2008 North American Meeting and Annual Meeting of Stockholders - Victoria, Vancouver Island, British Columbia, Canada

Start planning today! Heat Transfer Research, Inc. returns to Canada for their 2008 North American Meeting.

Vancouver Island is home to British Columbia's historic capital – the "garden city" of Victoria. Join HTRI at The Fairmont Empress situated on Victoria's picturesque Inner Harbour.

The 2008 North American meeting includes the Annual Meeting of Stockholders, technical presentations, and an exhibition. Training this year includes

- Advanced Boiling Heat Transfer Short Course
- ***X****fh* Workshop (two-day)
- HTRI ***X****changer Suite* Essentials Workshop
- Kettle Reboilers and Vaporizers Short Course
- Technology Advances in HTRI ***X****changer Suite* 6 Workshop

Also, HTRI is happy to once again offer a free half-day course for new users, Getting Started: Maximizing the Value of HTRI Technology.

Exhibition – A two-and-one-half-day event begins Monday, August 25, and ends at 15:00 on Wednesday, August 27. The themes of the exhibition include heat exchanger technologies and selected interfaces between HTRI ***X****changer Suite* and complementary software.

The North American meeting offers a value-packed week of technical presentations and dynamic discussions on leading-edge heat transfer technology. For us to gather in such grand style and in a place so rich in natural beauty is the icing on the cake!

Victoria has a fascinating history, and there's an ocean or mountain vista around every corner. We hope to see you there in August.

Schedule

Registration desk opens one hour before the first event of the day.

Sunday, August 24, 2008

These meetings are open only to Board of Directors and Technical Committee members.

8:30 - 17:00	Board of Directors' Meeting
8:30 - 17:00	Technical Committee Meeting
17:30 - 20:00	Board / Technical Committee Dinner

Monday, August 25, 2008

8:30 - 17:00	Annual Meeting of Stockholders
	Technical Presentations
10:00 - 17:00	Exhibition
18:00 - 20:00	Reception

Tuesday, August 26, 2008

8:30 - 17:00	Technical Presentations
8:30 - 17:00	Exhibition

Wednesday, August 27, 2008

8:30 - 12:00	Technical Presentations
8:30 - 12:00	Exhibition
13:00 - 17:00	Getting Started: Maximizing the Value of HTRI Technology - ***free***
13:00 - 17:00	Crude Oil Fouling Task Force (COFTF) Meeting *(COFTF members only)*
17:30 - 21:00	Exchanger Design Margin Task Force (EDMTF) Meeting *(EDMTF members only)*

Thursday, August 28, 2008

8:30 - 17:00	Advanced Boiling Heat Transfer Short Course
8:30 - 17:00	***X****fh* Workshop (Day 1)
8:30 - 17:00	HTRI ***X****changer Suite* Essentials Workshop

Friday, August 29, 2008

8:30 - 17:00	***X****fh* Workshop (Day 2)
8:30 - 17:00	Kettle Reboilers and Vaporizers Short Course
8:30 - 17:00	Technology Advances in HTRI ***X****changer Suite* 6 Workshop

Courses

Getting Started: Maximizing the Value of HTRI Technology

Instructor: S. Greg Starks
Date: Wednesday, August 27, 2008
Time: 13:00 - 17:00
Fee: Free to new HTRI users!

Is your employer a new HTRI member—or have you recently joined a company that is a long-time member? If you need to leap ahead on the learning curve, we have an opportunity that may interest you.

Join us for a seminar designed specifically for new HTRI users. Attend this FREE, hands-on, half-day seminar to make the most of your investment in HTRI's premier product, HTRI ***X****changer Suite*®. To maximize the value of HTRI technology, this seminar provides

- an extensive overview of ***X****changer Suite* components
- an introduction to HTRI methods
- instructor-led, hands-on analysis of sample cases, including data entry based on specification sheets and common pitfalls to avoid in data entry
- strategies for interpreting and understanding case results, including the use of 2D and 3D data plots
- options for obtaining in-depth technical support
- information about upcoming training offerings

Register quickly—with a maximum of only 40 attendees, this seminar will fill up fast! New users will be registered on a "first-come, first-registered" basis!

Suggested Participants

New users of HTRI software

Advanced Boiling Heat Transfer Short Course

Instructors: John R. Thome and LiDong Huang
Date: Thursday, August 28, 2008
Time: 8:30 - 17:00
Fee: US$500

Designed for practicing engineers that design heat transfer equipment, this course covers the theory of boiling, visualization of the boiling process, practical application of boiling theory, and state-of-the-art modeling techniques for two-phase flow. Instructors will work through example cases from operating plants and extensively used plant designs to illustrate the practical aspects of boiling theory.

After completing the course, participants will be able to understand the boiling process, predict how different heat exchanger and process choices influence the operation of boiling equipment, and make sound engineering decisions in the operation of shell-and-tube boiling equipment.

Key Topics

- Nucleate boiling
- Boiling on horizontal bundles
- Two-phase flow and boiling models
- Shellside falling film evaporation
- Film boiling
- Numerical modeling of two-phase flow in tubes and tees
- Numerical modeling of boiling and condensation in non-circular channels

Suggested Participants

Engineers that design, evaluate, or specify boiling heat transfer equipment in the chemical and petro-chemical industries

Xfh **Workshop (two-day)**

Course developed with Jack E. Hardie

Instructors: Nathan W. Kidd and Andrew C. Lintern
Date: Thursday, August 28, and Friday, August 29
Time: 8:30 - 17:00
Fee: US$600

Learn how to simulate the performance of fired heaters. By using ***X****fh*, designers can predict the entire performance for a fired heater in a single run, including process tubeside methods for pressure drop and heat transfer.

X*fh* can help you troubleshoot plant problems and assess the effects of energy-efficient add-ons, as well as evaluate competing designs or proposed changes to plant conditions and/or existing designs.

Key Topics

- Typical fired heater geometries and applications
- Combustion
- API 530
- Convection
- Cylindrical heaters
- Box heaters

Suggested Participants

Designers of fired heaters and process engineers who evaluate their performance

HTRI *Xchanger Suite* Essentials Workshop

Instructor: Thomas G. Lestina
Date: Thursday, August 28, 2008
Time: 8:30 - 17:00
Fee: US$350

Do you need a review of modeling techniques and HTRI methods in ***X****changer Suite*? After a brief introduction to the component software, you receive debugging tips and a checklist for data needed to set up a case.

Using hands-on examples, learn about HTRI's latest guidelines to specify fluid properties, boiling and condensing method options, and general recommendations to review results.

Key Topics

- Overview of ***X****changer Suite* components and data entry
- Geometry input for shell-and-tube, air-cooled, and plate-and-frame exchangers
- Process specifications for rating, simulation, and design
- Guidelines for specifying fluid properties
- Introduction to HTRI analysis methods

Suggested Participants

Both novice users of ***X****changer Suite* and engineers who need an update on the latest HTRI recommendations

Kettle Reboilers and Vaporizers Short Course

Instructors: Christy M. Laird and LiDong Huang
Date: Friday, August 29, 2008
Time: 8:30 - 17:00
Fee: US$500

Thermal design methods for kettle reboilers have evolved over the years and old rules-of-thumb no longer apply. New research results, software advances and feedback from industry all contribute to improved design practices.

The course presents the most up to date research in kettle reboilers, provides our current recommendation to use ***X****ist* to model kettles accurately, and discusses future research and software development to improve predictions. Many example problems will be provided illustrating recommended good practice using ***X****ist*, interpreting warning messages, improving designs, and troubleshooting cases. Practice sizing a propane vaporizer for increased capacity, evaluate the performance of a propane vaporizer with low wall superheat, troubleshoot a stabilizing reboiler, design an amine reboiler, and much more.

Key Topics

- Shellside boiling methods
- Recirculation
- Liquid level and bundle dryout
- Differences between bundle composition and feed composition
- Kettle sizing
- Entrainment
- Vibration
- Fouling

Suggested Participants

Thermal design engineers and heat exchanger experts

Technology Advances in HTRI *Xchanger Suite* 6 Workshop

Instructor: R. Stanley Kistler
Date: Friday, August 29, 2008
Time: 8:30 - 17:00
Fee: US$350

Come and learn how to use the new features in ***X****changer Suite* 6 and understand why your results changed for existing cases. Practice using the developmental version of our software and quiz the staff on the best modeling practices.

This is a great opportunity to get a "sneak preview" of our latest software prior to release.

Key Topics

- Modeling A-frame condensers
- Specifying continuous tube-in-plate fins
- Predicting kettle entrainment
- Using the new native interface to property generators
- Specifying non-Newtonian fluids in ***X****phe*
- Evaluating the velocity profile transferred from ***X****ist* to ***X****vib*
- Evaluating transition boiling

Suggested Participants

Users familiar with HTRI ***X****changer Suite* 5

Instructors

LiDong Huang, *Senior Project Engineer*, *Research*, holds a B.S. from Shanghai Maritime University and an M.S. from University of Shanghai for Science and Technology, Shanghai, China. He received his Ph.D. in Mechanical Engineering from the University of Houston, Houston, Texas, USA, where he studied and developed methods for predicting subcooled flow boiling, film boiling, and critical heat flux. Before joining HTRI, Huang worked as an instructor and thermal engineer in the Department of Marine Engineering at Shanghai Maritime University. Since joining HTRI, he has focused primarily on boiling and two-phase flow phenomena but also has done some experimental work on plate heat exchangers and organic fouling. Huang has taught several courses at HTRI meetings and member company sites in China. He is a member of ASME and a licensed Professional Engineer (P.E.) in Texas.

Nathan W. Kidd, *Engineer, Software Development*, graduated from Texas A&M University, College Station, Texas, USA, with a B.S. in Chemical Engineering. Kidd interned with HTRI for two terms, implementing RODbaffles® in ***X****ist* and modeling closed feedwater heaters. Since joining HTRI on a full-time basis, he has worked principally on the development of ***X****fh* and has co-chaired the 2006 American Flame Research Committee (AFRC) International Symposium. Kidd also conducts training for HTRI.

R. Stanley Kistler, *Vice President*, *Research & Technology*, obtained his undergraduate and master's degrees as well as his Ph.D. in Chemical Engineering, with an emphasis in boiling, from the University of Missouri – Rolla, Missouri, USA. Although Kistler's career at HTRI has focused on software development, he also conducted experimental research on shellside single-phase flow. Since 1995 he has led HTRI's software development efforts; in 2003 he also assumed responsibility for HTRI's research activities. Kistler has helped develop many HTRI workshops and over the course of his career has taught dozens of courses and workshops around the world. He also serves as a guest lecturer for academic courses and has been involved in various engineering events in academia. Named an AIChE Fellow in 1996, Kistler is past chair of the Heat Transfer and Energy Conversion division. He has chaired numerous sessions at National Heat Transfer Conferences.

Christy M. Laird, *Engineer, Research*, earned her Ph.D. in Chemical Engineering from Carnegie Mellon University, Pittsburgh, Pennsylvania, USA. During her graduate studies, she held a National Science Foundation Graduate Fellowship and served as a teaching assistant for undergraduate classes in Thermodynamics and Process Control. Her dissertation research focused on a model for production of solar-grade silicon in a fluidized bed reactor provided experience for defining appropriate models for process equipment and using experimental data to fine-tune the model. Laird holds a B.S. in Chemical Engineering and in Mathematics from the University of Arkansas, Fayetteville, Arkansas, USA. At HTRI, her initial primary research responsibility is improving the kettle reboiler model and single-phase shellside flow in inline crossflow bundles; her work as a software developer focuses on maintaining and enhancing the kettle model in ***Xi****st*.

Thomas G. Lestina, *Vice President, Engineering Services*, has over 20 years of engineering project management experience. He earned a B.S. in Mechanical Engineering from Union College, Schenectady, New York, USA, and an M.S. in Mechanical Engineering from Rensselaer Polytechnic Institute, Troy, NY. He is a member of ASME and serves as the chair of the technical committee for the ASME Performance Test Code 12.5, Single Phase Heat Exchangers. Prior to joining HTRI, he worked as a Lead Engineer for MPR Associates, Inc., Alexandria, Virginia, USA. Lestina leads HTRI's training initiatives; he develops, customizes, and routinely teaches courses at HTRI events and member companies. In addition, he has developed and taught *Heat Exchanger Design and Operation* for ASME/AIChE. He also

manages our contract services and technical support activities. Lestina is a licensed Professional Engineer (P.E.) in Texas.

Andrew C. Lintern, *Senior Project Engineer, Software Development*, will be awarded his Ph.D. in Chemical Engineering from Imperial College, London, United Kingdom (UK) in May 2008. His Ph.D. thesis research focused on two-phase flow and heat transfer in compact heat exchangers, with an emphasis on theoretical modeling of dephlegmators. He also received his Masters (MEng) in Chemical Engineering from Imperial College. Prior to joining HTRI, he worked in the UK as a software developer with AEA Technology Plc. and AspenTech Limited. His education, combined with nearly fifteen years of experience, gives Lintern a broad-based knowledge of multiple types of heat exchangers, fired heaters, and CFD modeling. Lintern will initially work on software enhancements to the HTRI ***X****changer Suite* calculation routines.

S. Greg Starks, *Senior Project Engineer, Software Development*, graduated with a B.S. in Mechanical Engineering from Texas A&M University, College Station, Texas, USA. While working at the Shuttle Support Thermal Control Systems Analysis Group of Rockwell International, Houston, Texas, he performed thermal analyses for the space shuttle and developed geometry models for the shuttle/space station. From 1994 – 1999, Starks was employed at HTRI, developing calculation engines for our software as well as a quality control database to track program changes. He then moved to Austin, Texas, to work as the Software Engineering Manager for Tanisys Technology, Inc., a supplier of automated test equipment for semiconductor memory technologies. Now that he has rejoined HTRI's team, Starks is currently responsible for the ***X****tlo* calculation engine and enhancements to ***X****ist*. He also assists with sales and training initiatives.

Dr. John R. Thome, *Professor and Director of the Heat and Mass Transfer Laboratory*, *Swiss Federal Institute of Technology*, Lausanne, Switzerland, received his Ph.D. from Oxford University. He has developed numerous methods for prediction of flow boiling heat transfer, boiling of mixtures, evaporation and condensation in enhanced tubes, two-phase flow pattern maps, and other related topics. Thome has authored several books, including *Enhanced Boiling Heat Transfer* (1990) and *Convective Boiling and Condensation* (1994). His new book, *Principles of Two-Phase Flow and Heat Transfer* will be available next year; he currently is working on a new website handbook. He received the ASME Heat Transfer Best Paper Award in 1998, for his submission to the Journal of Heat Transfer. Thome has been a consultant to HTRI since 1981. He is a member of ASME, AIChE and ASHRAE. Thome is the developer of EHT, which was initially commercialized in 1990.

Hotel Accommodations

The Fairmont Empress
721 Government Street
Victoria, British Columbia
Canada V8W 1W5

Telephone: (250) 384-8111
Fax: (250) 389-2747
eMail: theempress@fairmont.com

Online Reservations
http://www.fairmont.com/EN_FA/Reservations/ReservationAvailability?hc=EMP&pc=GRHTR1
The promotional code has already been entered for you.

Room Rates
Single/Double CAD $169

Note: *HTRI's contract with the Fairmont Empress includes "pre- and post-room nights" at the HTRI negotiated rate. The period starting three (3) days prior to and ending three (3) days after the original program dates includes August 18 - September 1.*

Reservation Deadline
July 21, 2008

Nearby Cities
Saanichton (10.8 miles)
Malahat (11.0 miles)
Roche Harbor, WA (14.6 miles)
Sidney (14.7 miles)

Transportation Information

Victoria's International Airport is a 30-minute drive from downtown Victoria and approximately 17 miles (27 km) from The Fairmont Empress.

If you are flying into Vancouver, you can take the daily scheduled coach service from the Vancouver Airport to Victoria. Your journey ends right behind the Fairmont Empress Hotel at 700 Douglas Street. For more information and the current schedule visit Pacific Coach. The frequency of departures increases to hourly during the summer months. Prices are current to March 31, 2008.

If you are flying into Seattle, the Victoria Clipper high-speed catamaran provides round-trip transportation Seattle/Victoria. Enter HTRI when the system asks for a Promo Code and receive a 10% discount.

It takes approximately 30-40 minutes to travel from the Seattle Airport to Pier 69 by taxi (~$35) or A-One Airport Express ($45 – up to 4 passengers.)

For the latest ferry schedule information regarding Seattle to Victoria transportation, check out the ferry schedule page.

The Fairmont Empress is about four blocks from the Belleville Terminal. It's an easy walk provided you are not too encumbered with luggage. Otherwise, taxis meet all arrivals.

Registration

Fees: **US$350**
Meeting fee includes continental breakfast, lunch, coffee breaks, and reception.

Courses and workshops are offered at additional cost which includes materials, continental breakfast, lunch, and coffee breaks. The Getting Started course is free to new users of HTRI software.

Deadline: **August 8, 2008**

Attire: Business casual (no ties or jackets required)

Registration: Secure online registration opens soon!

Information:
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Fax: +1-979-690-3250
Meetings@HTRI.net

Fee/Cancellation Policy

HTRI will refund your registration fee if you cancel in writing before the registration deadline. Substitutions of attendees are permitted at any time. If a course/workshop is cancelled due to insufficient enrollment, HTRI will refund your registration fee for that session. *No refunds will be given after the registration deadline.*