

Learning Topic: Technical (Operation & Trouble diagnosis).

Course Name: Heat Exchangers & Fired Heaters Operation & Troubleshooting

Reference Code : TEC 403

Course Objectives:

This course will provide insight into the basics of thermal and mechanical design of Fired Process Heaters, and their safe and efficient operation. Emphasis will be on design methods, fuel types, combustion chemistry, efficiency, heat distribution and heater tubes considerations. A step-by-step review of a design calculation example is included. Preparation of heater specifications and evaluation of heater design proposals is discussed. Mechanical aspects include tube design, burners, refractory and heater structural features. The course cover techniques to improve efficiency, run lengths, safety and emissions, and include Q&A discussions on heater field survey, operations, troubleshooting and revamp methods.

Who Should attend?

This course is intended for engineers, supervisory and technical staff involved in the maintenance including process engineers, mechanical & equipment engineers, project engineers and maintenance engineers, operators and technicians.
as well as plant engineers in the oil, chemical and other process industries.

Program Methodology:

A variety of methodologies will be used during the course that includes:

- Pre-test and Post-test
- Variety of Learning Methods
- Presentation
- Lectures
- Group Work
- Animations
- Discussion

United Arab Emirates

Emirates Towers, Level 41 Sheikh Zayed Road
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Khobar Gate Tower
King Fahad Street , Khobar 31952

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101 Business Tower, 8th Floor
Al Jubail 35513, Bldg# 9278 ,KSA

Course Outline:

Day I

- Introduction
- Course overview
- Gas processing overview
- Process equipment categories
- Mechanical and safety aspects

Day II

- **Fired Heaters**
- Heater types
- Process applications
- Selection guidelines
- Process operating problems

Day III

- **Heat Exchangers**
- Heat exchanger types
- Process applications
- Heat transfer terms and equations
- Design criteria and parameters
- Fouling considerations

Day IV

- Reboilers
- Selection guidelines
- Process operation problems/troubleshooting
- Overview of the Processing Industry
- Chemistry of the Processing Industry

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- Safety for the Operation and Maintenance Groups
- Overview of Piping and Heat Exchanger Equipment
- Safe Commissioning of Piping and Heat Exchanger Equipment
- Economics – Heat Exchanger Monitoring

Day V

- Trouble Shooting
- Maintenance Guidelines
- Safety – Pressure Concerns
- Maintenance Guidelines
- Post test

Course Duration	Date	Venue	Course Fee
5 Days			

Time: 08:00 AM -03:00 PM

Numbers of hours: 30 Hours

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