

ASHRAE, INC.
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TC/TG/TRG MINUTES COVER SHEET

(Minutes of TC/TG/TRG Meetings are to be distributed to those listed below within 60 days after the meeting.)
 These minutes were approved at the New York City 2014 Winter Meeting

TC/TG/TRG NO.: **TC 1.12**

TC/TG/TRG TITLE: **Moisture Management in Buildings**

DATE OF MEETING: **June 22, 2013, 1pm to 3pm.**

LOCATION: **Sheraton Downtown Denver, CO, Director's Row E**

MEMBERS PRESENT	TERM EXPIRES 6-30	MEMBERS ABSENT	TERM EXPIRES 6-30	EX-OFFICIO MEMBERS
Lew Harriman III	2013	Quinn Hart	2016	Victor Penar
Ray Patenaude	2016	Hugo Hens	2013	
Raoul Webb	2014	Achilles Karagiozis	2013	
Steven Cornick	2013	Alex McGowan	2015	
Paul Shipp	2013	Lan Chi Nguyen Thi	2015	
Stan Gatland	2016	George DuBose	2016	
Norm Nelson	2016			
Florian Antreter	2016			
CORRESPONDING MEMBERS PRESENT		CORRESPONDING MEMBERS ABSENT (CONTINUED)		ADDITIONAL ATTENDANCE
Hartwig Künzel		Wahid Maref		John G. Davis
Gordon Hart		Larry Elkin		Ed Light
Andre Desjarlais		Diana Fisler		Christy Cronin
Sam Glass		Jeff Traylor		Dane Christensen
Anton TenWolde		Michael Hayes		John L. Harrod
Manfred Kehrler		Dale Herron		Donald Snell
Fitsum Tariku		Gil Avery		
Mika Salonvaara		Albert Pucino		
Ron Bailey		Carl Lawson		
Holly Bailey		Mark Lawton		
Theresa Weston		Neil Leslie		
William Chadwick		Him Ly		
Louis Kelter		John Murphy		
CORRESPONDING MEMBERS ABSENT		Leonard Damiano		ADDITIONAL DISTRIBUTION
Rodney Lewis		Claudio Darras	Section head	Victor Penar
Mark M. Anderson		Doug Bibee	TAC Chair	William McQuade
Davidge Warfield		Elia Sterling	Liasons	
Bede Welford		Dwight Heberer (prov. CM)	Standards	Heather Platt
Joseph Griner, III		Christine Maurer (prov. CM)	Research	Arthur Giesler
Fiona Aldous		Manfred Gerber	Staff	Mike Vaughn
Marcus Bianchi			Chapter TT	Alexander Weiss
Stephen Barefoot			ALI/PDC	Donald Brandt
Jim Cummings			Special Pubs	Francis Mills

TC 1.12 Moisture Management in Buildings

June 22, 2013, 1pm to 3pm.

Sheraton Downtown Denver, CO, Director's Row E

1. Call to order – Lew Harriman III – Chair

Chair called meeting to order at 1:07 PM and read the TC 1.12 scope statement.

2. Self-Introduction of members and guests – Lew Harriman

Those present introduced themselves. Quorum was established.

3. Approval of minutes – Lew Harriman

Paul Shipp moved approval of the minutes. Steve Cornick seconded. Minutes approved 8/0/0.

4. Review agenda – Lew Harriman

There were no additions to the agenda.

5. Chairman's report – Lew Harriman

The chair reported that Steve Cornick will take over as chair after the meeting. Ray Patenaude will replace Alex McGowan as Program chair. There is a vacancy for secretary.

6. Research – Steve Cornick

- a. Status update – Development of the ASHRAE Design Guide for Dedicated Outdoor - Air Systems (1565-TRP) – TC 8.10 (TC 1.12 cosponsors this project.) Lew Harriman: Contract with contractor was terminated. The work statement has been revised and resubmitted to RAC.
- b. RTAR Develop a method to determine residential whole home dehumidification capacity requirements. TC 8.10 (TC 1.12 cosponsor) Sam Glass agreed to serve as the TC's representative on the PES.
- c. WS 1566 Water vapor evaporation rates from swimming pools. TC 8.10 (TC 1.12 cosponsor). This WS is being revised and will be sent to TC 1.12 for comment when revisions are complete. Louis Kelter agreed to represent TC 1.12 on the PES.
- d. Potential new RTAR's: No progress was made since the last meeting
 - i. Damp Building Measurement Criteria and Inspection Protocol – Lew Harriman. There was a consensus that the TC should develop a work statement with a plausible definition of what constitutes a damp building and develop a test protocol. The research project's goal would be to validate the protocol. Lew Harriman, Ed Light, and Norm Nelson will develop the draft definition and protocol by the end of August, and a special on-line fall meeting will be called to discuss these.
 - ii. Techniques for Limiting Indoor Dampness and Microbial Growth During Unoccupied Hours and In Buildings That are Seasonally Occupied – Lew Harriman
 - iii. Techniques for Minimizing Construction Moisture Problems – TenWolde withdrew as the lead author. Paul Shipp and Ed Light agreed to develop this RTAR.
 - iv. Humidity Loads Generated in Non-residential Buildings – Theresa Weston, Sam Glass, Raoul Webb.
 - v. Techniques for Limiting Indoor Dampness and Microbial Growth in Heritage and Special-purpose Buildings – Steve Cornick.
- e. RTAR Modeling Water Vapor Permeation in Pipe Insulation (TC 1.8). Gordon Hart reviewed a new RTAR proposed by TC 1.8. The research subcommittee was interested in cosponsoring this work and Manfred Kehrer agreed to help Gordon and TC 1.8. The research subcommittee will review the RTAR when it is ready for a vote.
- f. RTAR on Air Emissions from Unvented Combustion Devices. SSPC 62.2 is sponsoring this RTAR. TC 1.12 decided not to cosponsor at this time.

7. Handbook – Hugo Hens

Hugo took ill during the trip over to Denver and was forced to return home. The discussion was led by Lew Harriman.

- a. Handbook of Fundamentals chapter. The chapter needs more information on hot and humid climates and the effect of HVAC equipment.
- b. Applications Handbook chapter
 - i. The chapter needs more on the reasons for concern (e.g. dust mites)
 - ii. More information is needed on mold sampling, mold species, and the presence of mold as a trigger for remedial action.
 - iii. Information on quantifying dampness of buildings should be included, as it becomes available through future research.

8. Program – Lew Harriman for Alex McGowan -----

- a. Denver:
 - i. Seminar: “Tools and techniques for avoiding construction moisture problems” Chair Sam Glass. Speakers: Lew Harriman, Hugo Hens, and Stan Gatland . Steve Cornick agreed to fill in for Hugo Hens.
- b. New York
 - i. Conference tracks for New York are:
 1. HVAC&R Systems and Equipment
 2. HVAC&R Fundamentals and Applications
 3. Environmental Health through Indoor Environmental Quality
 4. Building Information Systems: Integrating Technology for Control, Management, Optimization and Efficiency
 5. International Design
 6. Building Performance and Commissioning for Operation and Management
 7. Hydronic System Design for Efficiency and Large Buildings
 8. Tall Buildings: Performance Meets Policy
 - ii. Seminar: “Designing Buildings for Resiliency to Natural Disasters” Chair Lew Harriman. Potential speakers Elliott Warner: “ASTM procedures for materials that survive extreme events; Alex McGowan “Design for storm surge: you have to think upside-down”
 - iii. Seminar: “Lessons learned from hurricane recovery”, Chair Lew Harriman. Potential speakers: Gordon Hart/George Dubose on reusing materials, Raoul Webb on interfacing with agencies, person to be named later from Wiss Janney Elstner on the local experience of Hurricane Sandy. A representative from the restoration contractors should be added.
- c. Seattle:
 - i. Conference paper session: “Hygric buffering to save energy and control humidity in buildings.” Chair Hugo Hens. Potential speakers: Dane Christiansen (2 papers), Florian Antreter, Achilles Karagiozis, Fitsum Tariku.
 - ii. Seminar on the progress of the damp building definition and protocol research project. Chair Ray Patenaude.
 - iii. Seminar: “Lessons learned from a damp climate” Chair Alex McGowan.
Speaker 1: Equipment and systems in a damp climate.
Speaker 2: Building operation in a damp climate.
Speaker 3: Architectural design for a damp climate.

9. Old Business – Lew Harriman

There was no old business to report

10. New Business – Lew Harriman

There was no new business to report

11. Mini-Presentation – Peter Criscione

New retrofit kits for improving humidity control and reducing energy consumption in constant-volume packaged rooftop units – Hardware, costs and early field measurements.

12. Adjourn – The meeting was adjourned at 3:05 PM

Next meeting: New York, Saturday January 25, 2014 - 13:00 – 15:30

Action items as of June 2013

WHO	ITEM	DEADLINE
Anderson	Gather input from Std 62 subcommittee members, organize it, discuss it and report with recommendation to the full committee on the question of changing the max rh recommendation in std 62 to a max dew point recommendation	??
All	Send appropriate material for the Handbook chapter to Hugo	??
Harriman	Draft an outline for a chapter in the APPLICATIONS volume of the handbook that is focused on common problems and solutions in moisture management. (Outline partly based on work of the Mold Position Document Revision Committee)	
Harriman, Light, Nelson	Develop Damp Building definition and test protocol for discussion	August 31
Harriman	Submit Seminar “Designing Buildings for Resiliency to Natural Disasters” for New York	
Harriman	Submit Seminar “Lessons learned from hurricane recovery” for New York	
Patenaude	Submit Seminar on the progress of the damp building definition and protocol research project. For Seattle.	
McGowan	Submit Seminar on “Lessons learned from a damp climate” for Seattle	
Hens	Submit a conference paper session entitled “Hygric buffering to save energy and control humidity in buildings.” For Seattle	
Harriman	Develop RTAR “ <i>Techniques for Limiting Indoor Dampness and Microbial Growth During Unoccupied Hours and In Buildings That are Seasonally Occupied</i> ”	
Shipp, Light	Develop RTAR “ <i>Techniques for Minimizing Construction Moisture Problems</i> ”	
Weston	Develop RTAR “ <i>Humidity Loads Generated in Non-residential Buildings</i> ”	
Cornick	Develop RTAR “ <i>Techniques for Limiting Indoor Dampness and Microbial Growth in Heritage and Special-purpose Buildings</i> ”	
Harriman	Notify TC 4.1 (Load Calculation Data & Procedures) that Sam Glass’ research strongly suggests that current internal humidity load equation in the ASHRAE handbook severely underestimates the observed data, and that TC 1.12 respectfully suggests that TC 4.1 re-evaluate the values generated by equation 31 of chapter 17 of the 2009 FUNDAMENTALS in light of this fact.	

Minutes prepared by A. tenWolde