

**“Heat Exchangers & Fired Heaters (operation & Maintenance)”
Training Program
(English Material)**

Course Length: 25 Hours @ 5 days

Objectives:

This course explores the construction and configuration of the heat exchangers in some detail.

Suitable for:

Engineers, Maintenance and Operations Personnel who work with heat exchangers.

Course Contents:

- **Functions of heat exchangers.**
- **Applications of heat exchangers**
- **Heat Transfer in heat exchangers.**
- **Classification of heat exchangers**
- **Finned Tube Effects**
- **Primary factors affecting heat transfer duty**
- **Performance of heat exchangers**
- **Clean versus fouled**
- **Influence of operating and design variables on fouling**
- **Types of heat transfer equipment.**
- **Plate exchangers.**
- **Fired heaters.**
- **Design of primary exchanger components.**
- **Heat exchangers troubleshooting.**
- **How to evaluate the performance of heat exchangers**
- **Shell and tube heat exchangers**
- **Types of shell and tube heat exchangers**
- **Fluid Stream Allocations**
- **Tubes, Tube-sheets**

- **Shell Assembly, Baffles**
- **Fouling Control and Cleaning Techniques**
- **Controlling Shell and Tube Exchangers**
- **Fired heaters.**
- **Types of fired heaters**
- **Burners of fired heaters**
- **Evaporators and Reboilers**
- **Heat Recovery Systems**
- **Plate Heat Exchangers**
- **Types of Plate Heat Exchangers**
- **Installation and Operation of Plate Heat Exchangers**
- **Heat Exchanger Tube Side Maintenance– Repair vs. Replacement**
- **Tube inspection**
- **Plugging the holes**
- **Heat exchangers troubleshooting**
- **Plate Heat Exchangers Maintenance.**