Thanks to all attendees for a great 2013 Annual Conference in Corpus Christi, Texas. We had almost 400 Participants in attendance and all of the 54+ Table Top Exhibits were taken, which represents a record. In addition we had an excellent series of papers on a variety of topics related to evaporative cooling technology, environmental issues, and sustainability.

Awards were presented to outgoing Board Members Frank Foster, Tower Performance; Don Zelek, Brentwood Industries; and Denny Shea, Ascend Performance Materials. A special CTI plaque was presented to retiring BOD member Raul Castillo (Dow Chemical) for his many years of dedicated service to CTI and to Ken Hennon (Clean Air Technologies) for his dedicated service as P&T Chairman for the past four years.

I also wish to convey my sincerest appreciation to the CTI member companies supporting our newly elected BOD members: Billy Childers, Aggreko, Steven Chaloupka, Amarillo Gear, and Nathasa Jones, Bechtel. By presidential appointment Helene Troncin of Electricite de France (EDF) is serving the remaining BOD term of Raul Castillo and we are glad to announce that Helene is our first international BOD member.

In order to build on the success of our 2013 Annual Conference I want to extend an invitation to all of our member companies to send at least one representative to the Committee Workshop at the Hilton Del Mar Hotel in San Diego, California from July 7-11, 2013. CTI Committee Task Groups are currently finalizing several important documents and standards which most definitely merit your company’s input into the final documents, which will serve as Industry Benchmarks going forward.

I would also like to recognize Tom Weast for his 20+ years of service as our CTI Thermal Certification Administrator. It started with 4 manufacturers that collectively had 12 products lines and a total of 666 towers. Today there are 31 manufacturers that collectively have 77 products lines and over 10,000 tower models not including a number of products lines that are marked as private brands.

We are fervently updating our Certification Administrator Job Description so that we can issue an RFQ for Tom’s replacement as Certification Administrator. Tom Weast and Nick Stitch, and CTTA will continue to offer their services as part of the Multi Agencies Testing Program going forward.

The Cooling Technology Institute continues to be the premier global authority for industry related issues and we thank all of our North American and International Members for their contributions to our association.

I look forward to seeing each of you in San Diego in July.

Jack Bland, 2012/2013 President
# 2013 CTI Board of Directors

*Serving as President for 2012 and 2013*

Jack Bland  
ChemTreat, Inc.

## Manufacturers

|-----------|-----------|-----------|
| Trevor Hegg  
Evapco, Inc. | Tom Toth  
Midwest Towers, Inc. | Billy Childers  
Aegreko Cooling Tower Services |

## Suppliers

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| Phil Kiser  
GE Power & Water | Dean Lammering  
Nalco Company | Steven Chaloupka  
Amarillo Gear Company |

## Owner Operators

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| Frank Michell  
American Electric Power | Helene Troncin  
Electricite De France (EDF) | Natasha Jones  
Bechtel Power Corporation |
Meet 2013's Newest Board Members!

Billy Childers, Aggreko Cooling Tower Services

Billy Childers has been part of the cooling tower industry for the past 23 years and is currently the National Manager of Aggreko Cooling Tower Services (ACTS). Billy is responsible for Aggreko’s industrial cooling tower rental business for the Americas. Responsibilities over the past 23 years have included R&D, thermal performance testing, cooling tower design, CTI STD-201 certification, business development, and business management. His work in designing projects for rental cooling tower applications includes thermal performance, cooling tower selection, pumps, piping, and electrical distribution. Billy has authored and presented several technical papers on rental cooling towers at national conferences including Cooling Technology Institute, Electric Power Research Institute, and Edison Electric Institute.

Steven Chaloupka, Amarillo Gear Company

Steven Chaloupka has been associated with the cooling tower industry for 20 years and currently serves as President of Amarillo Gear Company LLC, located in Amarillo, Texas. Employed since 1993, Steven oversees Amarillo Gear’s worldwide operations of their specialized mechanical components for wet cooling towers, air-cooled condensers, heat exchangers and vertical turbine pumps. Prior work history includes being raised on a family owned ranch near Dalhart, Texas, 1 year as a Field Engineer for Dresser Atlas Well Logging in Alice, Texas and 13 years in various technical positions with National Oilwell Varco in Houston, Texas. Steven graduated in 1978 from Texas Tech University with a B.S. in Engineering.

Steven has been involved with the Cooling Technology Institute for 20 years. Past positions include CTI President in 2006/2007, CTI Treasurer, member of the CTI Board of Directors, member of the Past President’s Council, Vice-Chair of the Finance Committee, Vice-Chair of the Membership Committee and have participated in various task groups within the Engineering, Standards and Maintenance standing committee. Steven’s interest is in all areas within the CTI, but especially enjoys the people he meets within the cooling industry.

Steven is married to Shelley Chaloupka and has two sons, Michael (22) and Carter (16). He has served as a Board Member for the Amarillo Harrington Cancer Center’s Development Council, Amarillo College Continuing Education Council and Elder at First Presbyterian Church. Besides spending time with his family, Steven enjoys hiking, golf and snow skiing.

Natasha Jones, Bechtel Power Corporation

Ms. Jones currently works for Bechtel Power Corporation where she participates in specifying, evaluating, inspecting, and testing new and modifications of existing cooling systems (including air-cooled steam condensers, wet cooling towers, hybrid cooling systems, and air cooled heat exchangers) for fossil, nuclear, and renewable technology (solar) power plants. She has over 10 years of experience in the engineering field including working in the power industry, being a lead field engineer for various groundwater and soil remediation projects throughout the United States, and conducting laboratory research. Ms. Jones has co-authored and presented several papers at national conferences including Cooling Tower Institute meetings, PowerGen International, International Water Conference, and Electric Power and has been published in Power Magazine and the Bechtel Technology Journal.

Helene Troncin, Electricite De France (EDF)

Helene Troncin is an engineer who graduated from the Polytechnic Institute of Grenoble in France. Since 1987, she works at Electricity of France (EDF), the only French company producing electricity with Nuclear Power Stations. EDF runs 58 Nuclear Power Stations and is equipped with 32 big cooling towers. In 1996 she joined the Basic Design Department of EDF and worked on the chemistry for the cooling circuits. Her experience includes the cooling towers design, the qualification of the fill through its thermal performances and the fouling issues.

She is member of the French Standard Organization working group involved in cooling technologies studies. In her civic life, she is or was a member of the board of directors in several associations.
2013 Annual Conference

(l-r) David Corelli, IMI Sensors; Christophe Duquennoy, EDF


(l-r) Robbie McElveen, Baldor Electric Company, Helene Troncin, EDF; James (Jim) Baker, Composite Cooling Solutions, LP; Magose Abraham Eju, Nigeria LNG Limited

(l-r) Paul Nelissen, Howden; Karoline Bohlen, Colorado School of Mines

(l-r) Roy Holliday, GE Water & Processing Technologies, Lake Barrett, Sauereisen, Inc.; Ken Mortensen, SPX Cooling Technologies, Institute; Daniel M. Cicero, Nalco Company

(l-r) Kevin Emery, ChemTreat, Inc.; Jonathan Lanciani, Sustainable Water
Speakers and Participants

Education Seminar

Water Treating Panel

Retiring Board Members
Two of the three members that have completed their 3 years serving on the Board of Directors are Don Zelek and Frank Foster. Thank you for your time and service. (Missing is Denny Shea, Shea Consulting Service.)

Ask The Expert
(l-r) John Lichtie, Amarillo Gear Company; Paul Nelissen, Howden; Helen Cerra, ChemTreat, Inc.; Phil Kiser, Kiser Consulting (Missing, Brandon Rees, Cooling Tower Depot, Inc.)

Program Committee
(l-r) Ken Hennon, CleanAir Engineering, Inc.; Paul Lindahl, SPX Cooling Technologies; Jared Medlen, McHale & Associates; Rich Aull, Brentwood Industries, Bottom (l-r) Kent Martens, SPX Cooling Technologies; Dave Suptic, EvapTech, Inc.

Long Standing Members
(l-r) Paul Puckorius, Puckorius & Associates, Inc.; Jim Willa, Honorary Life Member; Art Brunn, Honorary Life Member
I. Call to Order/Announcements/Introduction of Attendees - At 4:35 PM, Bill Howard began the meeting. A list of 8 attendees at the Closing meeting is available.

II. Lead Task Group Chair Reports

Wood, Metal, and Concrete Materials Task Group [Bill Howard]
- Wood, Jane Hauser [including Redwood, Douglas Fir, Connections, and Plywood] met Wednesday at 1:30PM. Designating as Historic or Obsolete: STD – 104 and 117. Reviewed: STD – 103, 114, and 119 for final to AdHoc in July, 2013. STD – 134 will be considered last. NDS will affect all of these documents.
- New Guideline, Cleaning of Cooling Towers, Phillip Poll – Document will include Basin Cleaning, Disinfection and Fill cleaning.

Mechanical Equipment Task Group [Dave Suptic, Craig Burris]
- STD-151 – Variable Frequency Drives, Dave Suptic – will be a guideline.
- New Standard – Vibration, Dave Suptic – met and worked on the draft including monitoring, instruments, probe location, baseline development, with frequency tables and graphs. This document is expected to go to AdHoc after the Summer Meeting.
- Chapter 11 – Electrical Components, Dave Suptic – met and plan to refer to other documents for many items, the specifics will be about motors. The current revision will be e-mailed prior to the Summer Meeting.

FRP and Plastics Task Group [Glenn Barefoot, Jamie Bland]
- New Guideline – Wood to FRP, John Ahern, Ken Mortensen – met Tuesday at 11:30AM. Document outline discussed and assignments for sections made for completion and return to John Ahern by June 1. John will assemble and send out the document for Summer Meeting.
- STD - 124 – FRP Fan Stack Design, Jamie Bland – met to review and resolve Ad Hoc comments and recommend sending this document for Board approval.
- New Task Group for STD-136 – met 10AM Tuesday. This document will become 2 Standards, one on material and one on design of product.

Tower Operations Task Group [Jim Baker]
- Chapter 13 – Inspection of Cooling Towers – no meeting
- STD-203 - Industrial Cooling Tower, Tom Toth – met Wednesday at 3:30 PM to revisit document and plan next steps. Expect to detail and send to AdHoc after Summer Meeting.

Hazard & Environmental Protection Systems Task Group [James Blake]
- Chapter 7 (Water) & Chapter 8 (ES&M) Environmental Aspects of Cooling System Operation, James Blake – plan yet to be determined.
  - BUL-109 Nomenclature of Industrial Cooling Towers, James Blake - ready for AdHoc.

Old Business
- Information, R Seismic Factor, Bill Howard – Update is the latest ASCE 7 document includes R, of 1 to 1.5, continuous columns, height restriction of 50’, brace at every frame, diaphragm at 25% weight levels. Estimate is $150,000 for testing. Test on Crossflow with load at the top for simulation with sensors in place. The next meeting is the 1st week in May in Pittsburgh. CTI letter to be requested as complaint to ASCE on this subject.
- Materials Certification – awaiting a technical director.

New Business
- OP304 Document Procedure – Bill Howard, Jim Baker, and Jon Bickford to comment to the Policy and Procedures Committee as input to the procedure redraft.
- ASTM D20 – Chairman Bhryav Mutnuri described the ASTM process and offered information and participation from CTI users of FRP products to the task group writing the document beginning in March, 2013.
- New Groups proposed – Filament Wound Pipe STD – 154, corrosion of Concrete, and Hazards and Environmental Issues.

III. Adjournment – at 5 PM
Performance & Technology Committee Meeting Minutes
Annual Conference – Omni Bayfront, Corpus Christi, Texas
February 3-7, 2013
Chair: Toby Daley, Composite Cooling Solutions, LP
Vice Chair: Ken Hennon, Clean Air Engineering, Inc
Vice Chair: Rich Aull, Brentwood Industries, Inc
Vice Chair: Jean-Pierre Libert, EvapTech, Inc.

1. CALL TO ORDER

Ken Hennon, Performance & Technology Committee Chairman, called the closing meeting of the P&T Committee to order on February 6, 2013 at 4:00 p.m. at the Omni Bayfront Hotel in Corpus Christi, TX.

2. ACTIVE TASK GROUPS

a) ATC-105 (Thermal Tests) – Rich Harrison, Chair

Appendix U on uncertainty calculation was reviewed. A meeting teleconference of the sub-task group will be scheduled in about a month to further review this section. Because Chair Rich Harrison will be retiring soon, he symbolically handed over the gavel to David Wheeler who will chair this task group from now on. A round of applause was given to thank Rich Harrison for his good work and dedication.

b) STD-146 (Flow Measurement) – David Wheeler, Chair

The final draft RFQ for the pitot tube study prepared by Rich Aull, was reviewed and discussed. It is essentially complete. Rich Aull will send the final document to the Board of Directors soon. He will also work with a balanced committee to supervise the study once it is launched. There was further discussion regarding additional flow meter assignments and anticipated formatting of sections detailing less commonly used flow meters.

c) STD-201 (Certification) – Frank Michell, Chair, and Trevor Hegg, Co-Chair

This is a standing task group. The standard has now been split in two draft documents: an Operations Manual (OM) and a Rating Standard (RS) which were reviewed and discussed. Only editorial changes were made to the OM. More substantial changes apply to the RS. The OM will not require an ad-hoc review but RS will follow the review procedures as specified in OP-304. Ad-hoc review of the RS will initiate next week.

d) ATC-128 (Sound) – Jean-Pierre Libert, Chair

A few additional comments were recently received and reviewed. The derivation of equation 7 in the code will be researched. The entire document has essentially been reviewed by the task group at this time. A final draft will be issued soon to the TG members for approval. Then the ad-hoc review process will soon be initiated and the chair is targeting the summer 2013 meeting to resolve the ad-hoc reviewer’s comments.

e) STD-202 (Publication) – Paul Lindahl, Chair

This will be a standing task group for the foreseeable future as the program gets underway. Comments from two of the three ad-hoc reviewers were discussed and resolved. A teleconference will be scheduled in March to complete the resolution of the third reviewer’s comments and then the draft will be sent again to the reviewers. After resolution of the comments by the task group, the document will be sent to the BOD.

f) PFM-143 (Airflow Measurement) – Paul Nelissen, Chair

Because of scheduling conflicts this new task group did not meet. The next meeting will be during the summer 2013 workshop.

g) PTG-156 (Preparation for a test) – Ken Hennon, Chair

This task group will meet during the summer 2013 workshop.

h) Miscellaneous

• Ken Hennon recommends moving the meeting of the Certification Committee to Sunday to minimize schedule conflicts.
• It is very convenient to have a projector and a screen in the meeting rooms!

3. NEW BUSINESS

a) Kenneth Hennon, P&T Chair, after several years of service, symbolically handed the Chairman’s gavel to Toby Daley. Toby Daley warmly thanked Ken Hennon for his productive work during his tenure and a round of applause was given. The new Chairman has nominated Ken Hennon, Rich Aull and Jean-Pierre Libert as Vice-Chairmen of the P&T Committee.

The meeting was adjourned at 4:20 p.m.
2013 Committee Workshop Agendas

ENGINEERING, STANDARDS AND MAINTENANCE

Bill Howard - Cooling Tower Depot, Inc., Chair
James F. Blake, Jr. - American Lightning Protection, Vice-Chair
Kenneth Mortensen - SPX Cooling Technologies, Vice-Chair

The summer agenda will include committee work on:

- Wood standards (Redwood, Douglas Fir, Connections, Plywood, etc.)
- R Seismic Factor
- Concrete and Corrosion
- Cleaning Cooling Towers
- Chapter 11 - Electrical
- Tower Vibration
- Polyvinyl Chloride Materials
- Fiberglass Pultruded Structural Products
- Cooling Tower Filament Wound Fiberglass Piping System
- FRP Fan Stack Material
- FRP Fan Stack Design Guideline
- Industrial Cooling Tower Standard
- Liquid Effluent Pollution Control
- Environmental Aspects of Cooling System Operation
- Field Erection Practices
- Nomenclature for Industrial Cooling Towers
- Legionella

PERFORMANCE & TECHNOLOGY

Toby Daley - Composite Cooling Solutions, LP
Ken Hennon - CleanAir Engineering, Chair
Rich Aull - Brentwood Industries, Vice-Chair
Jean-Pierre Libert - EvapTech, Inc, Vice-Chair

Call to Order/Announcements

- ATC-105 Thermal Test – David Wheeler
- ATC-128 Sound – Jean-Pierre Libert
- ATC-143 Recommended Practice for Airflow Testing of Cooling Towers - Paul Nelissen
- ATC-156 Preparation for an Official CTI Thermal Performance Plume Abatement, or Drift Emission Test - Ken Hennon
- STD-201 Certification Standard – F. Michell/T. Hegg
- STD-202 Publication Standard – Paul Lindahl

WATER TREATING COMMITTEE

Matt Wangerin, Ashland Water Technologies, Chair
Jim Kanuth, ChemTreat, Inc., Chair
Pete Elliott, GE Water & Process Technologies, Secretary
Jon Cohen, H-O-H Water Technology, Coordinator

I. Call to Order/Announcements
II. Approval of 2013 Annual Conference Meeting Minutes
III. Task Group Reports
   A. WTG-130b - Deposit Monitoring
   B. ATC-130c - Microbiological Monitoring
   C. Instrumentation & Control
   D. Application of Non-Oxidizing Microbiocides
   E. Non-Chemical Devices / Physical Water Treatment
   F. Chapter 7
V. Liaison Reports: ASHRAE, ASM
   AWT, EPRI
   NACE, IWC
VI. Old Business
VII. New Business

CALL FOR PAPERS

2014 Annual Conference
February 2-6, 2014
Hilton Houston North
Houston, Texas

The following schedule will begin the process for papers presented at the 2014 Annual Conference:

2013

- June 7: Deadline for Abstracts
- June 28: Authors Notified by Program Chair
- Aug 2: One (1) electronic copy of draft must be sent to CTI office for review
- Nov 8: 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
CTI 2013 Committee Workshop
CTI Annual Golf Tournament

- Maderas Golf Club • Sunday, July 7, 2013
- 8:00 am Tee Time • Cost - $175

This award-winning Johnny Miller course offers both beauty and challenge as it winds through the cliffs, rock outcroppings, creeks, and forests of San Diego County’s inland hill country. Now is a great time to experience Maderas for yourself.

Step onto the first tee and enjoy the course’s three lakes, five waterfalls, and over forty acres of native habitat. Maderas Golf Club has consistently been voted one of the top golf courses in San Diego County for a reason. The 18 hole course is impeccably maintained, and our satisfied players continue to return for another round.

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

CTI 2013 Committee Workshop
Monday Evening, July 8, 2013 - 6:00p – 9:30p
at the Pool Area on site

This year’s Monday Evening event is open to all CTI Attendees and guests for Hor’ Devours and Drinks with the blending of Music in the background at No Charge! Yes you read it right!

• Monday Evening • No Charge
• Open to All
Table Top Exhibits  
Tuesday, February 4, 2014 • 4:00p - 9:00p  
Hilton Houston North, Houston, Texas

Don’t forget to reserve your space. A total of 54 exhibit spaces available at $1200/space with a number of tables already reserved (sold spaces indicated by red boxes)

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

Exhibitors to date:

French Creek Software  
ChemTreat, Inc  
Prominent Fluid  
Composite Cooling Solutions  
GEA 2H Water Technologies  
C.E. Shepherd  
Strongwell  
Tower Tech  

McHale & Associates  
Ashland Water Technologies  
IMI Sensors  
Rain For Rent  
Special Pathogens Lab  
Baltimore Aircoil  
Brentwood  
FasTec  
Cofimco  

Hudson Products  
Proco Products  
Amarillo Gear  
EvapTech, Inc.  
Aggreko  
Dynamic Fabricators  
Bedford Plastics  
SPX  
Midwest Towers, Inc
Registration Form
Committee Workshop July 7-10, 2013
Hilton San Diego Del Mar, Del Mar, California

Name_________________________________________________ Nickname for Badge ________________________
Company ___________________________________________ Spouse Name if Attending ______________________
Address ___________________________________________ City __________________ State ________ Zip ________
Phone ___________________________________________ FAX __________________________________ Email: ____________________________

☐ Full 3 Day Registration ................................................................. $425.00 $450 after June 21
☐ Golf Tournament (Handicap___________) Tee Time Begins @ 8:00a ........ $175/pp Closed June 28
   Spouse Name __________________ (Handicap__________) .......... $175/pp Closed June 28

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 29.)

REFUNDS WILL BE MADE IN FULL FOR CANCELLATIONS MADE PRIOR TO JUNE 29, 2012.
15% CHARGE ON ANY CREDIT CARD REFUND MADE - NO EXCEPTIONS!

2013 Committee Workshop, July 7-10, 2013
Hilton San Diego Del Mar, Del Mar, California

The 2013 Committee Workshop will be held at the the Hilton San Diego Del Mar, Del Mar, California, July 7-10, 2013. Plan to arrive early and participate in golf, view the sights the area has to offer. Actually the sky is the limit. When making reservations be sure to mention that you are with the CTI Conference

Hilton San Diego Del Mar Reservations: 858.792.5200
Be sure to mention you are with the Cooling Technology Institute for our group rate.

Guest Room Rates:  (Cut off Date: Wednesday, June 19, 2013):
• $149.00/plus taxes - Single Rate  • $159.00/plus taxes - Double Rate
Hotel room rates are subject to applicable state and local taxes and resort fees.
Press Release
Contact: Chairman, CTI Multi-Agency Testing Committee

Houston, Texas, 1 May 2013

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, 2013, at the CTI address listed.

2013 Board of Directors

President.........................Jack Bland
Vice-President............Frank Michell
Treasurer....................Steve Chaloupka
Secretary......................Tom Toth

Director.............Billy Childers
Director............Trevor Hegg
Director........Natasha Jones
Director........Phil Kiser
Director........Dean Lammering
Director........Helen Troncin

CTI NEWS
COOLING TECHNOLOGY INSTITUTE
2611 Cypress Creek Parkway, Ste A-101
Houston, Texas 77068
(281) 583-4087

A quarterly publication containing news of CTI and its activities.

Terry Ogburn, Editor-in-Chief
Art Brunn - Chairperson
Publications Committee

Virginia A. Manser, Managing Editor
Donna A. Jones, Administrative Assistant

CTI News published continuously since May 1962. Published by the Cooling Technology Institute, Established in 1950.