

ASHRAE, Inc.

1600 Lamar – Room 338 (3)

Houston Texas, 77010

713-739-3000

TC/TG/TRG MINUTES COVER SHEET

TC/TG/TRG NO: TC2.7

TC/TG/TRG TITLE: Seismic and Wind Resistant Design

DATE OF MEETING: 06/26/2018

Location: Houston, TX

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL
Pat Marks	07/01/2016			Greg Meeuwsen
Matthew Hooti	07/01/2016			Harold Dubensky
Angela Waters	02/01/2018			Paul Meisel
Scott Campbell				Robert Simmons
Jim Carlson	07/01/2016			Eli Howard
Doug Fitts	07/01/2015			Sarper Arun
Panos Papavizas	07/01/2016			Michael Morby
John Giuliano	07/01/2015			Prasad Naik
Stephen Duda				Matt Clark
Don Warik, Jr.				Sarper Arun
Jim Tauby				Delaine Deer
				Bob Reid
				Joel Walters
				Rupal Choksi
				Mike Pascual
				Lawrence Turner
				Kenny Hightower
				Karl Peterman
				David Stephens
				Ryan Parker

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ALL MEMBERS /CM OF
 TC/TG/TRG Section 2
 Section Head

TC 2.7 Seismic and Wind Resistant Design

Committee Scope: Technical Committee 2.7 is concerned with fundamental scientific and engineering design principles for seismic and wind resistant design of HVACR equipment and building mechanical/electrical service systems.

Chair: Patrick Marks, Johnson Controls, patrick.c.marks@jci.com
Vice-chair: Matthew Hooti, Isotech Industries, mhooti@isotechindustries.com
Secretary: Angela Waters, Kinetics Noise Control, awaters@kineticsnoise.com
Website: <https://tc0207.ashraetcs.org/index.php>

1. Meeting was called to order at 3:30 PM.
2. All present members and guests introduced themselves. See summary/cover sheet above.
3. Quorum was established with 12 quorum voting members present.
4. Previous minutes from Chicago were distributed by email. John Giuliano first motion to approve and Matthew Hooti seconded the motion to approve minutes. Revision: Doug Fitts was not at the Chicago meeting. (10) voting members approved, chair not voting.
5. **TC Chair's Report** (Patrick Marks)
 - From Breakfast Committee: encouraging everyone to use Base Camp, everyone thinks that it is wonderful.
 - 2019 annual conference call for papers on August 21st, 2019.
 - Programs for Houston: There were 8 available spots for the conference, 127 were submitted, & 105 were approved.
 - Atlanta: January 12th, July 9th research papers are due, August 3rd seminars, 8 tracks for winter conference
 - Robert Simmons wished to add fatigue testing to standards for anything that clamps, whether it be a cable or a strut.
 - Robert's suggestion was in addition to the original testing. John Giuliano asked if this was additional required to keep the rating.
 - Fatigue testing is not static testing, but cyclic testing that does not duplicate the shake table testing. It should be applicable to anything that has a friction type connection, like a strut.
 - Robert Simmons was asked if he is seeing a slip that is affecting the performance. Yes, Robert Simmons has seen this slip enough to affect the performance.
 - SPC 171 has been shelved for now.
 - Handbook met this morning, re: flooding
 - Subcommittee meeting met on the ASHRAE handbook
 - Jim Carlson motion to accept the handbook & Pat Marks seconded the motion.
 - We are now going to bring the voting members up to date. Karl Peterman did have some edits.
 - Some of the references and the bibliographies were out of date.
 - Updated some of the standards to the current versions.
 - Handbook does not include any of the Flood discussion that were revised at this ASHRAE meeting.
 - Just the two paragraphs on the flooding
 - 12 voting members in favor, 0 against, chair not voting

6. **Honors and Awards** (Steve Duda)

- Request remote call in when we request the room because it is considered a change in the meeting.
- Steve went over the types of awards, etc.

7. **Long Range Planning** (Matthew Hooti):

- Push, lobby or otherwise pursue an agenda to move Mechanical Engineers into the lead position (or at least an equivalent position to Structural Engineers) with regard to the design, selection and incorporation of seismic and wind restraints for non-structural components. VISCMA started the conversation with a lawyer to review the legal side of it.

8. **Publications Subcommittee** (Jim Carlson)

- Handbook, VISCMA is currently not referenced, but Jim is OK with it referenced if everyone else is.
 - Concern is if the website link path every changes
- Jim Carlson is giving the graphics from FEMA 213 to John Giuliano.
- Went over Karl Peterman's review of the seismic handbook.
- Group proposed just listing the FEMA 412, 413, 414 etc. and not directing the reader to the VISCMA or FEMA site.
- Should we find all the neoprene references and change to elastomeric to make everything consistent?
- John Giuliano proposed & Don Warick Jr. seconded adding VISCMA to the bibliography list for the handbook.
- Jim Tauby sending the reference changes to Pat Marks.

9. **Programs Subcommittee** (Robert Simmons)

- **Important deadline dates for Atlanta meeting:**
 - 7/9/18: Conference Papers due
 - 8/3/18: Seminar, Workshop, Forum, Panel Discussion, Debates due
 - 8/15/18: RTAR due
- **As mentioned above, programs are due August 3rd.**
- **Did have 2 programs that we sponsored here:**
 - TC 2.6 Lessons learned from Hurricane Harvey
 - TC 2.5 Safeguarding Gen. Sets.
- Brainstorming for Ideas: Tracks 4 & 5 seem realistic, resiliency is still a popular topic
- Back to Basics: wind, seismic, flood & bomb blasts
- **Future Programs**
 - TC 2.5 is planning on chairing the co-sponsor program

10. Research (Panos Papavizas)

General

- Panos is looking to retire and is looking for someone who can take over the research aspect of TC 2.7. This person would have to be trained by Panos for next year.
 - If have ongoing research for ASHRAE, CORP, for collecting more data, \$50,000 funding support a year is available
 - If you are in process of writing RTAR, RAC is offering support \$200, small amount. Pay for Library services
 - RTAR Deadline is August 15th.
 - If have the RTAR submitted by then, there is a follow up meeting to review.
 - Has to go through e-balloted program.
 - Update on IBHS research project:
 - Was accepted after Chicago?
 - Murray has not submitted the technical yet, small amount of balance left
 - We could accept that the last presentation meets the requirement of the deliverable; however, our research contact suggests against this.
 - Murray is drafting an article to be submitted next month.
 - We do not have any activities right now.
 - We did establish two different ideas for research: 75 lb exemption, and response modification for cooling towers
 - See if CTI would be interested at all, does not appear to be a lot of interest
 - Work statement needs to be revised or amended.
 - Testing duct work 6 square ft., etc...
 - We might have a co-sponsor form TC 5.2 & TC 5.3
 - We have until August 15th to get it in, Robert Simmons is going to send it out for yay or nay vote after some “word-smithing”
 - It will probably go out after July 1st.
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 - 1692 RP, accepted research report that was committed.
 - Technical paper submission still not complete, Murray is working on a draft to be submitted in July.
 - PMS completed its work
 - New research to study the inline duct exemption, Robert and Prasad are working on writing the RTAR.
 - Elis is going to check where the 75 lb. number originated from (OSHPD? SMACNA?)
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- What is the scope of the research, shaker table test boxes that are below the 75 lb. range to determine where products fail.
 - OSHPD original intent was to look at items that were on either side of the item.
 - Where is the point of delineation?
- Duct work is not designed to support the equipment for commercial
- Industrial is a different monster
- If the system is independently supported does it need to be restrained?
- John Giuliano believes it talks about the restraints but not the supports for the exempt portion, not the standard portion
- Chapter 13 would allow the VAV Box to be supported by the duct.
- This would be in violation of the international mechanical
- MCEER and PEER does not have anything going on in their lab for non-structural components
- Program with TC 2.6 on safeguarding generators speakers on acoustics and vibration
- Program with TC 2.5 on lessons learned by Hurricane Harvey, global climate change discussion was impassioned.
- Movement by other TCs for extreme events and planning.
- Future programs: Matthew Hootie – back to basics seminar chair for Atlanta
- John Giuliani says that he would be willing to speak on something
- Roman with 2.6 had some ideas
- Long Range Planning:
 - Transformers of $I_p = 1.0$ or 1.5
 - Matthew explained that we have best way to get approval when we find presentations that follow the tracks
 - Bus duct, verses cable trays, etc.
 - Everything can catch fire on the electrical side because of a short circuit.
 - Good for future programs when we might have a track that it would fit into
- Jim Carlson will talk about the Flood Resistance
- Met on the floods, about 12 people present, are going to do some literature research, go over the history of flooding, the history of flooding in Canada.
- 4 year comprehensive effort to get a flood section into the handbook.
- ASHRAE handbook: Mark Holms was not here.
- Ali, 8-10 months prior to the conferences for short conferences.
- TG2 has applied for TC status.
- Guideline 29 risk management, approved for next step, extensive literature, proposing RTAR, other TC's are also looking at it, such as TC 2.5
 - Activity for resiliency with TC 2.5
- Table 47 of 48 discussed the isolation based on the floor span and equipment.

- They discussed that the table does not include the newer isolation products out there
- Also need to discuss transmissibility or natural frequency goals
- We need to think about the surge frequency.
- Matthew Hooti should be the liaison for TC 2.6, not Karl Peterman due to responsibilities.
- 9.1.1.7 is ASCE Karl Peterman, not Jim Carlson, should be Simmons/Peterman
- Doug Fitts for a bunch of TC, justice facilities are meeting Sunday afternoon, made some very minor changes to the chapter.
- Tapping testing for transmission loss for isolated floors and architectural products
- BSSC stuff ASCE 7 mostly, technical groups: TI 5 & 6, group has number of people on both, trying to distinguish when equipment is in chapter 13 and when it is in chapter 15.
- ATC 20 project, coming up with the new equation for seismic – revamping the ASCE 7 chapter
- Keeping the changes close to the vest
- VISCMA – main objective is to market the group more visibly, break out groups into bulletins, and FAQ Fact finding tree & webinar break out groups.
- After Chicago meeting, approved 2 new white papers
- Working on FEMA 413, and with Jim Carlson, we now have 150 graphics to work with.
- Matthew Hooti to send Bob Ecker his information in order that he can receive the mailing updates
- SMACNA is currently working on the update, trying to get it out in the next couple of years.
- MSS is specified on every project
 - Prasak Naik

11. Membership (Robert Simmons)

Name	Appointed Year	Position
Mr Patrick C Marks, PE	07/01/2016	Chair
Mr Matthew M Hooti, PE	07/01/2016	Vice Chair
Mrs. Angela Waters, PE	02/01/2018	Secretary
Mr Stephen W Duda, PE	07/01/2016	Honors Chair
Mr John F Dunlap, PE	07/01/2016	Subcommittee Chair
Mr Panos George Papavizas, PE	07/01/2016	Research Subcommittee Chair
Mr James A Carlson	07/01/2016	Handbook Subcommittee Chair

12. Old Business: : None.

13. New Business: None.

14. Next Meeting: Atlanta, January 2019, Please note that it is a week earlier than it usually is.

15. Adjournment: Steve Duda made a motion to adjourn the meeting