

TC 1.12 – MOISTURE MANAGEMENT IN BUILDINGS

June 25, 2022

2022 ASHRAE SUMMER MEETING – Approved Minutes

1. Call to order – Florian Antretter

The Chair called the meeting to order and read the TC 1.12 title, scope statement, and ASHRAE code of ethics.

2. Self-introduction of members and guests

Those present in person and virtually introduced themselves.

3. Roll call/committee membership – Diana Fisler

Eight of twelve voting members in attendance. Quorum was established.

4. Review Agenda –

Agenda was reviewed. No additions were made. Erika Bonfanti motions to approve the agenda, Wahid Maref seconds. Eight of eight voting members in favor; agenda approved.

5. Approval of minutes from Winter 2022 meeting

Wahid motions to approve, Diana Fisler seconds. Eight votes in favor, zero abstentions. Minutes approved. Will be posted to Basecamp; Ed Light's additional comments sent via email after the meeting will be attached.

6. Chairman's report – Florian Antretter

- a. There have been issues with members being dropped from the roster, including voting members. Corey Metzger will follow up with Tara on this issue.
- b. Activity Feedback Form will be sent to the Chair via email if not already received.
- c. Corey notes that there are framework updates for the MTGs that ASHRAE will release for these functional groups.
- d. Discussion regarding continuation of the hybrid meeting scheme, given ongoing technical difficulties. Will be discussion in the breakfast regarding attendance: overall, virtual, and in person. There are steps being taken by the Conferences and Expositions Committee (CEC) to improve these issues, including ASHRAE providing better hardware.

7. Research – Wahid Maref

- a. Update on PMS 1844 – Project is close to conclusion; the research paper was submitted to the Buildings XV conference and should be finalized in September.
- b. Update on identified TC 1.12 research topics – Five main topics have been developed after brainstorming sessions, with teams and possible RTAR subjects assigned to each:
 - i. "Managing moisture sources during construction- within materials and due to external weather conditions/thermal bridging" - Ed Light, Danko Davidovic, Fitsum Tariku, Donald Snell, Lew Harriman (consultant), TC 4.4
 - ii. "Thermal comfort, moisture comfort, health, and affect of humidification techniques on occupant comfort" - Carl Grimes, Peter Luttik.
 - iii. "Risk assessment practitioners guide to whole-building moisture and hygrothermal analysis" - Ed Light, Fitsum Tariku, David Finley, Erika Bonfanti.
 - iv. "Occupant comfort, experience relevant to health and wellbeing" - Carl Grimes (lead), Florian Antretter, Ed Light, Peter Luttik.

- v. "Building retrofit electrification (heat pump power heating, etc.) and effect on moisture management" - Diana Fisler, Simon Pallin, Mehdi Ghobadi, Donald Snell, Wahid Maref, Mika Salonvaara, ORNL.
- c. Wahid motions to recommend topic "New materials/products and their effectiveness versus issues in climate zones, including low embodied carbon products" to TC 4.4, with TC 1.12 as co-sponsor, Diana seconds. Eight votes, zero abstentions. Motion was approved.
- d. Remaining task is to propose RTARs for these topics for the January 2023 meeting. Wahid motions to formulate remaining five topics as RTAR submissions, Diana seconds. Eight votes, zero abstentions. Motion was approved.

8. Handbook – Simon Pallin

- a. Update on Handbook revisions work group – HVAC Applications (Chapter 64) updates were posted to Basecamp and reviewed by TC 1.12 members. Overall goal was to make the chapter more user friendly and infill gaps.
- b. Further discussion: Lew Harriman suggests updating the title to be more active, such as "Avoiding Moisture and Mold Problems."
- c. Simon motions to approve the Chapter 64 modifications with the title modification, Erika seconds. Eight votes to approve, zero abstentions. Motion passes.
- d. If you have an interest in future updates, please reach out to Simon, Florian, or Erika for inclusion.

9. Program – Florian Antretter (Filling in for Dave Finley)

- a. Summer 2022 programs of interest- TC 1.12 is co-sponsor of the following:
 - i. Seminar 6, *IEQ and the Building Envelope: When Walls Talk* on June 26, 2022
 - ii. Seminar 28, *COVID-19 IAQ: Building Readiness and Resiliency in the New Age* on June 28, 2022.
 - iii. Paper Session 18 – *Moisture and Humidity Management in Commercial Buildings* on June 29, 2022.
- b. Tracks for next conference in Atlanta are posted on the website.
- c. TC 1.12 has identified two proposed seminars: "Building Retrofit Electrification and Effect on Moisture Management" with Peter Luttik as lead, and "Occupant Comfort/Moisture Comfort" with Carl Grimes as lead. Speakers are being compiled and co-sponsors from other TCs pursued (including TC 8.10 and 8.11 for the first seminar). Will send out letter ballots for a vote once teams are developed.
- d. Carl Grimes would like to coordinate with SGCP 10- *Interactions Affecting the Achievement of Acceptable Indoor Environments*, so will propose in that meeting and also solicit experts from the Environmental Health Committee to put together a seminar. Deadline is August 9, 2022.
- e. Wahid notes that it would be very helpful to keep options in the queue so we can be ready for future conferences. Will develop proposed programs and deadlines for Winter 2023 and in the future, based on research scope/topics.

10. Standards and Guidelines – Florian Antretter (Filling in for Don Snell)

- a. Update on review of ISO 22185-1 "Diagnosing moisture damage in buildings and implementing countermeasures": Part 1 was published in 2021, focusing on principles, nomenclature, and moisture transport mechanisms. Part 2 is in the working group stage and focuses on condition assessment. Will be circulated to TC 205 for members to comment on it; Don will give us an update on how we can participate in the commenting phase. There is a national mirror committee to TC 205 that requires application. Part 3 is not yet registered under the work program; will provide an update in the next meeting.
- b. Lew recommends Don share a copy of the Chapter 64 Handbook revisions with the ISO committee if he is an official liaison, and recommends that the Special Publication on *Damp Buildings, Human Health, and HVAC Design* be submitted to them with formal advisement to consider our metrics and mitigation strategies.

- c. Update on Std. 62.1 Changes (Lew Harriman) – Committee for 62.1 will be discussing form for exemption for very dry climates; this may be put out for public review, and Lew recommends members of TC 1.12 comment on the revisions.
- d. A document preventing humidification to maintain sensible cooling loads- evaporative cooling- is in the works and will be distributed for comment.
- e. Conflict between requirements of Standards 90.1 and 62.1, whereby 90.1 prohibited relative humidity control, was resolved.
- f. Swamp coolers are discussed with regards to issues created by these systems; TC 1.12 should review and propose related Handbook revisions. Diana will start a thread on Basecamp for further discussion.

11. Special Publications/Additional Updates

- a. Two books that are supported by TC 1.12 are pursuing funding for updates with current information:
 - i. Humidity Control Design Guide for Commercial and Institutional Buildings.
 - ii. The ASHRAE Guide for Buildings in Hot and Humid Climates, 2nd Edition
 - iii. Simon notes that Eric Werling with NREL is interested; other options include Laura Kolb in the Office of Technical Studies at the EPA, and possibly manufacturers who supported the previous publications.
- b. Future discussion: TC support for publication of the *Guide for Resilient Energy Systems Design in Hot and Humid Climate* - Alexander Zhivov is asking for support from the TC on this guide, but he is not in attendance to elaborate. Some updates will be provided in a second addition. Florian moves to support further development of the guide; Diana seconds. Five votes in favor, two abstentions.

12. Old Business – N/A

13. New Business

- a. ASHRAE website includes agendas, but approved minutes have not been updated. Simon to upload.
- b. Philip Agee notes that, regarding residential moisture control, the Board has approved a new Guideline 46P “Design and Construction Practices for Controlling Humidity in Residential Buildings.” Philip is looking for volunteers and contributors for this document. A thread regarding this will be posted to Basecamp.
- c. Ed Light expresses concern that an RTAR may be inappropriate for some of the proposed TC 1.12 topics, such as construction moisture/moisture comfort. Recommends simplifying the title and pursuing document development in lieu of further research as information is already available.
- d. Ed recommends further guidance on implementation of the Std. 62.1 dewpoint limit in Std. 90.1 to clarify that the system’s ability to control dewpoint is more essential than maintaining the limit at all times
- e. Ed suggests alternative title for Chapter 64 Handbook revisions, agree upon “mitigation” in title.
- f. Andre notes that Buildings XV Conference will be held in December 2022, and a final agenda will be posted by mid-July on the ASHRAE website.
- g. Diana motions to revote on the publication *Guide for Resilient Energy Systems Design in Hot and Humid Climate* now that Ed Light is available. Wahid seconds. Six votes in favor, two abstentions. Quorum, motion passes.

14. Adjourn

- a. Wahid motions to adjourn, Diana seconds.

Next meeting: 2023 ASHRAE Winter Conference – Atlanta, GA, February 4-8, 2023

Minutes approved in ASHRAE 2023 Winter Conference meeting on February 4, 2023; prepared by E. Bonfanti.