

**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**

**Minutes
Monday, January 25, 2016
Orlando, Florida**

These minutes are unapproved and will be approved at the ASHRAE Annual Meeting in St. Louis MO, June 25th 2016

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 25, 2016. Meeting convened at 2:15 pm.

Location: S331A, Orange County Convention Center, Orlando, Florida

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

Monday, January 25, 2016 – Orlando, Florida

Building Materials and Building Envelope Performance

1. Introductions/Roll Call/Attendance

The Vice Chair, Rick Peters, called the meeting to order at 2:15pm. Roll call and introductions. A total of 28 committee members and guests were present. A quorum was present (14/14 not counting NVM). Attendance is shown below.

Voting Members and Officers Present:

<u>Name</u>	<u>Affiliation</u>	<u>Role</u>
Richard E Peters	TBS Engineering	Vice Chair
Samuel Glass	USDA Forest Products Laboratory	Research Chair
Fiona Aldous	WJE	Secretary
Achilles Karagiozis	Owens Corning	
Diana Fisler	Johns Manville	Std. 189.1 Liaison
Manfred Kehrer	Oak Ridge National Laboratory	
Jan Kosny	Fraunhofer/USA	
Hua Ge	Concordia University	
Alexander McGowan	WSP	
Paulo Cesar Tabares Velasco	Colorado School of Mines	
Paul H Shipp	USG Corporation	
Patrick Noonan	Knauf insulation	
Fitsum Tariku	British Columbia Institute of Technology	

Number of voting members present: 14 (0 non-quorum)

Voting Members and Officers Absent

<u>Name</u>	<u>Affiliation</u>	<u>Role</u>	<u>Notes</u>
Peter J Adams	Morrison Hershfield Ltd	Chair	Voting Member
Sean M O'Brien	Simpson Gumpertz & Heger Inc	Program Chair	Corresponding Member
Theresa A Weston	Dupont	Standards Chair, 90.2	Voting Member
Andreas H Holm	Fraunhofer IBP		VM Non quorum
Carsten Rode	Technical University of Denmark		VM Non quorum
Jonathon Humble	American Iron & Steel Institute	90.1 Liaison	Corresponding Member
Laverne Dalgleish	ABAA	Handbook Chair	Voting Member

Corresponding Members Present

<u>Name</u>	<u>Affiliation</u>
Marcus V Bianchi	Owens Corning
Michael Blanford	HUD
William Rose	University of Illinois
Alejandra Nieto	Roxul
Kelley Vogel	WJE
Roderick Jackson	ORNL

Visitors Present

<u>Name</u>	<u>Affiliation</u>
Brad Gover	NRC-CNRC
Keith Nelson	Intertek
Taylor Sennaugh	MMM
John G..Davis	University of Wisconsin
Charlie Petty	Lamtec
Sam J. Taylor	
Lena Burkett	EE DOE
Tom Marks	Stego Industries
Jay Crandell	ARES Consulting

2. Review of Agenda/Approval of Atlanta June 29, 2015 Minutes

The draft minutes from the June 29, 2015 meeting in Atlanta were posted on the TC Google Site in October 2015 and the ASHRAE Website for review. There were a few minor editorial changes. Paul Shipp moved to approve the Atlanta minutes as amended. Sam Glass seconded.

VOTE: For 11, Against, Abstaining 0, CNV; MOTION CARRIED

3. Report From the Chair/Membership/Roll-on, Roll-off

Report was presented by Vice Chair, Rick Peters

ASHRAE Code of Ethics

(Approved by ASHRAE Board of Directors January 30, 2013)

1.140.001.1 As members of ASHRAE or participants in ASHRAE committees, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

- A. Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.
- B. Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources.
- C. Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.
- D. We shall act with care and competence in all activities, using and developing up-to-date knowledge and skills.
- E. We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.
- F. The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.

- G. Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.
- H. Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.

Rick Peters attended the chairs breakfast on Sunday morning.

Provisional Corresponding Member (PCM) Process - The process for adding new PCMs to TC rosters and notifying all affected parties has now been automated through the ASHRAE website. Potential new TC members now just need to click on the "JOIN A TC" button at the top of the TC page (www.ashrae.org/tcs) on the ASHRAE website to get started.

2015-2016 Hightower Award Winner – Steve Duda Nomination Process and Deadline - Nominations for the 2016-2017 George B. Hightower Technical Achievement Award are due to you Section Head by September 1, 2016

2015-2016 Service to ASHRAE Research Award Recipient – NONE

No nominations were received this year from any TCs for the Service to ASHRAE Research Award. If you believe you have a deserving candidate on your TC, please go to the ASHRAE Research page (www.ashrae.org/research) and review details on this award under the heading *Research Grants and Awards*.

The submission deadline for TC nominations for these awards is September 1st each year.

MTG.IAST – Impact of ASHRAE Standards and Technology on Energy Savings/Performance

Scope: MTG.IAST will generate research proposal(s) and work with the selected consultants/contractors to conduct research, collect and organize the data in a useful and conveniently summarized format for Initiative 1B of the Society Strategic Plan "ASHRAE will research the true impact of its standards and technology" as requested by the BOD.

This MTG will provide information on the global impact of ASHRAE's technology and standards efforts allowing ASHRAE's groups to make adjustments in our efforts as required. The time period of this MTG is expected to be two years to no more than four years.

MTG.ASEC – Avoided Source Energy Consumption Due to Waste Heat Recovery and Heat Pump Technologies

MTG.ISPAQE – Indoor Swimming Pool Air Quality and Evaporation

MTG.OBB - Occupant Behavior in Buildings

If your TC would like to have a voting representative on a particular MTG, please contact the ASHRAE Manager of Research and Technical Services, Mike Vaughn, at MORTS@ashrae.net.

Updated TC Website Template – Initial Feedback, None provided.

Since the Atlanta meeting, the Society's Electronic Communication Committee (ECC), ECC staff, TAC volunteers Gage and Cooper, and a consultant have been working to modernize and streamline the template for TC websites and now most of the TC websites have been moved to this new template. The new template so far includes WIZYWIG editing, automatic rosters, and simplified document uploading. There is no longer a need for HTML editing. If you have any feedback on the new template or suggestions for additional features, please let your Section Head and MORTS know.

The recent conversion to a new TC website platform highlighted a couple areas where a refresher of the ASHRAE rules on website maintenance is warranted. First be aware that ASHRAE Products (i.e., handbook chapters, journal articles, final reports from research projects, etc.) cannot be published on your TC's website. It is very appropriate to post the title and scope of the product and then link the reader to the ASHRAE bookstore or other location on the ASHRAE site where the product may be purchased. Any possible exceptions to this rule must be sent through Steve Comstock for review and approval (scomstock@ashrae.org). The second issue involves timely posting of the draft minutes. Draft minutes (and final, approved minutes from the prior meeting) should be posted to your website (or otherwise distributed to the members) by 60 days after the meeting. Please ensure that your secretary and webmaster are aware of this deadline. To assist your secretary in understanding the procedures for taking and reporting minutes, a video has been developed and posted on the Technical Committees' Training page (<https://www.ashrae.org/standards-research--technology/technical-committees/tc-training-and-presentations>). On the same page, a video has also been posted for use by webmasters to learn about the procedures and schedules for maintain the new websites

New TC E-mail Position Aliases Created for 15-16 Society Year

New position e-mail alias addresses have now been created for each of the remaining mandatory positions of the Technical Committee management team (Secretary, Standards Sub. Chair, Program Sub. Chair, Handbook Sub. Chair, and Webmaster). The 15-16 E-mail Alias list is posted on the ASHRAE website www.ashrae.org/TCs under the heading *Procedures, Forms & Information for TCs/TGs/MTGs and TRG*

CEC & TAC are looking for your feedback on ASHRAE's Technical Program Submission Process

CEC and TAC are soliciting your feedback on ASHRAE's Technical Program submission process, particularly of your program submissions are frequently rejected and you are frustrated with the current process. Please send information on some of your past submissions and any process improvement suggestions that you might have to TAC member Kelley Cramm at TACcoord2@ashrae.net before June 1, 2016.

Women in ASHRAE Continental Breakfast – Monday, 1/25, 7 am to 8:30 am
Orlando Hilton, Florida Ballroom 5-7, Lower Level

The purpose of this event is to encourage women to be active ASHRAE participants at the chapter, region, and/or society level and to provide ideas and information about how to do so. Current ASHRAE members will be on hand to provide insight and to share their experiences.

RAC Prioritizing Research Topics Related to the Residential Sector Starting in the 2015-2016, RAC will be prioritizing for bid accepted research topics that support Goal #3 below from the Research Strategic Plan.

Goal #3: *To reduce significantly the energy consumption for HVAC&R, water heating and lighting in existing homes.*

Option for TC Subcommittee Meetings via Conference Calls and Web Meetings

More and more TCs are taking advantage of a new Society service that allows TCs to hold subcommittee meetings by phone and/or web. Many TCs are finding this to be a more efficient way for them to conduct subcommittee business and it also allows TC members that can't travel to meetings on a regular basis a way to still contribute to the TC. Such a change can also eliminate potential conflicts with the TC's program sessions at Society meetings. Please pass your conference call/web meeting/webinar requests on to the Manager of Research and Technical Services, Mike Vaughn, at mvaughn@ashrae.org or MORTS@ashrae.net

2016-2017 Service to ASHRAE Research Award Nomination Process and Deadline - Nominations for the 2015-2016 Service to ASHRAE Research Award for TC volunteer efforts in research are due to RAC research liaison by September 1, 2016.

Seminar and Forum proposals for St. Louis are due by Monday, February 8th, 2016. Please visit the following site to submit your proposal:

<http://ashraem.confex.com/ashraem/s16/cfp.cgi>

For more information, go to: www.ashrae.org/stlouis.

15-16 Rosters Access & Distribution - Remember, the current 2015-2016 roster for the TC, TG or MTG is in effect until after the June meeting this year – through Thursday, June 30th.

By now, each TC, TG and MTG chair should have received a PDF & MS-Excel file of their new 2015-2016 roster from their Section Head or staff for distribution to the committee. In addition, each member can view all of the rosters of their committees on the ASHRAE Website. Go to www.ashrae.org <http://www.ashrae.org>, click on the "Membership & Conferences" tab in the header, click on "My Membership" text in the left sidebar, and log in (if you have not logged in lately, you might need to set up a new username and password). Click on the "Update Your Bio / View or Edit Tour Profile" link. Now, you should see your current "bio info". Click on "Committees" on the left sidebar; all of the committees you are a member of will appear. Click on the "blue" roster text at the left hand side of a committee to reveal the roster with linked contact information.

Make sure everyone on your committee also knows how to access the roster. The Provisional Corresponding Member (PCM) position is a relatively new position on TC/TG/TRG rosters. This position allows potential new members to be added by staff to the committee roster any time a request for membership is made by an individual. The position has a 2-year term on the committee. Staff will notify the chair and reissue a new roster to the committee chair any time a provisional member is added. The TC/TG/TRG chair has the option each year during the regular roster update process to convert provisional CMs that have been active participants on the committee the past year into regular CMs or voting members or drop them. If no action is taken, they will time expire from the roster and be removed by staff.

Employment Discipline added to ASHRAE BIO Online Input Form - A new input field titled Employment Discipline has been added to the ASHRAE online member (BIO) graphical input form and TAC would like ALL TC members to self-declare their employment discipline prior to the start of the new Society year on July 1, 2015 by going to the Members Only area.

Upcoming Workshops and Conferences: 2016

International Air-Conditioning, Heating, Refrigerating Exposition (AHR Expo) – 2016 - January 25 – 27, 2016 - Orlando, FL – Contact: <http://www.ahrexpo.com/>
CLIMA 2016 - May 22 – 25, 2016 - Aalborg, DENMARK – Contact: <http://www.clima2016.org/welcome.aspx>
IAQVEC 2016 (9th International Conference on Indoor Air Quality Ventilation & Energy Conservation in Buildings) – Oct. 17 – 19, 2016 - Seoul, SOUTH KOREA – Contact: <http://iaqvec2016.org/>

ASTM C16 collecting abstract submissions for: Symposium on Advances in Hygrothermal Performance of Building Envelopes: Materials, Systems and Simulations

Dates: Wednesday October 26 2016 - Thursday October 27 2016

Location: Renaissance Orlando at SeaWorld Orlando, FL

Sponsored by: C16 Thermal Insulation

Deadline for Abstract Submittal: Sunday July 19 2015

http://www.astm.org/SYMPOSIA/filtrexx40.cgi?+P+EVENT_ID+2884+callforpapers.frm#anchor2

TC Volunteers needed to help improve the ASHRAE technical program for meetings, and ideas for future programs.

Provide to your Section Head after each Society meeting a list of qualified volunteers from your TC that are potential Technical Session chairs and reviewers of session papers that are related to TC's scope for use by the Conferences & Expositions Committee (CEC) in developing technical content for future technical programs.

Upcoming meetings:

St. Louis/tracks and dates are given in the Program Subcommittee Report.

The Vice-Chair reminded everyone to update their bios.

MEMBERSHIP: ROLL-ON/ROLL-OFF

The TC has a new management team as July 2nd 2015:

Peter Adams, Chair
Rick Peters, Vice-chair
Fiona Aldous, Secretary

Rolling off as VM's after the June meeting in St. Louis (July 2nd, 2015):

Fiona Aldous
Diana Fisler
Alex McGowan
Paul Shipp

The Chair has added the following VM's after the June meeting in Atlanta (July 2nd, 2015):

Peter J. Adams
Hua Ge
Achilles Karagiozis
Paulo Cesar Tabares Velasco

REPORT FROM LIAISON TO TC 4,4 - DENNIS WESSLER

Electronic meetings are now available. CEC can be contacted to schedule the meeting.

During electronic meeting, Voting Members can vote electronically, however it must be followed up with a written vote.

ASHRAE is working to develop an online roster. It is scheduled to be available in 1 year.

New online app for 90.1 ECB. Offers compliance tool for 90.1. It is a collaborative handbook software, that allows for multiple persons working on the handbook at one time.

New TC websites are available, and easy to use and update. A webinar is available online and roster updates.

4. 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

News

TC 4.4 Google site: <https://sites.google.com/site/ashraetc44/home/research-page>

Section 4 RL is Xudong Yang from Tsinghua University.

RTAR and WS forms (latest revisions dated 6/2015) are available at <https://www.ashrae.org/standards-research--technology/research> (near bottom of page under “Information for TCs/TGs/MTGs Sponsoring Research”).

Information conveyed at Research Subcommittee Chairs’ breakfast:

- “RAC to look into more applied research”
- RAC looking at improving efficiency of research processes; reviewing input from forum in Atlanta.
- Currently no lack of funds for ASHRAE research. Research “reserve funds” at higher-than-usual level.
- RAC reviewing URP process; not accepting URPs until new guidance is issued.
- New WS template has milestone chart and associated costs for each milestone as a percentage of total project cost. Criteria will allow PMS to exercise better control over payment approval.
- RAC received no nominations for honors/awards last cycle. Requesting nominations:
 - a. Service to ASHRAE Research Award – Sep. 30
 - b. Homer Addams Award (graduate student with published paper) – Dec. 15
 - c. New Investigators Award
 - d. Grant-in Aid
- Current meeting: RAC evaluated 9 RTARs (5 accepted with comments, 4 rejected); 4 WSs (1 accepted, 1 conditionally accepted, 1 returned, 1 not acted upon for being incomplete).
- Noted that co-sponsorship by TC implies providing input to the development of the RTAR and WS.

Research topic brainstorming session was held at subcommittee meeting in Atlanta 2015-6-28, led by Theresa Weston. Topics have been compiled.

Action item: Glass will send list of topics to TC members by e-mail first to add any further topics and clarify existing topics. Glass will then revise the list and send to TC members to rate their top 5 topics.

Project Status Updates

1561-RP

Procedures to Adjust Observed Climatic Data for Regional or Mesoscale Climatic Variations

(TC 4.2 lead, TC 4.4 co-sponsor). Steve Cornick is PMS chair. Hartwig Künzel is the TC 4.4 liaison. Contractor is Novus Environmental Inc. Output will be web-based tool to generate mesoscale time series weather data on a 4-km grid based on meteorological models and station data. Temperature and humidity data appear reliable but wind and rain data do not; these are much harder to model. Project completed June 2015; approved by TC 4.2. Cornick reported that TC 4.4 was somehow not officially listed as a cosponsor in ASHRAE's records and therefore did not need to vote to approve final report.

1696-RP

Thermal, Moisture and Air Transport Property Values for New Building and Insulating

Materials (Authors: Alex McGowan, Steve Cornick). PMS includes Alex McGowan (chair), Sam Glass, Achilles Karagiozis, and Theresa Weston. Contract finalized August 2015; project will run three years (Sep. 1, 2015 – Aug. 31, 2018). Contractor is RDH Building Science Consulting. PMS met 2016-1-24. Chris Schumacher presented progress on Task 1 (identify and characterize new materials) and Task 2 (identify changed materials). Properties to be measured include thermal conductivity, specific heat, density, air permeance, water vapor permeance, liquid diffusivity, moisture storage function, saturation moisture content, solar absorptance, and thermal emittance.

Discussion with PMS involved prioritization of properties to be measured for each material, with four levels of priority: 1) critical properties (have a significant impact on building and assembly performance; also exhibit strong and nonlinear dependence); 2) important properties (have a moderate to significant impact on building and assembly performance; often exhibit little dependence or linear/predictable dependence); 3) properties of interest (have low to moderate impact on building and assembly performance; often exhibit little to no dependence, can be measured at a single set point; usually consistent from one material sample to another); and 4) known and/or irrelevant properties (sufficiently consistent and documented so as to eliminate the need for further testing; or anticipated to have no impact on the building or assembly performance in question). PMS discussion addressed test methodology, documentation of any departures from standard methodology, products and formulations available for each material type, method of obtaining material samples, and number of samples for testing. Contractor will seek input from various industry associations (e.g. ARMA, CRRC, ABAA) regarding material formulations. Contractor and PMS to finalize list of materials and methodology first quarter 2016 and proceed to Task 3 (material property testing).

1718-WS

Development of a Method to Determine the Moisture Transport Properties of a Roof Shingle System under Real Conditions (Author: Manfred Kehrer; cosponsored by TC 1.12 and SSPC 160). TC voted to accept RTAR 2014-1-20 after revisions in response to RAC comments. RAC voted to accept with conditions (improve grammar, clarify approach and deliverables, and get co-funding). Draft WS was discussed in Chicago, January 2015. WS was revised and distributed for further comments, discussed in Atlanta, June 2015.

Vote by letter ballot 2015-8-14: 11 for, 0 against, 0 abstentions, 8 non-returns, chair not voting. Submitted to MORTS 2015-8-17. Notification letter from MORTS 2015-11-20: RAC reviewed the subject WS and voted 3-0-0 CNV to return with comments. Main issues and concerns to be addressed:

1. RTAR acceptance letter asked TC to identify potential co-funding. Cover sheet does not list any.
2. Author's institution is the only listed bidder. A list of bidders must be supplied.
3. Work statement should cover ASTM E96 and how it relates to this project.
4. Barely a majority of the TC in favor.
5. Need to provide more guidance on the test method for task 2.

WS on hold until co-funding can be identified. Kehrer will contact ARMA. If co-funding cannot be secured, efforts should be documented in response to RAC comments when WS is resubmitted.

1730-WS

Research to Determine the Pressure Coefficients and Pressure Drop for Standard Venting Strategies and Components in Attic Spaces with Sloped Roofs (Authors: Anthony Fontanini, Dave Roodvoets; cosponsored by TCs 4.3, 4.5, and 4.7). TC voted to accept RTAR by letter ballot 2014-5-14. RAC voted to accept with conditions. First draft of the work statement should be submitted to RAC by 2016-5-15 to remain on RAC's radar (can be extended through RL; otherwise will not be dropped permanently until 2018-7-1). Discussion in research subcommittee meeting 2015-1-25 identified volunteers for task group to provide input to draft WS: Stan Gatland, Fitsum Tariku, Marcus Bianchi, and Peter Adams. Bill Rose mentioned zonal pressure/airflow measurements of attics in weatherization work and will make a report available to the TC. Draft work statement distributed to task group prior to Atlanta meeting and briefly discussed in research subcommittee 2015-6-28. On hold while Fontanini completes PhD dissertation.

1759-RTAR

Impact of Air-Flow on Thermal Performance of Airspaces behind Cladding (Phase 1 of 2)

(Authors: Jay Crandell, David Yarbrough, Jonathan Humble; SSPC 90.1 envelope subcommittee). SSPC 90.1 approached TC 4.4 with request for TC 4.4 to sponsor RTAR and SSPC 90.1 to cosponsor. RL recommended splitting project into two phases. TC voted by letter ballot on RTAR for phase 1, 2015-2-12: 11 for, 0 against, 4 not returning ballot, chair not voting. Submitted to MORTS 2015-2-15. Notification letter 2015-7-29: RAC voted to accept it for further development into a WS. First draft of WS should be submitted to RAC no later than May 15, 2017. Draft WS and response to RAC comments distributed to TC January 2016 and discussed in research subcommittee in Orlando. It was noted that Phase 1 work statement does not include experimental efforts. Jan Kosny suggested that title include "Development of testing methodology for assessing the impact..." Chris Schumacher suggested that the work statement should specify six different claddings or configurations that the method needs to be able to address. Bill Rose suggested that additional literature review was necessary in drafting the work statement to bracket the airflows measured in the field. Task group was formed to look at literature to provide such values; volunteers includes Bill Rose, Fitsum Tariku, Hua Ge, and Sam Glass. Glass will also contact Hartwig Künzel (not present at meeting) for possible input.

Draft RTAR

Evaluating the Accuracy of Whole Building Energy Simulations by Comparison with Field Measurement Data

(Author: Sean O'Brien). Discussed at research subcommittee 2014-1-19. Will be revised and posted on Google site for comments. Also seeking input from TC 4.7. No further action.

Draft RTAR

Hygrothermal Properties of Aged Construction Materials (Author: Steve Cornick). Discussed at research subcommittee 2014-1-19. No further action.

Draft RTAR

Moisture Transfer in Building Materials at High Temperatures (Author: Sam Glass). Discussed at research subcommittee 2014-1-19. No further action.

5. Handbook Subcommittee

Update was presented by Marcus Bianchi on behalf Laverne Dalglish, Handbook Subcommittee Chair

For Handbook issues go to the following website:

<https://www.ashrae.org/resources--publications/ashrae-handbook-central>

The Handbook – Fundamentals is to be revised for 2017. The names of Handbook team are:

Laverne Dalglish Handbook Subcommittee Chair

Handbook – Fundamentals revisers

- **Chapter 25 – Marcus Bianchi**
- **Chapter 26 – Alex McGowan**
- **Chapter 27 – Charles Cottrell**

Handbook – Applications reviser

- **Chapter 44 – Peter J. Adams**

Chapter 25 - Marcus Bianchi reported that draft edits are due by February 5, 2016, and are comprised of editorial changes only.

Chapter 26 - Alex McGowan reported that there will be some moving of editorial edits. On February 26, 2016 draft edits are to be submitted, and April 26, 2016 is deadline.

Chapter 27 - Marcus Bianchi reported that no input has been received. If nothing is received, the Chapter will be published as is.

A letter ballot shall be performed for each of the chapter edits.

The production schedule for the 2017 HOF (attached) can be found on the TC Google site.

<https://sites.google.com/site/ashraetc44/home/handbook-page>

6. Program Subcommittee

Update was presented by Marcus Bianchi. The Program Subcommittee Chair Sean O'Brien was not present, and did not provide an update.

There were no TC 4.4 sponsored programs for the Orlando meeting. Marcus Bianchi reported there was one program accepted, but it did not move ahead. Sean will need to respond to what happened with it.

For St. Louis meeting, Marcus Bianchi plans to submit a Fundamentals of the Building Envelope program, similar to January 2015 meeting. Same session will be proposed, with different speakers.

Achilles Karagiozis suggested that the Program Subcommittee chair may need some assistance, due to not attending the meeting. Paulo Cesar Tabares Velasco volunteered to assist Sean O'Brien.

Achilles Karagiozis proposed a seminar on unvented attics, indicating the Code changes needed to be addressed. Achilles could chair this session in St. Louis. Deadline for submissions in February 8, 2016.

Rick Peters outlined the conference tracks. Track 8 - Achilles to pursue Net Zero track (unvented attics).

Program Focus at St. Louis Annual Conference

- Track 1: Advances in Refrigeration Systems and Alternative Refrigerants Track Chair: Frank Schambach Email: frankschambach@mindspring.com
- Track 2: Research Summit Track Chair: Jeffrey Spitler Email: spitler@okstate.edu
- Track 3: Fundamentals and Application Track Chair: David E. Claridge Email: dclaridge@tamu.edu
- Track 4: HVAC Systems and Equipment Track Chair: Alan Neely Email: alan_neely@pghcorning.com
- Track 5: Smart Building Systems/Remote Monitoring and Diagnostics Track Chair: Samir Traboulsi Email: traboulsi.samir@gmail.com
- Track 6: Indoor Environment: Health, Comfort, Productivity Track Chair: Dennis Alejandro Email:
- Track 7: Professional Skills Beyond Engineering Track Chair: Rachel Romero Email: rachel.romero@nrel.gov
- Track 8: Renewable Energy Systems and Net Zero Buildings Track Chair: Kevin Gallen Email: kevin@gallenengineering.com

2017 Las Vegas conference - Suggestion to present updates to the revised chapters. Deadline for submission is July 8, 2016. Seminars are due August 8, 2016.

CEC's Standing Request for Future Society Meeting Program Track Suggestions

The Conferences and Expositions Committee (CEC) oversees ASHRAE's annual and winter conferences and other specialty conferences and expositions globally. The CEC continually works to improve the conference experience for all attendees. To help keep a "pulse" on the technical issues facing professionals in the HVAC&R marketplace, and to create meetings that reach all of ASHRAE's constituencies, the CEC seeks ideas for tracks for the Long Beach 2017 meeting and annual and winter conferences beyond as well as topics for specialty conferences from TC members.

Please submit your suggestions to ASHRAE Staff member Tony Giometti (Giometti@ashrae.org). You can also add your track suggestion in the "Comment" section of the TC Activity form for the Atlanta meeting.

CEC Always Seeks TC Volunteers willing to Support Content Development and Quality Control for Society Technical Program at Society Meetings

Provide to your Section Head after each Society meeting a list of qualified volunteers from your TC that are potential Technical Session chairs and reviewers of session papers that are related to TC's scope for use by the Conferences & Expositions Committee (CEC) in developing technical content for future technical programs.

UPCOMING WORKSHOPS AND CONFERENCES

2016

- International Air-Conditioning, Heating, Refrigerating Exposition (AHR Expo) – 2016 - January 25 – 27, 2016 - Orlando, FL – Contact: <http://www.ahrexpo.com/>
- CLIMA 2016 - May 22 – 25, 2016 - Aalborg, DENMARK – Contact: <http://www.clima2016.org/welcome.aspx>
- IAQVEC 2016 (9th International Conference on Indoor Air Quality Ventilation & Energy Conservation in Buildings) – Oct. 17 – 19, 2016 - Seoul, SOUTH KOREA – Contact: <http://iaqvec2016.org/>

7. Standards Subcommittee

Updates were presented by Liaisons to the subcommittees on the behalf of the Standards Subcommittee Chair, Theresa Weston.

Std.90.1: (Jonathan Humble Liaison) The envelope Subcommittee is still working on metal building issues. A separate work group is looking into the definition and uses of air barriers. A definition for a damp building is being requested by ASHRAE. Rick Peters noted this was difficult to define, and proposed to provide descriptions.

Std. 90.2: (Theresa Weston Liaison) ASHRAE/ANSI Standard 160 is focusing on updating several topics. First up is the addition revision of section on mold and establishing a failure criterion based on VTT's mold index model. Will account for time and difference in sensitivity of material surfaces to mold. A Public Review version is planned for the spring of 2016 before the St. Louis meeting.

Std. 160: (Stan Gatland Liaison) No update

Std. 169: (Steve Cornick Liaison). No update

Std. 189.1: (Diane Fidler Liaison) Std. 189.1 is harmonizing with IGCC. A steering committee has been developed to guide the process. Noted IGCC is 5% improvement on 90.1, and 189.1 is 10% improvement on 90.1. Proposal is to bring 189.1 down to 5% above 90.1.

GPC34P "Energy Guideline for Historical Buildings and Structures": Bill Rose reported that the committee would be meeting informally on and will have a PR version out late summer early fall.

MTG.DB "Building Dampness": Cornick reported that the MTG has come up with a draft of a hierarchy of symptoms of increasing concern and to what extent they can be backed by peer reviewed literature.

8. Old Business

Nothing to report.

9. New Business

Frequently Asked Questions (FAQ)

TC is unable to place ASHRAE documents onto a website. A link can be provided, or quote the document, but cannot provide an excerpt. A special permission is needed to post ASHRAE documents. If it is not an ASHRAE document, then it cannot be listed as a resource. This does not apply to internal Google sites.

ASHRAE wanting to move away from the Google sites. Google claims ownership of documents on Google sites.

Respond to ideas for FAQs to TC Chair. Between Peter and Rick, the questions will be edited. Others may be called upon to provide input.

Paulo Cesar Tabares Velasco suggested the Building Envelope Fundamentals program described by Marcus Bianchi should be considered for the ASHRAE student program.

Alex McGowan encouraged new attendees to sign up as corresponding members.

10. Adjournment

Alex McGowan moved to adjourn the meeting at 15:30; Diana Fisler seconded.

Steve Cornick – Secretary, TC 4.4

Next meeting St Louis MO, June 27th, 2016

ASHRAE Technical Committee 4.4
Building Materials and Building Envelope Performance

Main Committee Agenda

Date: Monday, January 25, 2016

Time: 2:15 pm – 4:15 pm

Location: S331A, Third Floor
Orange County Convention Center
Orlando, Georgia

- | | | |
|-----|---|------|
| 1. | Introductions/Roll call/Attendance – Rick Peters [rp@tbs-engineering.com] | 2:15 |
| 2. | Agenda/Approval of minutes – Fiona Aldous [faldous@wje.com] | 2:20 |
| 3. | Report from the Chair. Membership/Roll-on roll-off – Rick Peters [rp@tbs-engineering.com] | 2:25 |
| 4. | Research Subcommittee – Sam Glass [svglass@fs.fed.us] | 2:45 |
| 5. | Handbook Subcommittee - Laverne Dalglish
[LDalglish@buildingprofessionals.com] | 2:50 |
| 6. | Program Subcommittee – Rick Peters [rp@tbs-engineering.com] | 3:00 |
| 7. | Standards Subcommittee – Rick Peters [rp@tbs-engineering.com] | 3:10 |
| 8. | Old business | 3:25 |
| 9. | New business
FAQ's | 3:30 |
| 10. | Adjournment | 4:15 |

(End)

2017 Handbook Production Schedule

2017 Handbook Revision Schedule

