



CTI NEWS

COOLING TECHNOLOGY INSTITUTE • HOUSTON, TEXAS

VOLUME LVIII

SPRING & SUMMER 2016

NUMBER 1



Mark Your Calendar!

Committee Workshop
July 10-14, 2016
Pointe Hilton Tapatio Cliffs
Phoenix, AZ

Annual Conference
February 5-9, 2017
Sheraton New Orleans
New Orleans, LA

2016 Committee
Workshop
July 10-14, 2016
Registration Form
on our website
www.cti.org



Inside...

- 2016 Board of Directors
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- Hotel Information



Bill Howard

My guess is you've heard this before, but what a great conference this past February! Thanks to the CTI staff and Vicky who all did a fabulous job, not to mention the many great attendees that make up CTI! My many thanks to Frank Michell, past president who, over the past two years, steered the CTI ship through some impressive nautical miles! (1 nautical mile = 1.151 land mile so by stating nautical miles, it's even more impressive I figure!) I also want to thank the outgoing board of directors, Billy Childers, (Aggreko Cooling), Steve Chaloupka (Amarillo Gear Co.) and Natasha Peterson (Bechtel). Without all of the CTI volunteers, CTI would not exist! And guess what? We have three new board of directors now too, please welcome Brian Hanel (Hudson Products), Jean Pierre Libert (Evapco) and Frank Michell (American Electric Power) who will help carry the torch forward.

The technical aspect of CTI is embraced by all sectors, however, owner operators need their voice heard at CTI to allow the manufacturers and suppliers to better serve their needs. What better way to allow your company to attend these important meetings and get involved in the committees and get your companies voice and perspective heard! This in turn allows your companies direct involvement in creating and updating all technical literature (codes, standards and guidelines) that have proven to be the backbone of CTI. To ALL Owner Operators out there, please "join in, get involved, learn, educate others, participate and thrive baby thrive in the great world of The Cooling Technology Institute!"

You ask yourself "What makes CTI so great?" (OK maybe you don't but you should!) The answer is simple, volunteers! I'd like to thank the many chairs of all the various committees

who dedicate their time and efforts (no really!) to CTI! Their hard work does not go unnoticed and they should be commended by all. I'd like to thank Frank Foster (Tower Performance) as well for taking over the Ambassador program which I began six years ago. Through the many ambassadors at the CTI meetings there should be no question from a new member unanswered, the ambassadors are there specifically to help the new members and get them acclimated with CTI and its hundreds, no thousands of benefits, just look for their bright yellow name tags!

We will be in Phoenix, at the Point Hilton Tapatio Cliff Hotel July 10th to the 13th, this is Phoenix in July so please be sure to bring your heavy down parkas! This, my friends is where the rubber meets the road, this is where we roll up our sleeves (actually I'd suggest short sleeve shirts) and the committee work gets updated and done. This is the foundation of CTI so please join me and the entire CTI body in this important workshop meeting. Your involvement is critical and yes, if you are reading this, I am talking specifically to you!

It is indeed an honor to serve as your president over the next two years and work with the many gifted volunteers and CTI staff that comprise CTI. In closing I'd like to thank the many past presidents and board of directors who have molded this great organization over the past 60 some years, their commitment to CTI should set an example for the rest of us to always excel at what we do My motto remains:

"Ask not what CTI can do for you, rather ask what you can do for CTI."

"Join in, get involved, learn, educate others, participate and thrive!"

Bill Howard, CTI President 2016/2017

CALL FOR PAPERS

2017 Annual Conference, February 5-9, 2017
Sheraton New Orleans, New Orleans, Louisiana

The following schedule will begin the process for papers presented at the 2017 Annual Conference:

2016

May 6: Deadline for Abstracts

June 10: Authors Notified by Program Chair

Aug 5: One (1) electronic copy of draft must be sent to CTI office for review

Nov 11: Final draft, based on review comments and slides due in the CTI office

Abstract Forms can be obtained by contacting the CTI office at 281.583.4087 or at our website www.cti.org

2016 CTI Board of Directors

Serving as President for 2016 and 2017

Bill Howard
Cooling Tower Depot, Inc.



2014-2016

2015-2017

2016-2018

Manufacturers



Anthony DePalma
Tower Performance,
Inc.



Brandon Rees
Cooling Tower
Depot, Inc



Jean-Pierre Libert
Evapco Inc.

Suppliers



Jon Cohen
H-O-H Water
Technologies



Narendra Gosain
Walter P Moore And
Associates, Inc



Brian Hanel
Hudson Products
Corporation

Owner Operators



James Cuchens
Southern Company
Services, Inc.



Helene Troncin
Electricite De France
(EDF)



Frank Michell
American Electric
Power

Meet 2016's Newest Board Members!



Jean-Pierre Libert, *Evapco Inc.*

Jean-Pierre R. Libert holds a MS Degree in Mechanical Engineering from Faculte Polytechnique of Mons, Belgium. He is Vice-President of Advanced Technology at Evapco in Taneytown, Maryland, where he oversees the research & development, product development, testing, rating and modeling activities of field-erected cooling towers and air cooled steam condensers. Before joining Evapco in 2006, Jean-Pierre held technical and management positions in cooling technologies in Belgium, Mexico and the USA.

Since 1985, Jean-Pierre has been an active member of the Cooling Technology Institute (CTI) where he has chaired and co-chaired technical committees. Since 2014, he is an Advisor to the Electric Power Research Institute (EPRI), Technology Innovation Water Use and Availability Program, Advanced Cooling. He is a member in good standing of the American Society of Mechanical Engineers (ASME). He has authored and presented technical papers on cooling systems at CTI, EPRI and ASME conferences.

Jean-Pierre and his wife live in Frederick, Maryland.

Brian Hanel, *Hudson Products Corporation*

Brian Hanel is the Manager of Fan Sales and Distribution for Hudson Products Corporation. He has extensive experience with cooling tower and air cooled heat exchanger installations in refining, petrochemical, gas transmission and power fields. Brian is a graduate from Southwest Texas State University in San Marcos and University of St. Thomas in Houston, Texas. He started his career with Hudson Products in 1992 as an inside sales rep. He continued his growth with Hudson as their International Sales rep., then transitioning into their Gulf Coast Sales Manager, Manager of Fans to his now current position. These different positions created various working relationships with Owners, Operators and cooling tower manufacturers throughout the world.

Brian has been an active member of The Cooling Technology Institute since 1996 and looking forward to his first board position.



Frank Michell, *American Electric Power*



Frank Michell is Manager of the Applications Engineering and Balance of Plant Mechanical Equipment Group of the Engineering Services Organization of American Electric Power. Frank is responsible for providing engineering services for AEP's Fossil Hydro Generating Fleet in the areas of Mechanical Engineering Analysis including fluid mechanics, thermal dynamics, heat transfer, stress analysis & Computational Fluid Dynamics, fire protection engineering and balance of plant mechanical equipment & system expertise/design basis for pumps, heat exchangers, cooling towers, compressed air systems, plant water intakes, HVAC & Dust Collection and other miscellaneous equipment. Frank is active in several Industry Organizations including the Cooling Technology Institute (CTI), the Electric Power Research Institute (EPRI) and the American Society of Mechanical Engineers (ASME). Frank has served several terms on the CTI Board of Directors and was CTI President in 2003 and 2014-2015. Frank holds a Bachelor of Science Degree in Mechanical Engineering from Polytechnic Institute of New York.

2016 Conference Session and Luncheon

CTI conference attendees hard at work and also enjoying lunch where the newest Board Members were introduced.



See additional pictures of speakers and participants that made the conference successful on page 4.

2016 Annual Conference Speakers and Participants

Our Conference Program Represented by:



(l-r) Helen Cerra, ChemTreat, Inc.; Brandon Rees, Cooling Tower Depot, Inc.; Phil Kiser, ChemTreat, Inc.



(l-r) Pete Elliott, GE Water and Process Technologies; Anna Pridmore, Ph.D, Structural Technologies, LLC; Brian Corbin, The Dow Chemical Company; Mary Jane Felipe, Baker Hughes Inc.



(l-r) Ethan Chesnut, MasterTech Services, Inc.; Nina Woicke, Enxio Water Technologies GmbH; Richard (Dick) DesJardins, DesJardins Consulting; Philip Poll, OBR Cooling Towers, Inc.



(l-r) Kelly Lipps, ChemTreat, Inc.; Magose Abraham Eju, Energy Business Total Solutions Limited; Jon Cohen, ChemTreat, Inc.

Honorary Life Member



Jess Seawell, Composite Cooling Solutions, LP

Passing the Gavel



Frank Michell, American Electric (l) passing the gavel to the Current President (2016-2017) Bill Howard, Cooling Tower Depot, Inc. (r)

Educational Seminar



Front Row (l-r) Helen Cerra, ChemTreat, Inc.; Ray Post, ChemTreat, Inc.; Janet Stout, Ph.D, Special Pathogens Laboratory; Back Row (l-r) Paul Lindahl, SPX Cooling Technologies; Kent Martens, SPX Cooling Technologies; Bill Pearson, Southeastern Laboratories, Inc.

A WORD FROM OUR COMMITTEES

Engineering Standards and Maintenance Committee Annual Conference – Hilton Houston North, Houston, Texas February 7-11, 2016

Chair: Ken Mortensen, SPX Cooling Technologies
Vice Chair: James F. Blake, Jr., American Lightning Protection
Vice Chair & Secretary: John Ahern, EvapTech, Inc
Vice Chair & Scheduler: Philip Poll, OBR Cooling Towers
AdHoc Coordinators: Jon Bickford, Alliant Energy



(l-r) Ken Mortensen, SPX Cooling Technologies; Jon Bickford, Alliant Energy; Bill Howard, Cooling Tower Depot, Inc.; James Blake, Jr., American Lightning Protection

- I. February 2016 Meeting - 60 Attendees at the opening / 20 Attendees at the closing
- II. Minutes for Summer 2015 ES&M were accepted
- III. Lead Task Group Chair Reports

Wood, Metal, and Concrete Materials Task Group [Bill Howard]

- STD-112 Pressure Treatment & ESG-117 Maximizing Life of Lumber, Joe LaBove, Phillip Poll – Review the standard to include only the currently EPA approved treatments. This removes cresote and ACC treatments.
- STD-119 Timber Connection Specifications, Brad Pirrung, Joseph Evans - Document was reviewed and comments being incorporated.
- ESG-153 Recommended Guidelines for Portland Concrete, Narendra Gosain, Tom Kline - Draft will be emailed to the attendees. Ad Hoc review is expected soon for this document.
- ESG-160 Corrosion of Concrete, Narendra Gosain, Tom Kline – This document is in the AdHoc/BOD process.
- ESG-162 Cleaning Cooling Towers, Philip Poll, Don Zelek - The rough draft from winter updated with information. Information from owner/operators, manufacturers and water treaters needed before the summer meeting.
- Chapter 9 Materials of Construction, Ethan Chesnut – No meeting.

Mechanical and Electrical Task Group [Craig Burriss]

- STD-111 Speed Reducers - Craig Burriss – This document was ready for Ad Hoc but gear industry changes required review and more discussion
- Chapter 11 – Electrical Components, Craig Burriss - This document is under review by committee members

FRP and Plastics Task Group [Glenn Barefoot, Jamie Bland]

- STD-131 FRP Siding Panels, John Ahern, Brian Fuqua – Draft nearing completion, working on finishing for Ad Hoc review.
- STD-154 Filament Wound FRP Pipe, Bill Daugherty, Greg Deshong, Tom Toth - This document is out for Ad Hoc review.
- ESG-157 Wood to FRP, John Ahern, Ken Mortensen – document is out for review by committee members.
- ESG-164 Thermoplastic Fill, Kevin Hole, Chris Spencer - The document is in major rework.
- STD-136 Thermoplastic Material for Fill, Chris Bowman, Ken Mortensen – Work began on this document with decision to include OI [Oxygen Index] burn testing method. Discussing what should be included in the document. Review by all parties of the types of plastics and their properties and testing methods will continue.
- STD-137, FRP Structural Products, Ken Mortensen, Byrav Mutnari - Input from the ASTM D4385 Dallas meeting on FRP testing being incorporated. Document to be sent for comment.
- Information, R Seismic Factor, Bill Howard, Tom Toth - Update on the status of the new LRFD Code

Tower Operations Task Group [Phillip Poll]

- STD-203 - Industrial Cooling Tower, Terry Ogburn, Tom Toth – Needs more discussion
- Chapter 1, Richard Hebert, Geoff Eddy - Members recruited and voting members established.
- Winter Operations, John Ahern - Current Document sent to committee members for review.
- ESG-138 Long-term Storage of Cooling Towers, Jess Seawell – A draft document was reviewed and scope discussed.

Hazard & Environmental Protection Systems Task Group [James Blake]

- Chapter 8 (ES&M) Environmental Aspects of Cooling System Operation, Helen Cerra, Ken Mortensen – Chapter 7 has been obsoleted by CTI (Water). Chapter 8 will be reviewed for relevance and status determined.
- ESG-120 Lightning Protection, James Blake – Sent for Ad Hoc review.
- ESG-121 Safety, Philip Poll – Checking for the last fairly complete draft to send to members prior to CTI Summer meeting.
- Fire Protection, Chapter 12 - next meeting
- Field Erection, Tom Toth, Ken Pate - General discussion held. More to follow.

Old Business - None

New Business - None

IV. Adjournment

Performance & Technology Committee Meeting Minutes

Annual Conference – Hilton Houston North, Houston, Texas

February 7-11, 2016

Chair: Kent Martens, SPX Cooling Technologies

Vice Chair: Jared Medlen, McHale Performance



(l-r) Chris Lazenby, Southern Company; Kent Martens, SPX Cooling Technologies; Jared Medlen, McHale Performance; Toby Daley, Composite Cooling Solutions, LP

1. Call to Order:

The P&T Committee Chairman, Kent Martens called the opening meeting of the Performance & Technology Committee to order at 3:45p at the Hilton Houston North.

2. Presentations

R&D

- Program Pitot Study – Rich Aull/Ken Hennon - Ken gave an update. There have been some delays due to Norris test facility, an issue with one of the tips that had to be repaired, and weather delays at the BAC facility.

Surface Tenting & Drift Testing – Vincent Ganzitti

- Has located access to numerous devices
- Discussed difference between dynamic ST and static ST and what devices measure each
- Requested information about known substance to recreate effect

3. Active Task Group Opening Remarks

- a. ATC-105 (Thermal Test Code) L. Burdick, Chair, Meeting Wednesday

- Trying to finish parts 1 and 2 at this meeting
- Members are reviewing Appendix P want to vote on it at summer workshop
- Appendix G and U should be ready for a vote as well

- Need to discuss issue of extrapolation of data
- b. STD-201 (Thermal Test Certification Program) – Jennifer Hamilton, Chair, Meeting Tuesday
- Need to discuss how to handle alternate fluids
 - Need to discuss how to handle pressure drop in CCC
 - Discussion on labels
- c. STD-202 (Publication of Thermal Test Results) – Paul Lindahl, Chair, Meeting Wednesday
- Need to discuss how the new process is working
 - Discuss an issue or typo in the standard
- d. ATC-128 (Sound Testing) – J.P. Libert, Chair, Meeting Wednesday
- This is now a standing committee
 - Discuss comments from SPX
 - Open discussion after SSA paper
- e. PFM-143 – No Report Meeting Wednesday
- f. ATC-140 (Drift Testing) – Chris Lazenby, Chair, Not Meeting
- Committee has a new voting membership
 - Wants to meet before July meeting

5. New Business

6. The meeting was adjourned 4:00pm.

Water Treating Committee Meeting Minutes

Annual Conference – Hilton Houston North, Houston, Texas

February 7-11, 2016

Chair: Phil Kiser, ChemTreat, Inc

Vice Chair: Jim Kanuth, ChemTreat, Inc.

Coordinator: Jon Cohen, ChemTreat, Inc.



Phil Kiser, ChemTreat, Inc.

1. Call to order Monday afternoon, February 8, 3:45 PM
2. The minutes for the Summer 2015 Committee Meeting were accepted.
3. Introductions of attendees were made.
4. A review of task groups took place as follows:

WTG 161, Best Practices Guidelines for Cooling Water Systems, Jack Bland/Bill Pearson

The group has a clear scope for the document and proposed summation for industry. Their plan is to have a single page of recommendations for cooling water by industry. The group is trying to consider the full scope of all towers (large and small) and include industrial and commercial. Best practices will be presented in excel spreadsheet form and will contain information on corrosion and biological and will be put into good/better/best categories. The document will also include metallurgy. The goal is to have a draft of the first page before the 2016 CTI summer meeting. A teleconference is planned before the summer meeting.

WTG 126, Application of Non-Oxidizing Biocides, Jim Lukanich

Jim has stepped down as the committee chair. Brian Corbin, Dow Microbial Control, has taken over responsibilities moving forward. Little has been accomplished on the document since the 2015 CTI summer meeting. The task group was not able to hold a meeting due to overlap of a paper/presentation and audio/visual difficulties pushed scheduling changes. Brian Corbin will reach out to the former chair and compile all existing data that has been received for non-oxidizing biocides. He will also coordinate with the chair of the oxidizing task group to make sure the ox/non-ox biocide documents are in a similar format.

WTG 130C, Microbiological Monitoring, Pete Elliott (chair); Christine McInnis (vice chair)

The task group held a brief meeting. The matrix had been previously laid out. Six items need to be finished to get to final draft. People were assigned tasks but only clarification/numerical data is

needed at this point. Team will have conference call to tie up loose ends and look at additional edits. Changes will be incorporated as applicable. Week of February 29 or 1st week of March set for conference call. The group is targeting April for completion of the draft document. The plan is to send to ad hoc with comments received by summer meeting.

WTG 130A, Corrosion Monitoring, Matt Wangerin (chair),

Since a reasonable draft is already in existence, the plan is work more with this draft. A conference call is set for early March. A 2nd call in June is planned. The target is for the task group to review in summer and go to ad hoc by the end of summer meeting. The standard 149 (corrosion coupon document) was discussed. When translated from existing software to new software, the illustrations in existing document are not visible. We need to establish a task group during CTI summer meeting to clean document up. All of the text is fine in the document.

WTG 147, Cooling Water Reuse, Jim Kanuth

The document is up for review (5 years). The document is currently twenty-four pages and the overall consensus is that not a lot can be added to the existing document. A conference call set for 2nd week March to discuss. The task group will decide who needs to write it up.

WTG 158, Physical Water Treatment, Mark Winter

Task group is currently working on updating the bibliography. They identified loose ends and plan a completion date by April 1st. Completed document for July Meeting is the goal. Also, we need to accommodate technologies seen at this conference.

WTG 125, Instrumentation and Control, Mike Dorsey

The document is written and through ad hoc. It needs one more look to make sure the ad hoc comments were addressed appropriately. The plan is hold a teleconference in the next few months and send for board approval this summer. Teleconference will be setup soon to address grammar and reviewers comments. The reviewers asked for minor changes.

WTG 130B, Deposit Monitoring, Bob Cunningham (chair)

No action. The task group will collect existing information and distribute by April 15th.

Other business:

Oxidizing Biocides 141- Came up for 5 year review. Went through review and ad hoc but then no additional action was taken. We will review the existing revised document and determine if it can go to board for approval.

New Business

Panel Discussion: Matt Wangerin would like someone else to take it over. Jon Cohen has volunteered to take over in future but needs approval by CTI President

5. Motion/Second to adjourn.

COMMITTEE WORKSHOP PLANNED ACTIVITIES

CTI 2016 Committee Workshop

CTI Annual Golf Tournament

- **Lookout Mountain Golf Club • Sunday, July 10, 2016**
- **7:00 am Tee Time • Cost - \$70**



The Lookout Mountain Golf Club is a nine-time winner of the Golf Digest Four Star Award and has been recognized as one of America's Best Golf Course by Zagat. Lookout Mountain has also been chosen as one of Arizona's Top 10 Golf Courses, as voted on by readers of Arizona Business Magazine. There's nothing like playing 18 holes among the vivid beauty of the Sonoran desert and lush Phoenix North Mountains.

Each golfer (or individual) is responsible for their own drinks, snacks and transportation.

CTI 2016 Committee Workshop

Monday Evening, July 11, 2016 - 6:00p – 9:00p

on site at the hotel

Monday Evening's dinner/hospitality suite is open to all CTI Attendees and guest. There will be roast beef / ham and/or turkey carved at your request with an array of vegetables and fruits for sides. There will be a DJ on site to keep us hoppin'. The best part is that this comes at **NO CHARGE!** Just be sure to let us know (when registering for the Committee Workshop) how many will be in your party.

- **Monday Evening** • **No Charge**

2016 Committee Workshop Agendas

ENGINEERING, STANDARDS AND MAINTENANCE

Ken Mortensen - SPX Cooling Technologies, Chair
James F. Blake, Jr. - American Lightning Protection, Vice-Chair
John Ahern - EvapTech, Inc, Vice-Chair & Secretary
Philip Poll - OBR Cooling Towers, Vice-Chair & Scheduler
Jon Bickford - Alliant Energy, AdHoc Coordinator

1. Review Minutes for Annual Conference 2016
2. Task Group Meetings by category
 - Wood, Metal, and Concrete Materials Task Group - STD-112; ESG-117; ESG-119; ESG-153, ESG-160, ESG-162, Chapter 9,
 - Mechanical and Electrical Task Group - STD-111; Chapter 11 and ACC Gearboxes Guideline
 - FRP and Plastics Task Group - STD-131, STD-154, ESG-157, ESG-164; STD-136, STD-137; Information, R Seismic Factor
 - Tower Operations Task Group - STD-203; Chapter 1; Winter Operations and ESG-138
 - Hazard & Environmental Protection Systems Task Group - BUL-109, ESG-120, Esg-121 and Chapter 8
3. Old/New Business



PERFORMANCE & TECHNOLOGY

Kent Martens - SPX Cooling Technologies, Chair
Jared Medlen - McHale Performance, Vice-Chair

Call to Order/Announcements

- ATC-105 Acceptance Test Code
- STD-201 Thermal Performance Certification of Evaporative Heat Rejection Equipment
- STD-202 Standard for Publication of Custom Cooling Tower Thermal Performance Test Results
- ATC-128 Code for Measurement of Sound from Water Cooling Towers
- PFM-143 Recommended Practice for Airflow Testing of Cooling Towers
- ATC-140 Isokinetic Drift Measurement Test Code for Water Cooling Tower
- Sound Certification Task Force
- Water Usage and Measurement Task Force

WATER TREATING COMMITTEE

Phil Kiser, ChemTreat, Inc, Chair
Jim Kanuth, ChemTreat, Inc., Vice Chair
Jon Cohen, ChemTreat, Inc., Coordinator

1. Approval of February 2015 Meeting minutes
2. Monday 7/11/2016
CTI Open Session
Water Treating Open Session
WTG-161; WTG-158; WTG-126; WTG-147 and WTG-130C
3. Tuesday 7/12/2016
WTG-130c; WTG-126; WTG-130a; WTG-161; GDL-159; WTG-125 and Deposit Monitoring
4. Wednesday 7/13/2016
WTG-161; WTG-126; Deposit Monitoring
Closing Session



CALL FOR PAPERS

2017 Annual Conference
February 5-9, 2017

Sheraton New Orleans, New Orleans, LA

The following schedule will begin the process for papers presented at the 2017 Annual Conference:

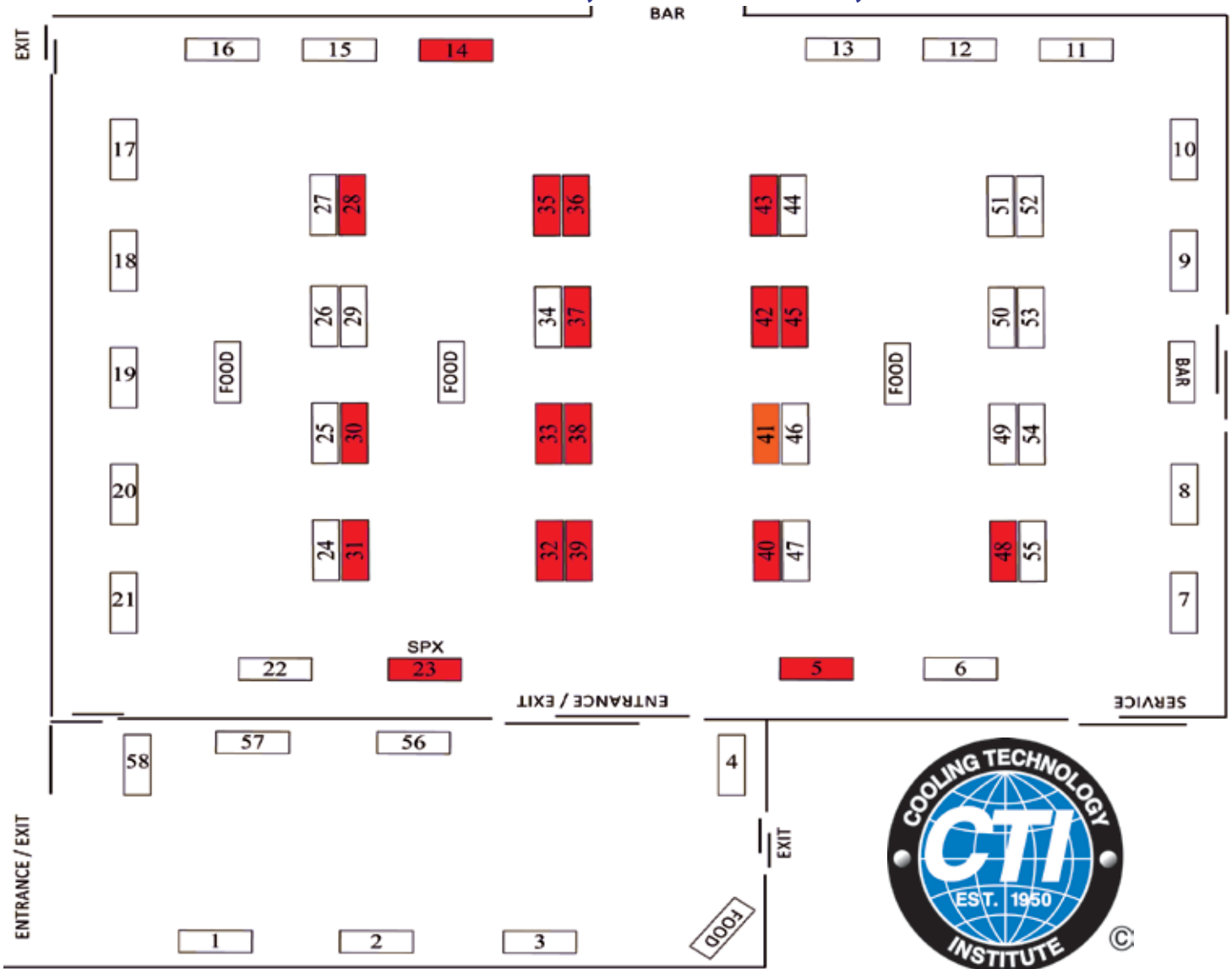
2016

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Abstract Forms can be obtained by contacting the CTI office at 281.583.4087 or our website www.cti.org

Table Top Exhibits

Tuesday, February 7, 2017 • 4:00p - 8:30p
 Sheraton New Orleans, New Orleans, Louisiana



Don't forget to reserve your space. A total of 58 exhibit spaces available at \$1350 a space with a number of tables already reserved (indicate in red)

for more information contact Virginia Manser at 281.583.4087 or vmanser@cti.org

Exhibitors to date:

- | | | |
|------------------------------|---------------------------|---------------------------------|
| 5. Baltimore Aircoil | 32. CleanAir Engineering | 39. Bedford Reinforced Plastics |
| 14. FasTech International | 33. ChemTreat, Inc | 40. EvapTech |
| 23. SPX Cooling Technologies | 35. Amarillo Gear Company | 41. ProMinent Fluid Controls |
| 28. Cooling Tower Resources | 36. Hudson Products | 42. McHale Performance |
| 30. Global Treat, Inc. | 37. Cofimco | 43. Brentwood Industries |
| 31. Hewitech GmbH | 38. Cool Water Technology | 45. Proco Products |
| | | 48. Enexio - 2H Components |

Registration Form

Committee Workshop July 10-14, 2016 Pointe Hilton Tapatio Cliffs, Phoenix, Arizona

Name _____ Nickname for Badge _____
 Company _____ Spouse Name if Attending _____
 Address _____ City _____ State _____ Zip _____
 Phone _____ FAX _____ Email: _____

- Full 3 Day Registration\$450.00 \$475 after June 26
- Golf Tournament (Handicap _____) Tee Time Begins @ 7:00a\$70/pp Closed July 1
- Spouse Name _____ (Handicap _____)\$70/pp Closed July 1
- I will attend Monday Night's DinnerN/C
- I will bring _____ guest with me for Monday Night's Dinner.....N/C

TOTAL DUE _____

Enclosed is my check made out to CTI for \$ _____

Registration can be charged to the following cards: [] Visa [] Master Card [] American Express

Card# _____ Exp. Date _____ Cardholder _____

CVV/CVC/CID Code _____ (must have to process payment).

Payment for meeting registration can be made at the meeting, but please pre-register. (All recreational activities must be paid for in advance. Events will be cancelled if we do not receive enough reservations by June 26.)

**REFUNDS WILL BE MADE IN FULL FOR CANCELLATIONS MADE PRIOR TO JULY 1, 2016.
15% CHARGE ON ANY CREDIT CARD REFUND MADE - NO EXCEPTIONS!**

2016 Committee Workshop, July 10-14, 2016 Pointe Hilton Tapatio Cliffs, Phoenix, Arizona

The 2016 Committee Workshop will be held at the Pointe Hilton Tapatio Cliffs Resort in Phoenix, Arizona, July 10-14, 2016. Pointe Hilton Tapatio Cliffs is a leading Phoenix hotel for vacation, business and event guests alike. Enjoy a surplus of parks and amenities coupled with breathtaking mountain vistas, fine dining, exquisite water fea-



tures, on-site spa, world-class golf and so much more. Tapatio Cliffs sets the standard in beauty, service and convenience. Whatever your adventure, you'll find an experience unlike any other. When making reservations be sure to mention that you are with the CTI Conference

Pointe Hilton Tapatio Cliffs Resort Reservations: 800.947.9784

By registering under the Cooling Technology Institute group rate you are guaranteed a discounted daily resort fee of \$15 (regular \$24), complimentary valet parking, tennis court time for two (1 hour), driving range privileges for 2 (1 hour), 20% discount on select spa services; 50% discount at the Lookout Mountain Golf Club practice tee and admission into the Falls Water Village for up to four guests.

Guest Room Rates: (Cut off Date: Friday, June 17, 2016):

- \$105/plus tax - Single and Double Rate - Hotel room rates are subject to applicable state and local taxes.

Press Release

Contact: Chairman, CTI Multi-Agency Testing Committee

Houston, Texas, 1 May 2016

The Cooling Technology Institute announces its annual invitation for interested drift testing agencies to apply for potential Licensing as CTI Drift Testing Agencies. CTI provides an independent third party drift testing program to service the industry. Interested agencies are required to declare their interest by July 1, 2016, at the CTI address listed.

2016 Board of Directors

President.....Bill Howard
Vice-President Anthony DePalma
Treasurer.....Frank Michell
Secretary..... Brandon Rees

Director.....Jon Cohen
Director.... James Cuchens
.Director.Narendra Gosain

Director..... Brian Hanel
Director..Jean-Pierre Libert
Director.....Helene Troncin

CTI NEWS
COOLING TECHNOLOGY INSTITUTE
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Virginia A. Manser, Managing Editor
Donna A. Jones, Administrative Assistant
Andrew B. Manser, Administrative Assistant
Angie Montes, Administrative Assistant

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Address Service Requested
Time Value - Deliver by May 27, 2016