TEMA & HTRI Heat Exchanger Design & Cost Saving Masterclass

Consultant / Trainer:

Bert Boxma

This Masterclass can be tailored to a specific client's needs. Built from a series of chosen modules, the Masterclass can provide an in depth practical understanding of major proven heat exchanger technologies and "state of art" fouling mitigation technologies. Pro's and Con's of several heat exchanger types can be explained with life operational examples. The Masterclass will mix theory and common practices using highly interactive case studies where attendees are encouraged to use in-house heat exchanger type selection software and rigorous design/rating world-class software from HTRI.

Participants

This **Petrogenium.** course can be tailored for awareness/inexperienced staff, for intermediate and for experienced personnel. Furthermore the course can be customized for a specific refinery, plant or unit. The option for post-course consultancy/help-desk support is also available.

Participants could include a wide range of Technical Professionals who want to improve the performance of heat exchanger in their company for shell & tube and compact types but will greatly benefit:

- Engineers in disciplines Process, Mechanical, Project acting as specialist or generalist.
- Design Specialist in heat exchanger & heat Transfer Engineers to extend their knowledge HTRI; specific Engineers in various disciplines; Maintenance, Instrument, Turn-Around, & Cost Estimating

Programme

Module 1 - Shell & Tube HX
Heat Exchanger Overview
Shell & Tubular Discussion
Stream Analysis

Module 2 - Shell & Tube HX
Deep dive Shell & Tube heat exchanger
TEMA nomenclature
Case studies

Module 3 - Shell & Tube HX
Tube-Tubesheet connection
Tube vibration
Examples & remedies

Module 4 - Shell & Tube HX
High velocity protection
Impingement plate or rods implementation
Cost savings

Module 5 - Shell & Tube HX
Removable bundles
(U-tube, Floating Heads and Texas Towers)

Module 6 - Shell & Tube HX
Shell side aspects
Tube support in different systems

Module 7 - Shell & Tube HX
Tube varieties
Twisted tube or High fFux tube

Module 8 - Shell & Tube HX
Operational aspects
Use of tube inserts

Module 9 - Air Cooled HX
Tube application & selection
Process application

Module 10
Double pipe or Multi Tube Hairpin HX
Process Application

Module 11 - Plate & Frame Gasketed HX
Process application & experiences

Module 12 - Other HX Types
Spiral plate, Plate in Shell, Packinox, Spiral Coil, Printed Circuit and Braised Aluminium

Module 13 - No Steam HX
Electrical heater, Submerged Combustion Vaporizer, Open Rack Vaporizer and others