

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND
AIR-CONDITIONING ENGINEERS, INC.
1791 Tullie Circle, NE, Atlanta, GA
404-636-8400**

**Technical Committee 4.4
Building Materials and Building Envelope Performance**

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.

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TC/TG/TRG MINUTES COVER SHEET

(Minutes of all TC/TG/TRG Meetings are to be distributed to the individuals listed below within 60 days following the meeting.)

TC/TG/SSPC: TC 4.4

TC Title: Building Materials and Building Envelope Performance

Date of Meeting: Monday, January 14, 2019. Meeting convened at 2:15 pm.

Location: Room B301, Georgia World Convention Center, Atlanta, GA

DISTRIBUTION

All members of TC 4.4 plus the following:

TAC Chair

Committee Liaisons

ADDITIONAL DISTRIBUTION

Manager of Standards

Manager of Research and Technical Services

ASHRAE TC 4.4 MINUTES

Building Materials and Building Envelope Performance

1. Introductions/Roll Call/Attendance

The Chair, Rick Peters, called the meeting to order at 2:15pm, which was followed by roll call and introductions.

A total of 29 committee members, corresponding members, and guests were present. Attendance is shown below. Quorum has been reached with 14 out of 17 voting members present.

Voting Members and Officers Present:

<u>Name</u>	<u>Affiliation</u>	<u>Role</u>	<u>VM</u>
Richard E Peters	TBS Engineering	Chair	Voting Member
Diana Fisler	Johns Manville	Vice Chair	Voting Member
Peter Adams	Morrison Hershfield		Voting Member
Alejandra Nieto	ROCKWOOL	Webmaster	Voting Member
Achilles Karagiozis	Owens Corning		Voting Member
Andre Desjarlais	ORNL		Voting Member
Paulo Tabares	Colorado School of Mines	Program Chair	Voting Member
Chris Schumacher	RDH		Voting Member
Hua Ge	Concordia University		Voting Member
Florian Antretter	Fraunhofer IBP		VM (Non Quorum)
David Yarborough	R&D Services		Voting Member
Wahid Maref	Ecole de Technologie Superieure		Voting Member
Paul Shipp	USG		Voting Member
Roderick Jackson	NREL		Voting Member

Number of voting members present: 14 (1 non-quorum)

Voting Members and Officers Absent

<u>Name</u>	<u>Affiliation</u>	<u>Role</u>	<u>Notes</u>
Laverne Dagleish	ABAA	Handbook Chair	Voting Member
Stanley D. Gatland, II	Certainteed		Voting Member
Sam Glass	USDA Forest Products		Voting Member

Corresponding/Provisional Members Present

<u>Name</u>	<u>Affiliation</u>
Manfred Kehrler	WJE (Secretary)
Fiona Aldous	WJE
Fitsum Tariku	British Columbia Institute of Technology
Philip Boudreaux	ORNL
Jaya Dorsey	Johns Manville
Andrea Watts	The Dow Chemical Company
Danko Davidovic	Huber Engineered Woods
Leslie Scheppelmann	WJE
Gulliermo Soriano	Escuela Superior Politecnica ESPOL

Doug Kinninger	Fi-Foil Company Inc.
Dave Finley	WJE
Mika Salonvaara	Owens Corning
Sam J. Taylor	Retired
Jonathan Humble	American Iron & Steel Institute
Marcus Bianchi	Owens Corning

Visitors Present

<u>Name</u>	<u>Affiliation</u>
Curtis Fong	Taylor Engineering
Marcin Pazera	PIMA
Charlie Haack	NAIMA
Ellen Thorp	EPDM Roofing
Charlie Curcija	LBNL
Aziz Laouasi	NRC Canada

2. Report From the Chair

Rick Peters reported that there is a proposed plan to reorganize the current Functional Groups - TC's, TG's, MTG's, and MRG's into approximately 30 large groups of 75-125 members each. The stated goals of the reorganization effort are to:

- Decrease the "Silo Effect" (where the FG's are too specific, lacking global perspective)
- Increase collaboration for Programs, Research, and Handbook
- Increase meeting efficiency & increase the effectiveness of members' volunteer time

TAC and the re-organization committee is soliciting feedback on this proposal. Please direct any comments to TAC via our Section 4 Section Head sh4@ashrae.net or to Sarah Maston sarah@greenfootprints.com, the TWG reorganization chair.

3. Approval of last meeting minutes, Houston, June 25 2018

The draft minutes from the June, 2018 meeting in Houston, TX were posted to the ASHRAE Website for review. A motion has been raised by Manfred Kehrer and seconded by Wahid Maref to approve the Houston meeting minutes as is.

VOTE: For 12, Against 0, Abstaining 0; CNV, MOTION CARRIED

4. Program Subcommittee

Seminars

In Atlanta TC 4.4 is sponsoring

- Workshop 8 (Monday 11:00-12:30am): How to Model Thermal Bridging Using Clear Transmittance Method

The subcommittee chair Paulo Tabares proposed to sponsor/co-sponsor the following five programs for the Kansas City Conference:

Sponsor:

Seminar/Workshop: Assembly Offsite construction affecting building envelope commission? Tied to curtain wall systems (quality control)?

Chair: Diana

Achilles/Diana will invite an industry professional that manufactures panels

Speaker: Graham Finch, cross laminated timber and tall wood buildings

Speaker: Peter Adams, Curtain wall systems

Speaker: Sam Glass, Composite wood system

Seminar: Why did the HEAT cross that thermal (Dynamic) bridge?

Chair: Paulo

Speaker: Achilles, walls

Speaker: Florian, WUFI Passive house use of 3D modeling.

Speaker: Hua Ge, impact of dynamic thermal bridging on whole building performance

Speaker: Mehid Ghobadi, 3D Tools.

Seminar: How envelope enables the building recover from electric failure? Facilitates recovery faster?

Chair: Roderick

Speaker: U Toronto (Alejandra to contact), Thermal Autonomy

Speaker: Lisa White (Passive House), relationship between grid and passive house

Speaker: recovering/resilience climate change (NRC) Mehdi to help find speaker

Speaker: Climate change resilience

Co-sponsor: 2.8 (sustainability)

Seminar: How envelope enables the building recover from flood? Facilitates recovery faster?

Chair: Andre

Speaker: Pete Consickly (RIA) restoration industry association

Speaker: Speaker from NRC post-disaster for roofing. Roof

Speaker: Mike Ennis

Co-sponsor

Seminar Commissioning New & Existing Buildings

sponsored by TC 7.9 Building Commissioning

Chaired James Vallort (TC 7.9)

Speaker 1: Tim Zelazny

Speaker 2: Fiona Aldous

Speaker 3: Simon Pallin to get a third speaker from ONRL

A motion was raised to approve the proposed Kansas City program for submission by Wahid Maref, seconded by Chris Schumacher.

VOTE: For 12, Against 0, Abstaining 0; CNV, MOTION CARRIED

Additional opportunities for seminars and/or conference papers were discussed.

5. Research Subcommittee

Abbreviations

MORTS = Manager of Research and Technical Services
PES = Proposal Evaluation Subcommittee
PMS = Project Monitoring Subcommittee
RAC = Research Administration Committee
RFP = Request for Proposals
RL = Research Liaison
RP = Research Project
RTAR = Research Topic Acceptance Request
TRP = Tentative Research Project
URP = Unsolicited Research Proposal
WS = Work Statement

Project Status Updates

1696-RP

Thermal, Moisture and Air Transport Property Values for New Building and Insulating Materials (WS
authors: Alex McGowan, Steve Cornick).

Chris Schumacher presented the progress and interim results to PMS members Achilles Karagiozis and Alex McGowan (attended over phone) and the PMS reported to the chair already.

1759-TRP

Impact of Air-Flow on Thermal Performance of Airspaces behind Cladding (Phase 1 of 2) (WS authors: Jay Crandell, David Yarbrough, Jonathan Humble).

Paolo Tabares took over the PMS chair positions from Jan Kosny and reported that the principal investigator of Ecole Polytechnique Federale de Lausanne (EPFL) - Switzerland presented on the results of the first few tasks on literature review.

1718-WS

Development of a Method to Determine the Moisture Transport Properties of a Roof Shingle System under Real Conditions (WS author: Manfred Kehrler; cosponsored by TC 1.12).

The WS has been conditionally accepted by RAC. Manfred Kehrler and Chris Schumacher will work on addressing the RAC comments.

1730-WS

Mass Flow Rate Correlations for Standard Venting Strategies and Components in Attic Spaces with Sloped Roofs (Authors: Anthony Fontanini, Dave Roodvoets; cosponsored by TCs 4.3 and 4.7).

Antony Fontanini has finished the WS and it will get submitted to RAC together with the ballot results soon.

VOTE: For 13, Against 0, Abstaining 0; CNV, MOTION CARRIED

Draft RTAR

Characterization of Residential Indoor Moisture Generation based on Survey and Laboratory Measurements (Authors: Simon Pallin and Fitsum Tariku, TC 1.12).

The RTAR has been rejected by RAC. The authors will work on a restructured new RTAR which focuses more on the survey part.

Draft RTAR

Development of Material Moisture Tolerance Criteria and Evaluation Methodology for Hygrothermal Analysis of Building Enclosures using ASHRAE 160 (Author: Jay Crandell, SSPC 160).

No Update.

Draft RTAR

Hygrothermal Properties of Aged Construction Materials (Authors: Steve Cornick/Neal Holcroft).

No Update

Draft RTAR

Develop Performance Metric, and a Process for the Measurement, Evaluation and Prediction of Speech Privacy in High Performance Buildings (Author: Kenneth Roy, TC 2.6).

No Update.

Draft RTAR

Moisture Transfer in Building Materials at High Temperatures (Author: Sam Glass).

No Update.

5. Handbook Subcommittee

Rick Peters chairs interim this subcommittee as Laverne Dalglish is not present. Chapter 44 of the Handbook of Applications, chaired by Peter Adams, has been published for public review with no changes. The below listed chapters of the Handbook of Fundamentals need to be updated by 2021.

Chapter 25, Jay Randall.

Chapter 26, Hua Ge, updates are in progress and were discussed

Chapter 27 Charles Cotrell

6. Standards Subcommittee

Updates were presented by the individual Liaisons to the TC as the Standards Subcommittee Chair Theresa Weston was not present.

Std.90.1: (Jonathan Humble): Jonathan mentioned that the standing committee is still working on the thermal bridging. The recent changes will go out for public review.

Std. 90.2: (Theresa Weston Liaison absent): Jonathan Humble mentioned that the SSPC is still working on the thermal bridging comments of the recent public review publication in December 2018.

Std. 160: (Achilles Karagiozis): Achilles reported that the SSPC works on the revised wording for the selection of the moisture reference year; on the methodology for corrosion assessment, chaired by Jonathan Humble; on the methodology freeze-thaw damage assessment, chaired by Chris Schumacher; the revision of the 1% wind driven rain approach; and on the object to include a probabilistic approach to the Standard.

Std. 189.1: Jaya has been appointed as the new Liaison.

7. Old Business

There was no old business.

8. New Business

The TC has been approached by TC 4.7 to co-sponsor RTAR 1857 on “Improved simplified methodology for describing and calculating the heat conduction between buildings and the ground”. Andre Desjarlais and Paul Shipp, agreed to do the work for co-sponsorship. A motion has been raised by Paul Ship seconded by Peter Adams to co-sponsor the RTAR.

VOTE: For 8, Against 0, Abstaining 2; MOTION CARRIED, 3 voting members left already.

At the next meeting, the TC will reserve 1 hour for a discussion about where we are going from here.

Wahid Maref moved a motion to adjourn the meeting at 4:15.

Manfred Kehrer – Secretary, TC 4.4. Next meeting: Kansas City, June 24, 2019