

Course Fee: US\$650

If you have cases that are heat transfer or pressure drop limited, this is the course for you. Learn how to use *Xist* to enhance the performance of shell-and-tube exchangers. Case studies of suitable applications for enhanced geometry and features in *Xist* will be discussed.

Key Topics

- Tube inserts
- ID enhanced tubes
- OD enhanced tubes
- Alternative baffles

Suggested Participants

Engineers responsible for specifying or improving shell-and-tube exchanger performance

HTRI Software

This course will make use of the following HTRI software: *Xchanger Suite*® component *Xist*®. All training materials are based on the current software version.

Course Credits: 6 hours (PDH/CEU)

Outline

- I. Considerations for Thermal Optimization
 - Conditions where optimization can benefit
 - Limitations of segmental baffles
 - Bypass flows
 - Window regions
 - Shellside flow distribution
 - Segmental baffle guidelines
- II. Tube Inserts
 - Tube insert applications
 - Augmentation mechanisms
 - Tube insert devices
 - Twisted tape
- III. Externally Enhanced Tubes
 - Extended surfaces and benefits
 - External enhancement options in *Xist*
 - Potential future technologies
- IV. Internally Enhanced Tubes
 - Internal enhancement options in *Xist*
 - Double enhancement options in *Xist*
- V. Alternative Baffles
 - Alternative baffle types
 - Performance of various baffles
 - Workaround to model disc-and-doughnut baffles