



**1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400**

TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. 6.1 DATE August 2, 2017
 TC/TG/MTG/TRG TITLE Hydronic and Steam Equipment and Systems
 DATE OF MEETING June 27, 2017 LOCATION Long Beach, CA

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Jason Atkisson	2016	Niels Bidstrup (non-quorum)	2015	
Scott Fisher	2015			
Larry Konopacz	2015			
David Lee	2015			
Frank Myers	2013			
Thomas Neill	2014			
Donald Prather	2013			
Rex Scare	2015			
Steve Tredinnick	2015			
Robert Walker	2015			

DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:

TAC Section Head:	Mark C. Hegberg
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	ALI/PDC – James W. Bochat Chapter Tech. Transfer – Maggie Moninski Research – Harvey M. Sachs Standard – Cyrus H. Nasser 2017 HB Fundamentals – Van D. Baxter 2020 HB Systems – Caroline Calloway
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

1. Call to Order:

Chair Scare called the meeting to order at 1:01pm. Chair Scare welcomed all in attendance and self-introductions were made. An attendance sheet was passed and signed by those in attendance. A roll call of voting members was conducted and a quorum was present with 9 of 11 voting members. One additional voting member arrived at 1:08pm.

Technical Committee 6.1 is concerned with all aspects of hydronic and steam systems. This includes the application of boilers, chillers, terminal units, and all accessories and controls making up the total system as well as the design of the integrated system. In addition to comfort applications of both heating and cooling, snow melting systems are included. Cooperation with other TCs is recognized in areas such as control, noise and vibration, refrigeration, pumps and hydronic and service water piping.

2. Setting of the Agenda:

The Chair passed out an updated Agenda. Motion by Fisher, second by Atkisson to approve the Agenda. Approved 8-0-1 CNV.

3. Approval of Las Vegas Meeting Minutes:

Motion by Fisher, second by Atkisson to approve the past meeting minutes. Motion passed 8-0-1 CNV.

4. Recognition of Liaisons:

Caroline Calloway, 2020 HB Systems & Equipment liaison was present. No report.

5. Chair's Report

Chair Scare summarized the key items from the Section 6 Breakfast.

- (a) The ASHRAE Code of Ethics was read, "*In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests.*" (See full Code of Ethics at www.ashrae.org/about-ashrae/ashrae-code-of-ethics)
- (b) The 2016-17 E-mail Alias List has been updated with the remaining aliases for the TC and will be posted on the ASHRAE website (www.ashrae.org/TCs) under the heading *Procedures, Forms & Information for TCs/TGs/MTGs and TRGs*, shortly after the Long Beach Meeting.
- (c) A new restructured TC Manual of Procedures (MOP) has been issued and is available at www.ashrae.org/TCs.
- (d) An updated TAC Presentation Template is available for TC members to use with their local Chapter.
- (e) The ASHRAE President, Tim Wentz, has offered to send letters to the employers of TC volunteers thanking them for supporting their employee's service on an ASHRAE TC. Members will receive an email in early July with details on requesting this letter.

- (f) 2017-18 Hightower Award nominations are due by September 1. This award recognizes outstanding technical leadership and contributions on a TC/TG/TRG during the past four years excluding research and standards activities. The nomination form can be found at www.ashrae.org/tcs. Nomination forms should be sent to Jason Atkisson or Rex Scare for submittal to TAC.
- (g) Nominations for the Service to ASHRAE Research Award for TC volunteer efforts in research are due to the RAC research liaison by September 1. Nominating forms can be found for this under www.ashrae.org/research. The nomination form is found at www.ashrae.org/TCs. Nomination forms should be sent to Jason Atkisson or Rex Scare for submittal to RAC.
- (h) Program statistics for Long Beach, with a total of 107 available slots: Seminars – 121 submitted, 61 presented; Workshops – 13 submitted, 9 presented; Forums – 11 submitted, 4 presented; Panel – 5 submitted, 2 presented; Conference Papers – 151 abstracts submitted, 129 approved, 71 presented.

6. Sub-Committee Reports

- A. Programs: David Lee (Chair). Subcommittee meeting minutes of June 26, 2017, are attached.

There were no sponsored programs at this meeting.

Chair Lee reviewed upcoming program submissions for Chicago and Houston.

Chair Lee asked for input and suggestions for programs at future meetings.

- B. Research: Tom Cappellin (Chair). Subcommittee meeting minutes of June 26, 2017, are attached.

This is Chair Cappellin's last meeting as chair of the Research Subcommittee. Chair Scare recognized Tom Cappellin's service as chair of the subcommittee.

- C. Handbook: Tricia Bruenn (Chair). Subcommittee meeting minutes of June 25, 2017, are attached.

Chair Bruenn discussed accessing the ASHRAE Authoring Portal for review by committee members. If a committee member cannot access the Authoring Portal, please contact Chair Bruenn.

- D. Chilled Water Plant Sub Committee: Steve Tredinnick (Chair). The sub-committee meeting was held on June 25. There were 11 attendees.

A current 9 page draft of the chapter was distributed as a discussion tool and to show progress. The current version of the Chapter currently resides on sub-committee chair Tredinnick's laptop since he is having issues with the authoring portal.

A table was added showing the chiller efficiency improvements between parallel, series and series-counterflow. The intent is to add an example to show the annual energy cost savings of the different chiller options.

The majority of the remaining time was used as a workshop to discuss the required clearances for proper pump base mounted pump installations. The discussion was centered on not only proper maintenance clearances, but also proper operational clearances. One key factor discussed was clearances from the back of the motor to a wall or other equipment that may block proper ventilation air circulation for cooling the motor. Stan Kutin and Larry Konopacz of Xylem provided insight and documentation from Siemens regarding motor clearances. The clearances vary by motor type and size but typically were a recommended one motor diameter on all sides to a wall and two motor diameters to another motor. This corresponds with standard engineering rule of thumb practices from Jason Atkisson of providing 6 feet in front of the pumps and 3 feet on all other sides.

Stocking motor spare parts was also discussed, but these were deemed to be minimal (seals, bearings, gaskets or the worst case couplings (data centers)) especially if a redundant pump was installed as the first level of redundancy.

E. Membership: Larry Konopacz (Chair). Chair Konopacz reminded all to update their member profiles, especially their e-mail addresses. To be placed on the roster and update their data it must be done by the member through the ASHRAE website.

F. Standards: Mike O'Rourke (Chair). Chair O'Rourke was not in attendance.

Frank Myers reported 90.1 was reviewing if active flow from a boiler must be stopped when there is no call for heat with multiple boilers in a boiler plant.

Frank Myers reported on SPC 155. A draft for public review should be issued by the end of the year. Last year's advisory public review was very successful and meaningful changes were reported. Expect the AHRI program to evaluate the new 155 protocol and look forward to providing summary information in about a month. It appears all fundamental issues have been resolved and what remains is updating for continuity and readability.

G. Web: Jessica Mangler (Webmaster). Webmaster Manger reports the website is up to date.

7. Liaison Reports from other TC's and Organizations.

No reports.

8. Old Business:

(a) MTG-O&MEE – Don Prather says there was no meeting.

- (b) SPC 208 – Method of Test for Determining Hydronic System Balance Valve Capacity. Mark Hegberg absent, no report.

9. New Business:

- (a) Steve Ferguson, Manager of Codes, discussed the ASHRAE Standard Development, US Model Code Development, and International Standards Development. Steve works for ASHRAE to work on Model Code interaction. Handout attached to detail what the TCs can do to get involved.
- (b) Changes in TC structure. Don Prather and Frank Myers are rolling off as Voting Members. Tom Cappellin is concluding his term as chair of the Research Subcommittee. Bob Walker is ending his duties as TC 6.1 Secretary. Chair Scare thanked all for their service to the Technical Committee.
- (c) New (and continuing) Voting Members are: Jason Atkisson, Larry Konopacz, David Lee, Bob Walker, Tom Cappellin, Niels Bidstrup, Scott Fisher, Thomas Neill, Steve Tredinnick, and Mark Hegberg.
- (d) Jason Atkisson is the new Chair, Larry Konopacz is the Vice Chair and Jennifer Leach is the Secretary for TC 6.1. David Lee continues as Chair of the Program Subcommittee; Jessica Mangler is the new Chair of the Research Subcommittee; Tricia Bruenn continues as Chair of the Handbook Subcommittee, Steve Tredinnick continues as Chair of the Chilled Water Plant Subcommittee; Mike O'Rourke continues as Chair of the Standards Subcommittee; new Membership Chair is Bob Walker; and new Webmaster is Mike Trantham.
- (e) Suggestion to name a new TC 6.1 liaison for 90.1. Frank Myers volunteered. Motion by Walker, second by Atkisson to approve appointment of Frank Myers as TC 6.1 liaison to 90.1. Motion passed 9-0-1 CNV.
- (f) Scott Fisher stated reviewing Handbook chapters was not a lot of work and asked all attending to take an hour to review a relevant chapter to insure the best possible material be published.
- (g) Frank Myers expressed appreciation to the Chair for his two years of service to the Committee.
- (h) Jen Leach asked for volunteers to review Conference Papers. Those interested were asked to give her their business card for future contact.
- (i) Chair Scare suggested in the future any programs rejected by CRC should be presented at the conclusion of future TC meetings.

10. Meeting Adjournment:

Motion by Meyer, second by Walker to adjourn the meeting. Motion passed 9-0-1 CNV. Meeting adjourned at 2:03pm.

Submitted by,
Bob Walker.
TC 6.1 Secretary