Recent Trend In Furnaces, Heat Exchanger And Coolers In Petrochemical Plants

Course Description:

Heat exchangers are designed to transfer heat more efficiently from one medium to another. Typically, heat exchangers use fluids to store heat but recently, with the creation of more advanced technology; gases can now be used to transfer heat. Heat transfer can take the form of absorption or dissipation. Unknown to many, heat exchangers are found in everyday equipment

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- Boilers, furnaces even refrigerators and air conditioners! Most people think that heat exchangers are used only in industrial process, but the truth is, it is now used in the household to transfer heat more efficiently. This sentence has huge implications
- With energy bills going up, heat exchangers can help store heat so that you can now cut down on your heating or cooling bills. Heat exchangers recover wasted heat to make it useful again.

Who Should Attend?

- Supervisors, technicians, foremen, pourers and operators are in petrochemical plants.
- This course is ideal for chemical and mechanical engineers who are engaged in plant operations, technical services, and project design; or with assignments involving heat exchanger sizing, specification, or operation.

Course Objectives:

This course is intended for operating personnel. Areas covered include basic heat transfer, fuel, refractory, principals of design applications and operation of different pipe steel heaters (furnaces), heat exchangers and coolers.

Course Outline:

Day 1:

- Double pipe exchangers
- Shell and tube heat exchanger
- Tube bundles
- Floating tube sheet exchanger

Day 2:

- Procedure to take a heat exchanger out of service
- Procedure to place a heat exchanger in service
- Testing heat exchanger for leaks
- Combustion

Day 3:

- Burners
- Draft
- Furnace efficiency
- Vertical heaters

Day 4:

- Box type heater
- Thermal cracking & hydro-cracking heater
- Typical decoking procedure

Day 5:

- Heater start up and shutdown procedure
- Induced draft cooling tower
- Air fan cooling and condensers