◆ Design of Superheater, evaporators and reheaters in different applications
- ◆ Detailed review of Waste Heat Recovery Worked examples and discussions.
- ◆ Steam Condensers in Power Plants
- ◆ Configuration selection, rating and preliminary design
 - Single phase exchangers, evaporators and condensers
 - Applications in process industry, desalination and power engineering
 - Inspection, troubleshooting and maintenance
- ◆ Compact heat exchangers: Plate-fin and Tube-fin heat exchangers; mechanical features, pressure drop
- ◆ Air-Cooled heat exchangers
 - Single phase heat exchangers
 - Condensers
- ◆ Direct contact heat exchangers: performance and design
- ◆ Condensers and evaporators for refrigeration and air conditioning: water cooled and air cooled
- ◆ Heat transfer enhancement measures and surfaces
- ◆ Fouling in heat exchangers and methods of treatment

- ◆ **Materials selections and corrosion.**
- ◆ **Life cycle cost analyses: overview of general methods**
- ◆ **Heat Exchangers in Multieffect Desalination**
- ◆ **Heat Exchangers in Multiflash Desalination**
- ◆ **Plant and piping heat transmission**
- ◆ **Heat exchangers in Industrial applications**
- ◆ **Heat exchangers in Air conditioning and refrigeration applications.**
- ◆ **Efficient shell and tube heat exchangers**
- ◆ **Materials selections and corrosion.**
- ◆ **Life cycle cost analyses**
- ◆ **Environmental regulations, compliance, and methods and equipment used for pollution control**
- ◆ **Overview of Plant system controls**
- ◆ **Instruments used for energy and Temperature measurements**
- ◆ **Exchangers components inspection details**
- ◆ **Operation – start up, normal operation, coming off line, provisions for short shutdown, provision for long shutdown.**
- ◆ **Systems maintenance checklist**
- ◆ **Codes and standards**

Case Studies Discussions, Last Day Review & Assessments will be carried out.

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