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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. TC 7.7 DATE June 25, 2018

TC/TG/MTG/TRG TITLE TESTING AND BALANCING

DATE OF MEETING June 25, 2018 LOCATION Rm 371 DE George R. Brown
(3rd Floor, Hilton) Houston TX

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Tom Cappelin	2015	Lloyd Le	2015	Justin Garner
Byron Hagan	2016			Frank Spevak
John Hamilton	2015			Gerald Kettler
Mark Hegberg	2017			Gus Faris
Robert Moss	2017			Jason Hauska
Donald Prather	2015			Michael Langton
Richard Rose	2016			Solomon Yin
Tom Schlachter	2017			Craig Wray
Jim Kelleher	2017			Josue Cruz
				Curtis Anthony
				Derick Ramos
				Viral Dharaiya
				Callen Schwank
				Shilei Ma
				Julian Rochester
				Gaylon Richardson
				Thomas Smith

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

TAC Section Head	Larry Smith	larrys@li-hvac.com
TAC Chair	Kelly Cramm	kelly.cramm@hendersonengineers.com
ALI / PDC Liaison	James W Bochat	jim.bochat@cxconcepts.com

Chapter Tech Transfer Chair	David Ballard	daballard21@gmail.com
2019 HVAC Applications	Bryan Becker	beckerb@umkc.edu
Research Liaison	Christopher Wilkins, PE	chris.wilkins@crbusa.com
Standard Liaison	Rick Heiden	rheiden@trane.com
Manager of Standards	Stephanie Reiniche	sreinichie@ashrae.org
Staff Liaison	Mike Vaughn	MORTS@ashrae.net

Note: These draft minutes have not been approved and not the official, approved record until approved by the TC.

**MINUTES
TC 7.7 TESTING AND BALANCING
ANNUAL CONFERENCE
MONDAY – January 22, 2018 (2:15 – 4:15 pm)
Hilton – Rm 371 DE George R. Brown
Houston TX**

1. CALL TO ORDER

Chairman Prather asked all guests to provide contact information on one of the sign-in sheet that was being passed around.

- Attendance: 9 of 10 voting members present – quorum is present.
- Chairman reviewed the ASHRAE Code of Ethics.

2. INTRODUCTIONS

Chairman Prather asked those attending to introduce themselves and identify the organization or company they represent.

3. APPROVE MINUTES FROM LAST MEETING

Minutes from the Long Beach meeting were passed out. After a brief discussion, a motion to accept the minutes as presented was made by Mr. Rose and seconded by Mr. Hegberg. The motion passed 9-0-0.

4. RECOGNIZE LIAISONS

None Present

5. DISCUSS ISSUES FROM TC BREAKFAST

Chairman Prather briefly covered the information provided at the TC Chairman's breakfast, (See attachment 1 handout).

6. SUBCOMITTE REPORTS

A. Handbook - Mark Hegberg

Motion to submit the handbook as written by Mr. Schlachter, 2nd by Mr. Rose. Passed 8-0-1. (Chairman Abstained).

B. Program - Tom Schlachter

- See attachment 2 Program Sub-Committee Report Handout.

C. Membership – Donald Prather

Chairman Prather reported current voting members are:

Thomas Cappelin, Byron Hagan, John Hamilton, Mark Hegberg, Robert Kelleher, Lloyd Le, Donald Prather (chair), Robert Moss (secretary), Richard Rose, and Thomas Schlachter (vice-Chair).

D. Research - Frank Spevak

- TC 7.7 is currently cosponsor, along with TC 5.3 of RP-1741, “Understanding Fan Coil Components and How They Relate to Energy Consumption and Energy Modeling”.
- Mr. Hagan gave an update on RP-1741. Noted thermo performance testing in progress.
- Mr. Spevak discussed the need for research to support the work of the Standards Committees.

Report Summary:

- 3 RTARs considered – 1 accepted, 1 conditionally accepted, 1 rejected.
- 3 Work Statements considered – All conditionally accepted.
- 1 Innovative Research Grant proposal approved.
- Grant in Aid Research Awards application deadline is March 1.
- Service to ASHRAE Research Award nomination deadline is September 30.
- Homer Adams Award nominations deadline is December 3.
- New Investigator Award nomination deadline is December 3.

E. Journal - Justin Garner:

Mr. Faris submitted 3 articles for the Journal.

F. Standards

STD 111 - Gaylon Richardson

STD 111 expected to go out for public review

GPC 11 - Tom Schlachter

GPC 11 completed and sent forward to be published.

G. Education –

Mark Hegberg volunteer to cover Education

H. Web Master – Aldin Andrade

Mr. Prather reported that the web is up to date.

7. LIASON REPORTS FROM OTHER TC’S OR ORGANIZATIONS

TC 1.2 Instruments & Measurements - Frank Spevak

Standard ASHRAE 41.4-2015 -- Standard Method for Measuring the Proportion of Lubricant in Liquid Refrigerant.

TC 1.4 Control Theory & Application – Mark Hegberg

Mr. Hegberg reported TC 1.4 considering writing manual of Control Sequences.

TC 5.2 Duct Design – Gus Farris

- Design guide is not finished; expected by the end of the year.
- Standard 215-2018 -- Method of Test to Determine Leakage of Operating HVAC Air Distribution Systems (ANSI Approved) is published.
- Mr. Garner suggested a training session on STD 215-2018.

TC 5.3 Room Air Distribution – Byron Hagan & Gus Farr

- VAV design guide is published.

TC 5.6 Control of Fire & Smoke – Gerald Kettler

- Mr. Felker reported on progress on Pressurization of stairwells.

TC 6.1 Hydronic & Steam Heating Equipment & Systems – Mark Hegberg

Meets Tuesday @ 1:00pm.

TC 7.9 Building Commissioning – Justin Garner

- Discussed regulatory involvement in building commissioning process.

TC 9.10 Laboratory Systems – Gaylon Richardson

Meeting is tomorrow.

AABC – Gaylon Richards

Nothing to report.

(LIASON REPORTS FROM OTHER TC'S OR ORGANIZATIONS...continued)

NEBB – Richard Rose

Annual meeting next April.
TAB committee rewriting training program.

SMACNA – Eli Howard;

No report.

ACCA – Don Prather

The commercial maintenance manual ANSI/ASHRAE/ACCA STD 180 is now available.

TABB – John Hamilton

Certification for ANSI on Smoke control.

8. OLD BUISNESS

No old Business was discussed.

9. NEW BUISNESS

Discussed plans for seminars in TC committee meetings.

10. ADJOURN

Motion to adjourn was made @ 4:15pm by Mr. Hegberg, second by Mr. Rose and accepted by committee consensus.

NEXT MEETING:

Atlanta, GA

Monday, January 14, 2019

2:15 – 4:15 pm

Attachment 1 Chairman Breakfast Handout

Conferences and Expositions Committee Information Items for Technical Committees 2018 Annual Conference, Houston, Texas

This “handout” includes recent updates and upcoming deadlines in the preparation of the technical program for the Winter, Annual and Topical conferences. It is being provided in advance of the conference for your information so that it does not have to be presented during the onsite TC section breakfasts. CEC will provide a short update at the TC breakfasts and answer any questions. *Kevin Marple, 2017-2018 CEC Vice Chair, kmarple@benzco.com*

1. 2019 Annual Conference Research Summit Call for Papers

The 2019 Annual Conference in Kansas City, MO features a call for papers for the Research Summit track. Please consider submitting papers or groups of papers as entire sessions from your TC for the conference. Abstracts are due August 21, 2018. If you have any questions, please contact Melanie Derby, the Research Summit Track Chair at derbym@ksu.edu

2. Student Authors Recognized at 2018 Annual Conference

Starting at the 2017 Winter Conference, CEC began recognizing student papers. Certificates were awarded to students at their assigned conference paper session. Certificates in the categories “*Best Paper*” and “*Honorable Mention*” were presented to graduate candidates and PhD candidates.

Four students will be recognized with CEC student paper awards at the 2018 Annual Conference.

3. Program statistics for Houston; for a total of 108 available slots:

Conferences Papers

- 127 conference paper abstracts submitted, 105 approved
- 67 conference papers presented
- 20 Conference Paper Sessions

Technical Papers

- 21 Technical papers received
- 14 Technical papers presented
- 4 Technical Paper Sessions

Seminars

- 100 submitted
- 72 presented

Workshops

- 9 submitted
- 7 presented

Forums

- 11 submitted
- 4 presented

Debates

- 2 submitted
- 1 presented

Panels

- 4 submitted
- 1 scheduled (withdrawn)

4. 2019 ASHRAE Winter Conference in Atlanta, January 12-16:

<http://www.ashrae.org/atlanta>

- a. Conference Papers are due July 9
- b. Seminar, Forum, Debate, Panel and Workshop proposals are due August 3
- c. Program notifications go out September 14
- d. Web site opens for presentation uploads on November 30
- e. All presentations due online January 4, 2019

2019 Winter Conference Chair is Corey Metzger, corey.metzger@resourcece.com

Tracks and Track Chairs

Track 1: Systems and Equipment

Joe Firrantello, j.firrantello@gmail.com

Track 2: HVAC& R Fundamentals and Applications

Rick Hermans, herma015@umn.edu

Track 3: Refrigeration

Sonya Pouncy, sonya.pouncy@gmail.com

Track 4: Construction, Operation and Maintenance of High Performance Systems

Leticia De Oliveira Neves, leneves@gmail.com

Track 5: Common System Issues and Misapplications

Lee Riback, lee.riback@gmail.com

Track 6: The Convergence of Comfort, Indoor Air Quality and Energy Efficiency

Ashish Rakheja, ashish.rakheja@aeonconsultants.in

Track 7: Building Integrated Renewables and Natural Systems

Maggie Moninski, maggie.moninski@gmail.com

Track 8: The Engineer's Role in Architecture

Ashu Gupta, ashu.energy@gmail.com

5. 2019 ASHRAE Annual Conference in Kansas City, MO: www.ashrae.org/kansascity

- a. Conference Paper Abstracts, Technical Papers and Paper Session requests due August 21, 2018
- b. Conference Papers due November 30, 2018

2019 Annual Conference Chair is Carrie Anne Monplaisir, carrie.monplaisir@gmail.com

Tracks and Track Chairs

Track 1: Systems & Equipment in the Built Environment

[Kimberly Pierson, kdpwildcat@gmail.com](mailto:Kimberly.Pierson.kdpwildcat@gmail.com)

Track 2: Fundamentals and Applications

[Gary Debes, gary.debes@comcast.net](mailto:Gary.Debes.gary.debes@comcast.net)

Track 3: Optimization in HVAC&R

[Vikrant Aute, vikrant@umd.edu](mailto:Vikrant.Aute.vikrant@umd.edu)

Track 4: Commissioning New & Existing Buildings

[Raul Simonetti, raul.simonetti@carel.com](mailto:Raul.Simonetti.raul.simonetti@carel.com)

Track 5: Occupant Health & Safety

[Chris Reinders-Caron, creinders@cannondesign.com](mailto:Chris.Reinders-Caron.creinders@cannondesign.com)

Track 6: Modeling Throughout the Building Life Cycle

[Nivedita Jadhav, nivi2307@gmail.com](mailto:Nivedita.Jadhav.nivi2307@gmail.com)

Track 7: Professional Development

[Rich Rose, richr@mticontrols.com](mailto:Rich.Rose.richr@mticontrols.com)

Track 8: Research Summit

[Bing Liu, bliu@neea.org](mailto:Bing.Liu.bliu@neea.org)

Track 9 (Mini-Track): Radiant Heating & Cooling Mini-Track

[Devin Abellon, devin.abellon@yahoo.com](mailto:Devin.Abellon.devin.abellon@yahoo.com)

6. Potential Sources Bias Disclosure

In accordance with the ASHRAE Code of Ethics, speakers have been asked to fill out a potential sources bias disclosure document that will note affiliations/ involvement with any organizations with financial or commercial interest in the subject matter to be discussed.

7. TC Opportunities:

- a. TC members who want to submit a program should consult the Track Chair for assistance in preparing a good abstract, learning objectives, and Q&A to help assure complete submission.
- b. TCs and Sections are welcome to suggest new presentation formats (like how the Workshop was born). Best way to present material to benefit attendee is a goal.
- c. TCs and Sections are encouraged to work with a track chair to put together a series of sessions that can be used as a mini-track.
- d. Putting together an entire track of programs in cooperation with other TCs is also encouraged; keeping in mind that track subjects are typically determined 14-15 months prior to a conference.

8. CEC Announces a Call for Reviewers and Paper Session Chairs

ASHRAE has a number of conferences coming up that include papers, and CEC seeks your help in reviewing them. Additionally opportunities to chair a paper session are available. Specifically, there is an immediate need for reviewers and session chairs for the 2019 Winter Conference and various topical conferences.

Please submit your interest in reviewing a paper or chairing a paper session using the online form: http://web.ashrae.org/cec_request/. Please contact Tiffany Cox, ASHRAE Assistant Manager, Conference Programs, at cox@ashrae.org for more information.

9. Topical Conferences

ASHRAE's topical conferences are focused on a particular aspect of the industry and bring together professionals for networking and professional development. Two topical conferences are available for the remainder of 2018.

2018 Building Performance Analysis Conference and SimBuild, co-organized by ASHRAE and IBPSA-USA

<http://www.ashrae.org/BuildPerform2018>

September 26-28, 2018, Chicago, Illinois

The conference program includes peer-reviewed papers, non-paper presentations and new program format types as well as the fourth annual ASHRAE LowDown Showdown modeling competition with a record 14 teams competing.

The Third International Conference on Efficient Building Design

<http://www.ashrae.org/Beirut2018>

October 4–5, 2018, Beirut, Lebanon

The conference is to present advanced research on the topics of advanced building and bioclimatic designs for attaining occupant comfort and good environmental quality addressing systems and technologies adapted to the Arab region in both moderate and hot humid climates.

10. Program Types

Technical Paper Session:

These sessions present papers on current applications or procedures, as well as papers resulting from research on fundamental concepts and basic theory. Papers presented in these session have successfully completed a rigorous peer review. Forms for written comment are available at each session, and sent to respective authors for reply and publication in ASHRAE transactions, if received by a certain date.

Conference Paper Session:

These sessions present papers on current applications or procedures, as well as papers reporting on research in process. These papers differ from technical papers in that they are shorter in length and undergo a much less stringent peer review.

Seminar:

These sessions feature presentations on subjects of current interest. There are not papers attached to seminars.

Workshop:

These sessions enable technical committees and other ASHRAE committees to provide a series of short presentations on a topic requiring specific expertise. These short presentations are provided with an increased emphasis on audience participation and training in a specific set of skills. There are not papers attached to workshops.

Forum:

The sessions are “off-the-record” discussions held to promote a free exchange of ideas. Reporting of forums is limited to allow individuals to speak confidentially without concern of criticism. There are not papers attached to forums.

Panel Discussion:

Panel discussions can feature a broad range of subjects and explore different perspectives on industry related topics. This session format includes a panel of 3-4 speakers each addressing a facet of the session topic, followed by an interactive discussion lead by the session chair. Panel Discussions may be 60 minutes or 90 minutes in length and will be posted online in the Virtual Conference.

Debate:

Debates highlight hot-button issues commonly faced by our membership. Industry experts, either on teams or as individuals, argue opposing sides of an issue, concluding with position summaries and audience feedback. Debate sessions may be 60 minutes or 90 minutes in length and will be posted online in the Virtual Conference.

Attachment 2 Chairman Breakfast Handout

TC 7.7 – Program Report

June 25, 2017 – Houston

Tom Schlachter

1. Seminar for “Venturi vs Blade” dampers was submitted and accepted.
 - Presented Monday @ 11:00 am
 - Speakers were:
 - Paul Fusion, Siemens for Blade
 - David Rausch, Phoenix for Venturi
 - Justin Garner; EAB presented test data covering both Blade & Venturi
 - Time was limited to 1 hr
 - Time was shortened by technical issues
 - Justin Has more data to present

2. Seminar for Lessons Learned pitched to Section head at TC Breakfast
 - Consider a mini-trac
 - Each conference a different section charged with presenting a program
 - Needs to be lively and informative
 - Current programs share what to do or how to do
 - Need to share what not to do
 - Benefits for YEA
 - Potential title “Tales from the Crypt”

NOTE: SEMINAR SUBMISSION DEADLINE FOR ATLANTA IS AUGUST 3RD

3. There was no formal program meeting In Houston, Program sub-chair was attending meeting for RP-1741 (FCU – Coil and Fan energy).
 - Sponsored by TC 5.3 Room Air Distribution
 - Co-sponsored by TC 7.7 & TC 4.7 Energy Calculations
 - This project has already produced one paper and will result in multiple programs