I’ve looked back on several “messages from the president” from past presidents in the CTI News (I’ve saved the news and journals since 1990!) and when I reflect back on how things have changed, it’s technology that stands out the most. From cell phones to the internet to advancements in water technology, to even homes and cars that are becoming automated. I begin to wonder what will it be like in 30 years from now? CTI will continue to grow with the ever changing times, just as we always have because of the volunteers that comprise the body of CTI as well as the stellar staff CTI has and will continue to hire.

CTI has a lot going on in the upcoming workshop meeting in Orlando, FL and I certainly hope to see you there adding to the wealth of knowledge at this meeting. Your contribution is what we need at each of these meetings. New regulations have come about recently regarding OSHA standards and we will continue to modify and update all our codes standards and guidelines to accommodate these types of ever changing requirements. New regulations on Legionella is still on going and CTI is taking this head on in resolving with different agencies. CTI will continue to lead rather than follow in our industry, it’s what we do.

Yes CTI is indeed very active in the US market but we need to push for more international involvement and understanding as well. We have so many international members that rely on CTI for education and regulation and we need to ensure that we are considering the global market and global regulations in order to satisfy all requirements regarding cooling technology throughout the world. It will continue to take dedicated volunteers, volunteers that are willing to work with individuals from other countries and backgrounds. Individuals that are willing to look beyond what is considered normal for their country and look beyond their understanding of global requirements with the help of individuals throughout the world. This is ongoing currently and it is what makes CTI the true global leader in cooling technology but there is always room for further advancement and relationships and understanding of all our international members. So reach out to all members both domestic and international because we are all “Family” in the Cooling Technology Institute.

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

Sincerely and respectfully,
Bill Howard, CTI President 2016/2017

CALL FOR PAPERS
2018 Annual Conference, February 4-8, 2018
Hilton Houston North, Houston, TX

The following schedule will begin the process for papers presented at the 2018 Annual Conference:

2017
May 5: Deadline for Abstracts
June 9: Authors Notified by Program Chair
Aug 4: One (1) electronic copy of draft must be sent to CTI office for review
Nov 10: 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
2017 CTI Board of Directors
Serving as President for 2016 and 2017
Bill Howard
Cooling Tower Depot, Inc.

2015-2017
Brandon Rees
Cooling Tower Depot, Inc

2016-2018
Jean-Pierre Libert
Evapco Inc.

2017-2019
Kent Martens
SPX Cooling Technologies

Manufacturers

Suppliers
Narendra Gosain
Walter P Moore And Associates, Inc

Brian Hanel
Hudson Products Corporation

Pete Elliott
GE Water And Process Technologies

Owner Operators
Helene Troncin
Electricite De France (EDF)

Frank Michell
American Electric Power

Janet Stout
Special Pathogens Laboratories
Meet 2017's Newest Board Members!

Kent Martens, SPX Cooling Technologies
Kent Martens has been employed by SPX Cooling Technologies/Marley for thirty-four years, serving in a variety of technical and commercial positions. His roles have included thermal ratings, product management, sales, management, marketing, training, and technical advisory roles. He is currently a Regional Sales Manager for the Western USA. Kent holds a BSME in Mechanical Engineering from Kansas State University, and serves as the chairman of the Industry Advisory Council for the Mechanical/Nuclear Engineering Department at KSU. He is a registered Professional Engineer in the State of Kansas. Kent is a member of ASHRAE. He previously chaired CTI’s Educational Seminar and currently serves as Chair of the Performance & Technology Committee.

Pete Elliott, GE Water And Process Technologies
Pete is a Senior Product Applications Engineer supporting the Cooling Water Product Line at GE Water & Process Technologies, headquartered in Trevose, PA. In his primary role, Pete supports Cooling Water treatment for the middle market globally, with additional focus on the Commercial & Institutional and Food & Beverage industries, in particular.

With 24 years of water treatment experience overall, Pete has managed shipboard steam propulsion plant operation, worked as a field sales technical representative for Betz Entec, and ultimately worked his way to the cooling water engineering role where he currently functions.

Pete has spent the last 17 years primarily dedicated to promoting cooling water treatment in the Commercial & Institutional Industry through his detailed work at U.S. based university campuses, large data centers, and Food & Beverage industries with his extensive work with cooling water systems and the sterilization and pasteurization operations they support. In 2009 at the CTI Annual Conference, Pete presented a technical paper he authored, “An Integrated Approach to Water Reuse”, and in 2014, Pete won the GE Lion Award for excellence in engineering and product applications, for the GE commercial teams in the industry segments he supports. In 2016, Pete received the Pinnacle Award for outstanding service and technical support to the GE Water commercial sales teams in the Middle Market industry segment. Also in 2016, at AWT’s annual conference, Pete presented the technical paper he authored, entitled, “Best Practices Application for Innovative Cooling Tower Makeup Water Alternatives”.

Pete attended Villanova University, in Philadelphia, PA, where he earned a Bachelor of Science in Civil Engineering in 1986. Upon graduation, he was commissioned as an Ensign in the United States Navy, and served five (5) years active duty, managing shipboard propulsion plant operations and maintenance. Pete currently resides in Ambler, PA.

Janet Stout, Special Pathogens Laboratories
Dr. Janet E. Stout is president and director of Special Pathogens Laboratory, and research associate professor at the University of Pittsburgh Swanson School of Engineering in the Department of Civil and Environmental Engineering. An infectious disease microbiologist, Dr. Stout is recognized worldwide for seminal discoveries and pioneering research in Legionella. Her expertise includes prevention and control strategies for Legionnaires’ disease in building water systems. Dr. Stout's more than 30 years of research is published in peer-reviewed medical and scientific journals. She has also authored textbook chapters on Legionella and legionnaires' disease, including the Legionella chapter in the APIC Text. An advocate for prevention, Dr. Stout assisted in developing the first Legionella prevention guideline (1993) in the United States, which continues to serve as a model for national and global health agencies and organizations. Additionally, she serves on the ASHRAE Legionella standard committee for Legionella Guideline 12 and the SPC 188 committee for ANSI / ASHRAE Standard 188-2015 Legionellosis: Risk Management for Building Water Systems, the U.S. standard passed in June 2015. Recently, Dr. Stout was elected to the board of the Cooling Technology Institute.
2017 Annual Conference Speakers and Participants

Our Conference Program Represented by:

(l-r) Phil Kiser, Kiser Services; Pete Elliott, GE Water & Process Technologies; Helen Cerra, ChemTreat, Inc.; John Lichtie, Amarillo Gear Company; Ethan Chesnut, Cooling Tower Depot, Inc.

(l-r) Mark School, Alliant Energy; Eric Ward, Rivertop Renewables; Moe Salen, Air2O Cooling LLC; Thomas Weinandy, Baldor/ABB

(l-r) Mike Dorsey, AquaCorr Services; Nina Woicke, ENEXIO Water Technologies GmbH; Prasad Kalakodimi, Ph.D., ChemTreat, Inc. Jan Cizek, Czech Technical University in Prague

(l-r) Nicola Romano, Cofimco Srl; Jim Witt, Choice Industrial Solutions, Inc; Jim Willa, Honorary Life Member; Pavol Vitkovic, Czech Technical University in Prague

(l-r) Christopher Baron, ChemTreat, Inc.; 2 attendees with Arvind Composites; Bhumik Modi, Hudson Products Corporation; Adam Green, Baker, Donelson PC

(l-r) Phil Kiser, Kiser Services; Program Chair; Mario Bellavance, Blue Heron Cooling Tower, Inc; Christophe Duquennoy, EDF; Angela Zaorski, Brentwood Industries
2017 Annual Conference Speakers and Participants continued from page 4:

Water Treating Panel

1st Row (l-r) Helen Cerra, ChemTreat, Inc; Michela McKenzie, DuPont, Sarah Ferrari, Evapco, Inc; 2nd Row (l-r) Bill Pearson, AWT/SPL; Adam Green, Baker, Donelson PC; Jack Bland, ChemTreat, Inc; Robert Strandberg, Covanta Energy

Educational Seminar

(l-r) Peter Carr, Bechtel Corporation; Andrew Cerra, Burns & McDonnell; Darin Baughner, EvapTech, Inc; Shane Taysom, SPX Cooling Technologies; Jean-Pierre Libert, Educational Seminar Program Chairman

Ask The Expert Panel

1st Row (l-r) Steve Chaloupka, Amarillo Gear Company; Jim Cuchens, Southern Company; Pete Elliott, GE Water & Process Technology; 2nd Row (l-r) Jamie Bland, Composite Cooling Solutions; Ben Brock, Nalco, An Ecolab Company; Christopher Auth, Baltimore Aircocil Co.; Jim Baker Ask The Expert Panel Chairman

Retiring Board Members

(l-r) Jim Cuchens, Southern Company; Jon Cohen, ChemTreat, Inc; Anthony DePalma, Tower Performance, Inc.
A WORD FROM OUR COMMITTEES

Engineering Standards and Maintenance Committee
Annual Conference – Sheraton New Orleans, New Orleans, Louisiana
February 6-9, 2017

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

I. February 2017 Meeting
II. Minutes for Summer 2016 ES&M were accepted
III. Lead Task Group Chair Reports

Wood, Metal, and Concrete Materials Task Group [Bill Howard]
• Wood, STD-112 Pressure Treatment, and ESG-117
  Maximizing Life of Lumber, Joe LaBove, Phillip Poll – Approved
• STD-119 Timber Connection Specifications – Brad Pirrung, Joseph Evans - Approved
• ESG-153 Recommended Guidelines for Portland Concrete, Narendra Gosain and Tom Kline – Ad Hoc review is expected after summer meeting for this document.
• ESG-160 Corrosion of Concrete, Narendra Gosain, Tom Kline – This document is in AdHoc.
• ESG-162 Cleaning Cooling Towers, Philip Poll, Don Zelek - This document is in AdHoc.
• Chapter 9 Materials of Construction, Ethan Chesnut, Augie Peterson – This document is in AdHoc.
• Fiber Reinforced Cement Board Panels, Joe Labove – In work.

Mechanical and Electrical Task Group [Craig Burris]
• STD-111 Speed Reducers - Craig Burris – In work.
• Chapter 11 – Electrical Components, Craig Burris - In work
• ACC Gearboxes Guideline – Natasha Peterson – In work.

FRP and Plastics Task Group [Jamie Bland]
• STD-131 FRP Siding Panels, John Ahern, Brian Fuqua – This document is going to AdHoc.
• STD-154 Filament Wound FRP Pipe Bill Daugherty Greg DeShong, Tom Toth- Near approval.
• ESG-157 Wood to FRP, John Ahern, Ken Mortensen – Going to AdHoc.
• ESG-164 on Thermoplastic Fill, Nina Woicke – The document is in major rework.
• STD-136 Thermoplastic Material for Fill, Chris Bowman, Ken Mortensen – Work began on this document with substantial discussion on the LOI 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. Progress being made.
• Information, R Seismic Factor, Bill Howard, Tom Toth– Update on the status of the new LRFD code. Looking into test facilities.

Tower Operations Task Group [Phillip Poll]
• STD-203 - Industrial Cooling Tower, Terry Ogburn, Tom Toth – In AdHoc.
• Chapter 1 - Richard Hebert, Geoff Eddy – Members recruited and voting members established. In work.
• Winter Operations – John Ahern – Close to AdHoc.
• ESG-138 Long-term Storage of Cooling Towers, John Ahern – Close to AdHoc.

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. In work.
• ESG-121 Safety, Philip Poll – In work.
• Fire Protection, Chapter 12 – Close to AdHoc.
• Field Erection – Tom Toth, Ken Pate - General discussion held. More to follow. In work.

Old Business
• None

New Business
• None

IV. Adjournment
A WORD FROM OUR COMMITTEES

Performance & Technology Committee Meeting Minutes
Annual Conference – Sheraton New Orleans, New Orleans, Louisiana
February 6-9, 2017
Chair: Kent Martens, SPX Cooling Technologies
Vice Chair: Jared Medlen, McHale Performance
Vice Chair: Chris Lazenby, Southern Company

Task Group Chair Reports

• ATC-105 – Acceptance Test Code for Water Cooling Towers (Larry Burdick, Chair)
  o Voted and approved a method for extrapolation of the crossplot beyond usual flow range when using the performance curve method.
  o Discussion on recommendations for seasoning of fill prior to thermal testing. A teleconference will be held before the Summer meeting.
  o Discussion on development of a white paper for guidelines on how to validate test results with contractual requirements.

• Water Usage Task Group (Zan Liu, Chair)
  o Reviewed calculations
  o Vencent Ganzitti will be doing an analysis for an extreme location case (ex. Middle East)
  o Hussnain Yaser will be doing a sensitivity analysis of a range of L/Gs
  o Zan Liu will be starting on language surrounding purpose

• Sound Certification (Doug Randall, Chair)
  o Announced voting members (Scott Nevins, Barry Woods, Chris Auth, Doug Randall, Mike Womack, Jared Medlen, Matthew Kantor, Erik Miller-Klein.
  o Chris Auth will serve as Vice Chairman
  o Agreed that two options should be available; thermal certification only, or thermal plus sound certification. Further discussion required on how to structure.
  o Discussion on whether or not to integrate sound certification into STD-201. More discussion planned prior to Summer meeting.

• STD-202 Standard for Publication of Custom Cooling Tower Thermal Performance Test Results (Paul Lindahl, Chair)
  o Reported on the changes that were recently approved.

• STD-201 Standard for the Certification of Water Cooling Tower Thermal Performance (Mike Lippy, Vice Chair)
  o Discussed and approved measures to address heat exchanger pressure drop for closed circuit cooling towers.
  o Discussed and approved modifications to the standard to allow the CTI Certification Administrator to address minor procedural violations.
  o Mike Womack raised the topic of revisions required in light of the results of the pitot-study work conducted by the R&D Task Group.
  o Reviewed and discussed the potential need to change CTI label templates to include revision numbers.

• PFM-143 Recommended Practice for Airflow Testing of Cooling Towers (Mike Daley, Chair; Sander Venema, Vice Chair)
  o Reviewed Changed made during teleconferences
  o Further discussed changes around motor input power vs. shaft power
Call to Order:
Phil Kiser, Chairmen of the water treatment committee called the meeting to order at 3:45 PM, February 6, 2017 at the Sheraton New Orleans Hotel, New Orleans LA. The concluding session was held February 8, 2017 at 3PM.

Task Groups:
WTG-125, Instrumentation and Control-Mike Dorsey - The document was finalized during the CTI 2016 summer session and the group is making final edits following ad hoc review. Next step is to send the document to the chair for his signature and have the board sign off.

WTG-126, Application of Non-oxidizing Biocides-Brian Corbin - This was an information session describing the intent of the task group to craft a document on non-oxidizing biocides. Bill Pearson, AWT Liaison, granted CTI access to the published AWT BioMatrix Non-oxidizing document. The task group agreed to review the AWT document and decide on what should be included in an updated CTI version. A teleconference will be scheduled by end of March following task group review of the document.

WTG-130B, Deposit Monitoring-Bob Cunningham - Task force met to take a first stab at the document. Group agreed that some parts are good and others need to be eliminated.

WTG-130C, Microbiological Monitoring–Pete Elliott - It was primarily an informational status update to the team. The following topics were discussed:
1. Summary of progress achieved via the multiple conference calls held in December 2016 and January 2017.
2. Discussion around the inclusion of a 2-page glossary and its treatment as an appendix, and not integrated into the body of the document. The purpose of this strategy is to accommodate the fact that we may not be able to produce this glossary. If not received, the document’s progression will not be held up, and will be submitted for Ad Hoc review as planned.
3. Bill Pearson will commence the performance of a standardized single-person review, primarily to ensure the appearance of uniformly created document and to portray the appearance of a homogeneous document. Standardized formatting is the principal goal.
4. WTG 130C internal review is slated to be complete by the end of February 2017, with subsequent initiation of the ad hoc document review process in accordance with CTI OP-304 (Drafting CTI Documents Process Flow).
5. The entire WTG 130C team will receive the internally reviewed and re-formatted document at the time of submission to ad hoc review. The intention here, is to ensure all members of the team are in position to assist Christie McInnis and myself in addressing any comments/revision requests that emanate from the Ad Hoc reviewers.

WTG-142, Treatment of Galvanized Cooling Tower to Prevent White Rust-John Zibrida - Task group requested the document from CTI. The scope was outlined and circulated to group. Path forward includes the following:
• update bibliography/references
• review document/update current info
• define passivation and conditioning
• include tower manufacturing in the process
• Circulate to group and begin review/update at summer CTI meeting 2017

WTG-155, Cooling Water Reuse-Jim Kanuth - The five year update was last done in 2008. Copies of the document were passed out to members with edits suggested by Ray Post. Team discussed whether scope should be expanded to include external wastewater. Decided no, will remain internal reuse only. Conference call scheduled for 4/19/2017. Topic will be any other suggested edits after two months of review. All writing assignments will be made at that call for updates at summer meeting. Anticipate being able to put together updated document incorporating changes at the summer meeting. May be ready for ad hoc review late 2017.

WTG-158, Physical Water Treatment-Michael Patton - Task group agreed to submit the document to the CTI Water Treating committee for ad hoc review. Many thanks go to the committee members who contributed in recent months to final review and editing, and to Mark Winter for his leadership. April target for conference call. Need to identify ad hoc reviewers.

WTG-161, Best Practices HPI/CPI Cooling Water Treatment - Moving forward with a draft document to use for the next best practices meeting. Goal is to tighten up the current guidelines and provide best/acceptable practices. The best practices will be
CTI NEWS

segmented by industry to reflect realistic performance metrics. Conference calls will be set prior to summer meeting in hopes of finalizing the guideline. Goal is to have a draft document to serve as topic for 2018 Water Treating Panel discussion.

**Liaison Reports** - ASHRAE. Jon Cohen reporting. The Winter Conference was held January 28-February 1st, 2017, in Las Vegas, NV. The meeting had a record attendance of 3,500, with one committee program on water sponsored. The annual conference will be held on June 24-28, 2017 in Long Beach, CA. The winter meeting will be held on January, 20-24, 2018 in Chicago, IL.

AWT. Bill Pearson reporting. The AWT 2016 Annual Conference & Exposition was held September 7-10 in San Diego, CA. The conference set a new record for attendance with 1,200 attendees. The 2017 Annual Conference will be held in Grand Rapids, Michigan, September 13-16, 2017.

IWC. Paul Puckorius reporting. The 77th Annual International Water Conference was held November 6-10th at the Marriott Rivercenter in San Antonio, TX. The event had record attendance with over thirty workshops. There were multiple well received papers discussed in the Cooling Water Microbiological Control Alternatives Session. The 2018 Annual Conference will be held November 4-8, at the Talking Stick Resort, Scottsdale, AZ.

NACE. Christine McInnis reporting. Based on attendance at the last several meetings attendance has shifted away from water in favor of increased focus on oil and gas.

CBE. Christine McInnis reporting. CBE is working on biofilm protocols for high level disinfection.

CTI. The CTI Summer meeting is set for Lake Buena Vista, Florida, on July 16-19, 2017.

**Additional Business**

Phil Kiser brought to attention that we are currently not up-to-date on our five year review process due to manpower.

Paul Puckorius agreed to partially/temporarily chair a new group on external plant reuse for makeup water. Task group will meet this summer to discuss further.

Helen Cerra informed the group that they anticipate NSF will put out for public review a standard for *Legionella*. Phil Kiser agreed to send out the document to all water treatment members. The document is written for NY city and any comments should be sent to NSF. Document will be a standard for cooling towers and *Legionella* control.

Motion to end meeting.

---

**CTI 2017 Committee Workshop**

**Monday Evening, July 17, 2017 - 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 entertainment for all. 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**
# 2017 Committee Workshop Agendas

## Engineering, Standards and Maintenance

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### Agenda

1. Review Minutes for Annual Conference 2017
2. Task Group Meetings by category
   - Mechanical and Electrical Task Group - STD-111, Chapter 11 and ACC Gearboxes Guideline
   - Hazard & Environmental Protection Systems Task Group - Chapter 8, ESG-120 (Ad-Hoc comments), ESG-121, Chapter 12 (Fire Protection and Field Erection)

## Water Treating Committee

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### Agenda

**Monday, July 17, 2017**

- 8:00a - 8:30a - CTI Open Session
- 9:00a - 9:30a - Water Treating Open Session
- 10:00a - WTG-142 Treatment of Galvanized Cooling Tower to Prevent White Rust
- 11:00a - WTG-130c Microbiological Monitoring
- Noon - Lunch
- 1:00p - WTG-161 Best Practices for Cooling Water Systems
- 2:00p - WTG-158 Physical Water Treating
- 3:00p - WTG-126 Non-oxidizing Microbiocides
- 4:00p - WTG-147 Cooling Water Reuse

**Tuesday, July 18, 2017**

- 8:00a - WTG-130c Microbiological Monitoring
- 9:00a - WTG-126 Non-oxidizing Microbiocides
- 10:00a - WTG-130a Corrosion Monitoring
- 11:00a - WTG-161 Best Practices for Cooling Water Systems
- Noon - GDL-159 Legionella
- 2:00p - External Reuse for Cooling Tower Makeup
- 3:00p - Deposit Monitoring

**Wednesday, July 19, 2017**

- 8:00a - WTG-161 Best Practices for Cooling Water Systems
- 9:00a - WTG-126 Non-oxidizing Microbiocides
- 10:00a - Deposit Monitoring
- 11:00a - Closing Session

## Performance & Technology

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### Agenda

- Call to Order/Announcements
- Introduction of Attendees
- Approval of 2017 Annual Conference Minutes
- Task Group Reports
  - ATC-105 Acceptance Test Code - Larry Burdick
  - STD-201 Certification - Frank Michell
  - STD-202 Publication - Paul Lindahl
  - PFM-143 Airflow Testing - Mike Daley
  - ATC-128 Sound Test Code - Larry Burdick
  - ATC-140 Isokinetic Drift Measurement Test Code for Water Cooling Tower - Chris Lazenby
  - Sound Certification Task Force - Doug Randall
  - Water Usage and Measurement Task Force - Zan Liu
- Task Group Meeting Schedules
- New Business
- Adjourn
**CTI WANTS YOU AS A MEMBER**

**Membership Classification**

**Manufacturer Corporate Membership**: Manufacturer Corporate Members produce Heat Rejection Systems for the industry. A Manufacturer Corporate Member will receive one set of CTI Standards delivered to a preferred location. Additional copies of the CTI Standards can be obtained at a discounted price. Manufacturer Corporate Members will be eligible for all CTI discounts and are permitted to display the official CTI membership logo on any correspondence at each location, while they are members in good standing. A Manufacturer Corporate Member will designate one representative to have voting privileges. Annual Cost: $995.

**Supplier Corporate Membership**: Supplier Corporate Members are companies that supply equipment, parts or services for Heat Rejection Systems. A Supplier Corporate Member will receive one set of CTI Standards delivered to a preferred location. Additional copies of the CTI Standards can be obtained at a discounted price. Supplier Corporate Members are eligible for all CTI discounts and will be permitted to display the official CTI membership logo on any correspondence at each location, while they are members in good standing. A Supplier Corporate Member will designate one representative to have voting privileges. Annual Cost: $995.

**Owner/Operator Corporate Membership**: An Owner/Operator Corporate Member is a company that owns, operates, maintains or provides asset management services for Heat Rejection Systems at one or multiple locations. Owner/Operator Corporate Members will receive one set of CTI Standards delivered to a preferred location and are eligible for all CTI discounts. Additional copies of the CTI Standards can be obtained at a discounted price. Owner/Operator Corporate Members are permitted to display the official CTI membership logo on any correspondence at each location, while they are members in good standing. Owner/Operator Corporate Members will designate one representative to have voting privileges. Annual Cost: $695.

**Owner/Operator Individual Membership**: An Owner/Operator Individual is one who works for a company that owns, operates, maintains or provides asset management services for Heat Rejection Systems. Owner/Operator Individual Members are permitted to display the official CTI membership logo on any correspondence while they are members in good standing. Owner/Operator Individual Members receive a set of CTI Standards, delivered to a preferred location, having voting privileges and qualify for all CTI discounts. Additional copies of the CTI Standards can be obtained at a discounted price. Annual Cost: $295.

**Consultant Membership**: A Consultant is an individual or company, with five or fewer employees, that provides services to the Heat Rejection Systems Industry. Consultant Members will receive one set of CTI Standards delivered to a preferred location, and are eligible for all CTI discounts. Additional copies of the CTI Standards can be obtained at a discounted price. Consultant Members are permitted to display the official CTI membership logo on any correspondence at each location, while they are members in good standing. Consultant Members have voting privileges. Annual Cost: $500.

**Student Members**: Student Members are individuals who are actively enrolled in an institution of higher education, carry a minimum of nine hours of accredited curriculum per semester and are engaged directly or indirectly with heat transfer and heat rejection systems. Student members are permitted to display the official CTI membership logo on any correspondence while they are members in good standing. Student Members will not receive a set of CTI Standards and do not have voting privileges. Annual Cost: $25.

**Honorary Lifetime Member**: An Honorary Lifetime Member is retired and has made a significant contribution to the Heat Rejection Systems industry. Honorary Lifetime Members are appointed by the Board of Directors. Such members are permitted to display the official CTI membership logo on any correspondence, qualify for all CTI discounts but do not receive a set of CTI Standards and do not have voting privileges. Registration fees for Honorary Lifetime Members are waived for the CTI Committee Workshop and CTI Annual Conference. No Charge.

1Memberships outside of North America (United States, Mexico, and Canada) will be assessed $100.00 additional charge to the membership cost to cover added postage and handling costs.  
2Note: Membership applications and current memberships are subject to review and approval by the CTI Administrator as to the assignment of the proper membership category.

Applications can be found on our website: www.cti.org
PICTURES FROM THE SUCCESSFUL 2017 CTI EXHIBITS
Don’t forget to reserve your space. A total of 63 exhibit spaces available at $1350 a space with a number of tables already reserved (indicated in shaded red)

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

Exhibitors to date:

3. SPX Cooling Technologies
7. Amarillo Gear Company
11. FasTec International
15. C.E. Shepherd Co
20. Cool Water Technologies
22. Proco Products
23. ChemTreat Inc
24. McHale Performance
25. Brentwood Industries
26. Environmental Safety Tech
27. Midwest Cooling Towers, Inc
28. Aggreko
29. CleanAir Engineering
30. G&G Marine
31. Denso North America
32. Dynamic Fabricators
33. Baltimore Aircoil Company
34. Rain for Rent
35. Enexio US
47. EvapTech
48. Hudson Products Corp
49. Cofimco USA, Inc.
Disney Discount Ticket Information

These tickets offer pre-arrival savings of 10% on our Full-Multi-Day (2 days or longer) Tickets and include one (1) complimentary admission to an additional Disney Experience at any one (1) of the following (additional details are listed on the web site):

- Disney’s Typhoon Lagoon Water Park • Disney’s Blizzard Beach Water Park
- Disney’s Winter Summerland or Disney’s Fantasia Gardens Miniature Golf Courses (before 4 p.m.)
- Greens Fees for one round of golf at Disney’s Oak Trail Golf Course, our 9-hole walking course

The site also contains our partial-day tickets, which are exclusive to the meetings market.

Disney Ticket Microsite:
For your reference, your custom Disney Ticket Microsite URL is: [https://www.mydisneygroup.com/cti17](https://www.mydisneygroup.com/cti17)

The Disney Ticket Microsite will EXPIRE for Advance Purchase Sales on: July 14, 2017
Registration Form
Committee Workshop July 16-19, 2017
Hilton Orlando Lake Buena Vista, Lake Buena Vista, FL

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 @ 8:00a ............................. $85/pp Closed July 1
  Spouse Name __________________ (Handicap__________) ........................................ $85/pp Closed July 1

- I will attend Monday Night's Dinner ................................................................. N/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, 2017.
15% CHARGE ON ANY CREDIT CARD REFUND MADE - NO EXCEPTIONS!

2017 Committee Workshop, July 16-19, 2017
Hilton Orlando Lake Buena Vista, Lake Buena Vista, FL

The Hilton, located in the Walt Disney World, Resort is an official hotel of Walt Disney World in Lake Buena Vista, Florida. Hotel guests will enjoy exceptional facilities at our four star, four diamond resort. Take a refreshing dip in either of the two swimming pools, enjoy a workout at our health club, play golf in our five Walt Disney World championship courses, and savor a variety of cuisines at our seven restaurants and lounges. Our Lake Buena Vista hotel is steps away from Downtown Disney, home of the Disney Marketplace, Pleasure Island and Disney’s West Side. What’s more, complimentary transportation to Walt Disney World Theme Parks is provided for all of our Florida guests. Whether for work or leisure, Lake Buena Vista, Florida hotel guests will enjoy the imagination and excitement of Disney at the Hilton! Take me to the Hilton. Call today!

Hilton Orlando Lake Buena Vista Reservations:
https://aws.passkey.com/e/49122849

Guest Room Rates: (Cut off Date: Wednesday, June 14, 2017):
- $179/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 2017

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, 2017, at the CTI address listed.

2017 Board of Directors

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Vice-President ............... Brian Hanel
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Director ................. Peter G. (Pete) Elliott
Director ............... Narendra Gosain
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CTI NEWS
COOLING TECHNOLOGY INSTITUTE
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(281) 583-4087

A quarterly publication containing news of CTI and its activities.

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Address Service Requested
Time Value - Deliver by May 27, 2017