

**“Heat Exchangers (Design & Inspection)”**  
**Training program**  
 (English Material)

**Course Length:** 16 Hours @ 4days

**Course Objective**

Upon completion of this applications-oriented course, attendees will be able to evaluate the mechanical design of shell-and-tube heat exchangers and have an overall understanding of typical heat exchanger maintenance requirements.

**Who Should Attend?**

Individuals who are responsible for evaluating the mechanical design of shell-and-tube heat exchangers, or those responsible for their inspection.

**Course outline:**

Main types of heat exchangers and their primary components

Primary process functions of heat exchangers

Primary factors affecting heat transfer duty

Specifying design requirements

Design of primary exchanger components

- Girth flanges
- Pass partition gaskets
- Flat channel cover
- Tube-sheets
- Internal floating heads
- Tubes
- Pass partition plates
- Non-pressure-containing parts

Typical inspection procedures

- Locating leaks
- Tube inspection techniques
- Eddy current testing
- Ultrasonic Examination