



TWO DAY`S TRAINING PROGRAM ON

Heat Exchanger (Tube, Shell and Plate Type)

(Fundamentals, Thermal Design, Operation & Maintenance)

27-28 Dec 2019 @Kolkata

Objective of the program: Heat Exchangers are one of the most important and commonly used equipment' s in chemical process industry. Thermal design provides key design parameters for the fabrication of heat exchangers. It is thermal design that provides input for mechanical design and later on fabrication of the exchangers. Proper understanding and knowledge related to fundamentals, thermal design, operation and maintenance of heat exchangers is extremely necessary and useful for Process engineers, plant Process engineers as well as manufacturers of heat exchangers for right design and manufacturing and smooth operation of the heat exchangers. It is this objective that this program will try to achieve.

Learning Outcome: The attendees of the training program would be able to acquire following learning' s from the training Program:

- i. Concept and basics of heat exchangers
- ii. Different types of Heat Exchangers
- iii. How to manage fouling in heat exchangers?
- iv. How to tackle flow induced vibrational issues?
- v. Specifying the configuration/geometry of the exchanger.
- vi. How the international codes/standards are used in thermal design of the exchangers?
- vii. Various aspects related to operation, maintenance and troubleshooting of heat exchangers.
- viii. Comparative study among various type of heat exchangers
- ix. Pipe tracing
- x. Heat transfer fluids

Specific Features of the Program:

- i. The program focuses on learning through example & illustrations.



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- ii. It combines design as well as operational aspects of heat exchangers and hence aims at providing comprehensive knowledge and learning to participants.
 - iii. The program aims to have interactive sessions for better learning and understanding.
 - iv. It explains how the international standards are used in design, operation and maintenance of heat exchangers.

Who should attend? Process engineers & managers and Mechanical engineers & managers in plants and design organizations, heat exchanger vendors and manufacturers.

Prerequisites: Anyone who is a graduate Process or Mechanical engineer working in a design engineering organization, plant or Vendor Company preferably with minimum 1-2 year's work experience can attend this training program.

Workshop/Programme Contents:

- Introduction to Heat Exchangers
- Types of Heat Exchangers
- Shell and Tube Exchangers
 - Construction
- Design Considerations for Shell and Tube Heat Exchangers
- Fouling Factor in Heat Exchangers
- Double Pipe Heat Exchangers
- Classification of Shell and Tube Heat Exchangers
- Materials of Construction
- Cleaning of Heat Exchangers
- Other types of Shell and Tube Heat Exchangers
- Flow in Heat Exchangers
- Comparison of flows in tubular heat exchangers
- Regenerative and Non-regenerating heat exchangers
- Plate type Heat Exchangers
- Fouling in Plate Heat Exchangers
- Advantage of Plate Heat Exchangers over Shell and tube heat exchangers
- Application of Heat Exchangers
- Spiral plate and spiral tube heat exchangers
- Comparison between spiral-plate heat exchangers and shell-and-tube exchangers
- Pipe tracing



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- Heat Transfer Fluids

Certification: Every successful participant will be awarded a course completion certificate.

Delivery Methodology (Strategy):

- Introduction and Objective Setting
- Knowledge Presentations,
- Assignments & Exercise,
- Feedback and Assessment
- Discussion and Interaction
- Delivery 9:30 AM to 17:30 PM

Registration Details:

Dates of the program: 27-28 Dec 2019 at Kolkata (Friday and Saturday).

Participation fees: Rs. 24500/- Per participant (GST@18% extra, Includes Lunch, Snacks Tea for both Days, Hard copy of Course Material, Welcome Kit).

Payment: ECS/NEFT/DD in favor of “Centre for Industrial Solutions and Advanced Training” Payable at Nagpur, Maharashtra, India. Account No: 0509102000003353 Bank: IDBI, Wardha-442001, MS, India; IFSC Code: IBKL0000509; MICR Code 442259001.

Venue: to be informed.

For registration can be done online through web www.cisat.co.in or call/SMS/email to cisat.nagpur@gmail.com; or vikas@cisat.co.in; or can call on Vikas +91-7709012815; +91-8669546332.

Looking forward further communication from you soon.

With Best Regards and Thanks,

Mrs. Rupali

Director Business Development

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