

Minutes
ACI/TMS Committee 122
Energy Efficiency of Concrete and Masonry Systems

Monday, March 30, 2020

1:00 PM - 3:30 PM

Virtual Meeting

(in place of Chicago Convention personal meeting)

1. Call to Order

- 1.1. The meeting was called to order at 1:00.
- 1.2. Revisions to agenda. The chairman noted none.
- 1.3. A quorum was established. The list of attendees is attached as an addendum.

2. Approval of the Minutes of Previous Meetings

- 2.1. The minutes from the Cincinnati meeting on October 21, 2019 were unanimously approved. Motion by Mark McGinley, second by Emily Lorenz.
- 2.2. The minutes from the Virtual Meeting on March 6, 2020 were approved with the following corrections: Add Scott Campbell to list of attendees; change affiliations of Emily Lorenz and Tina Subasic to Consultant. Motion by Jeff Speck, second by Mark McGinley.

3. Membership review

- 3.1. The Chair noted the roster changes made since the Fall Convention, based on the membership survey, balance requirements and Staff review. A copy of the roster is attached.
- 3.2. Recruiting efforts – see discussion under item 7, Old Business.

4. Balloting Process

- 4.1. There were questions about the balloting process for a joint committee. The following clarification was given: ACI is the primary organization, so balloting follows ACI rules and procedures. When a document has completed the balloting process and is ready for TAC review, ACI TAC will engage TMS TAC to get their comments and one combined set of TAC comments will be given to the Committee for resolution. Kim Kurtis, our TAC contact, forwarded to the chairman TAC's review schedule and noted that documents need to be submitted to TAC by the following deadlines:
 - a. June 11, 2020 for their Summer 2020 meeting
 - b. September 18, 2020 for their Fall 2020 convention in Raleigh
 - c. February 19, 2021 for the Spring 2021 convention in Baltimore

5. Committee Document - Review & Progress Reports Documents being Developed

5.1. ACI-TMS 122.Y: Standard for Mitigation of Thermal Bridges for Buildings having Concrete and Masonry Walls, or Masonry Veneer.

- (1) There is a letter ballot currently underway for the March 9 draft of the document. The closing date for the ballot is April 23, 2020. Members were urged to do a thorough review of the document (both Code and Commentary) and vote on the letter ballot and provide specific comments on the comment form. Member comments discussed today on the balloted document included:
- (a) Tina Subasic - is "Commentary" part of the standard that we should be reviewing, or just provided for clarification to the Committee? Martha clarified that there is both Code and Commentary in the standard, and both need to be reviewed and voted on with comments. Tina said most of her comments are editorial, and she will send them to Martha.
 - (b) Tina Subasic – Section 5.4 – Other thermal bridges – It's not clear what this section means. Martha pointed out that Chapter 5 is the Prescriptive Path. This section mirrors ASHRAE's "Other" category. In 5.4.1 the U value or C value is the value used for compliance. It is an adjusted, or modified value, so one of these descriptors needs to be added to the language.
 - (c) Mark McGinley – Three substantive comments: In 4.2 g, is he interpreting this correctly to say anything less than 3 sq. in. is not a thermal bridge? Martha said, Yes, this is what ASHRAE has as a limit. In 5.3, how do we apply this limit to a shelf angle? Martha: 5.3 only applies to cold climates; you must allow full depth of insulation except at structural connections. 5.4.3 is not clear. Martha: This will be moved to the first (charging) paragraph of 5.4.
 - (d) Mark McGinley - In Section R7, line 500, Mark suggests not referencing ComCheck. Martha will review and address this.
 - (e) Mark McGinley – Commented that the thermal bridge provisions are liberal, but that's okay. Martha provided her rationale and confirmed that the draft is intended to be simpler and more liberal than existing ASHRAE 90.1 language, because it is specific to concrete and masonry construction.
 - (f) Martha VanGeem – Announced that ASHRAE 90.1 Addendum AV is out for public comment, and comments are due May 4.
 - (g) Nick Lang – Chapter 2, Line 131 – Do we need to quantify the conductivity needed to comprise a thermal bridge? Martha stated that the definition given in the draft is straight from ASHRAE.
 - (h) Nick Lang – Line 481 – Does this statement mean you can omit these components from a whole building analysis? Martha answered Yes. The whole building analysis is one dimensional. So, if the components are done according to Chapter 5, you do not need to include them in a whole building model. It has always been done this way.
 - (i) Nick Lang – Line 302 – Should we include an example diagram to illustrate the intent? This question generated considerable discussion. The Addendum AV mentioned earlier includes ASHRAE's illustrations of its provisions. These could be

modified to illustrate the draft's provisions. There was agreement that our sketches and diagrams should be kept very simple. There was a question about whether having illustrations that differ from ASHRAE's might increase opposition to the new standard. Martha didn't think so; people who actually read 90.1 will like our solutions better, because they will work. The Chair will check with staff to find out format requirements for publication. Nick Zhou offered to help create the drawings. Martha suggested marking up the ASHRAE sketches using the draft provisions and reviewing to make sure the intent is clear.

- (j) Marta VanGeem – Has reviewed all the Code provisions and will review the Commentary completely. She asked everyone to review the ballot and submit their comments.

5.2. ACI/TMS 122R-14: Guide to Thermal Properties of Concrete and Masonry Systems / ACI-TMS 122.X: Standard Thermal Properties of Concrete and Masonry for Use in Determining Energy Code Compliance

- (1) Jason Thompson asked for clarification of the “big picture” regarding the priorities for the committee's other documents. It was previously decided that the current ACI/TMS 122R-14 Guide needs to be updated, splitting the current guide into two parts, a mandatory code section and a commentary section. The mandatory portion will include new language on minimum insulation levels to achieve code compliance. The committee will develop and add values for concrete, CMU, clay brick and other masonry materials, units and assemblies. The commentary section will include most of the data tables, charts, graphs, drawings and examples found in the currently published 122R-14 Guide. Martha has already done a draft. Once the 122Y document is ready for TAC review, the conversion of the Guide to the 122X Code Requirements can be moved forward. ACI requires that guides or reports be revised, reapproved or withdrawn within eight (8) years of publication.

5.3. ACI-TMS 122.Z: Methods of Design of Passive Solar Buildings

- (1) The Passive Solar document will be the last priority. Martha Said ASHRAE doesn't understand passive solar, so we definitely need a reference for ASHRAE to point to for exceptions to its insulation requirements.

6. Convention Session - Update & Planning

- 6.1.** The committee once again noted its desire to have a convention session, preferably a Full session to allow at least 30 minutes per speaker. Just prior to this meeting, on March 24, ACI staff noted that the ACI session-request portal had malfunctioned between January 22 and March 24, 2020. The Chair will check on our prior session request, made during the Spring 2019 convention week, to see if it can be refreshed and resubmitted with the goal of scheduling a session sooner than later. This means it will likely be a mini session as these require less advance planning and request deadlines.
- 6.2.** The Chair will check the availability of the speakers and topics previously identified including:
 - (1) Bob Sullivan, cfiFOAM, Inc. will discuss a practitioner's perspective on success stories created by insulating stronger Next Generation CMU.

- (2) Prof. Mark McGinley, U. of Louisville will discuss recent whole building analysis studies comparing the performance differences between lightweight and normal weight CMU wall systems.
- (3) Chip Clark / the BIA Research Center will summarize recent research into clay brick veneer wall system energy use.
- (4) and potentially, depending on its status, Martha Van Geem (or others) will report on the new 122.Y *'Thermal Bridging'* standard and its industry importance. Martha suggested someone else will probably be needed, as she will likely have a calendar conflict. The Committee Chair accepted the suggestion that he could replace Martha for this presentation.

Nick Zhou volunteered to provide a presentation if needed.

7. Old Business

- 7.1. Membership drive – The Chair will look for opportunities to make educational presentations on the 122 Code activities and use them as recruiting tools for new members. Phil Samblanet suggested the TMS meeting in Denver this Fall or next Spring. It was also suggested that the Canadian Masonry Symposium in Montreal in May 2021 would also be an opportunity.

8. New Business

- 8.1. Martha VanGeem will send out guidance for commenting on the ASHRAE Addendum AV mentioned earlier.

9. Next Meeting

- 9.1. ACI Fall Convention – Monday, October 26, 2020, Raleigh, NC.

10. Adjourn

- 10.1. Meeting adjourned at 3:00 pm.

Addendum

Attendees – Virtual Meeting ACI Cmte. 122

March 30, 2020

Kevin Cavanaugh

Jeff Speck

Jason Thompson

Emily Lorenz

Steve Szoke

Mark McGinley

Phil Samblanet

Nick Lang

Scott Campbell

Robert Sculthorpe

Steve Rowe

Michael Robinson

Nick Zhou

Rajiv Pathak

Kim Kurtis

Martha VanGeem

Christine Subasic

Fariborz Tehrani

Bennett Banting

**Chat Log C:\Users\KCava\OneDrive\Documents\ChatLog 122
2020_03_30 15_14.rtf**

Kimberly Kurtis (to Everyone): 1:06 PM: Hi, Kim Kurtis, TAC contact joining

Phil (to Everyone): 1:07 PM: Yes Phil is Phil Samblanet. Sorry about that...

ACI Online Meeting13 (to Everyone): 1:09 PM: Chat Window HELLO

Kimberly Kurtis (to Everyone): 1:29 PM: Kevin, I just emailed you the deadlines.

Kimberly Kurtis (to Everyone): 1:33 PM: They are: April 16, 2020 - for review at 2020 Summer Meeting
July 24, 2020 - for review at 2020 Fall Convention

ACI Online Meeting13 (to Everyone): 1:34 PM: thank you...

ACI Online Meeting13 (to Everyone): 1:35 PM: should I be recording this meeting?

Kimberly Kurtis (to Everyone): 1:39 PM: You need everyone's approval to record the meeting.

Kimberly Kurtis (to Everyone): 1:40 PM: You should have everyone type in their name here in the comments, so you have a record of who attended. (I was a few minutes late due to a conflict, or I would have asked at the time - I'm sorry you don't have ACI staff here)

Kimberly Kurtis (to Everyone): 1:48 PM: Ok, the meeting seems to be going well. I'm going to jump off. Please let me know if you have any other questions - you can reach me on email.

christine subasic (to Everyone): 1:52 PM: Christine Subasic, consultant

McGinley,William Mark (to Everyone): 1:52 PM: Mark McGinley was here

Nicholas Lang (to Everyone): 1:52 PM: Nick Lang

Bennett Banting (to Everyone): 1:52 PM: Bennett Banting

Phil (to Everyone): 1:52 PM: Phillip Samblanet

Robert Sculthorpe (to Everyone): 1:52 PM: Robert Sculthorpe
Jason Thompson (to Everyone): 1:52 PM: Jason Thompson
Steven Rowe (to Everyone): 1:52 PM: Steve Rowe
Rajiv Pathak (to Everyone): 1:52 PM: Rajiv Pathak
ACI Online Meeting13 (to Everyone): 1:52 PM: kevin cavanaugh
Dr. Fariborz Tehrani (to Everyone): 1:52 PM: Fariborz Tehrani
Stephen Szoke (to Everyone): 1:52 PM: Steve Szoke present
Jeffrey Speck (to Everyone): 1:52 PM: Jeff Speck
Michael Robinson (to Everyone): 1:52 PM: Michael Robinson
Martha VanGeem (to Everyone): 1:52 PM: Martha VanGeem
Emily Lorenz (to Everyone): 1:53 PM: Emily Lorenz
Hongyu Zhou (to Everyone): 1:53 PM: Hongyu Zhou
Martha VanGeem (to Everyone): 1:53 PM: No need to record
Robert Sculthorpe (to Everyone): 1:53 PM: OK with recording
Scott Campbell (to Everyone): 1:53 PM: Scott Campbell
ACI Online Meeting13 (to Everyone): 1:54 PM: sorry... by RECORD I meant document attendees. Not make an audio recording
McGinley,William Mark (to Everyone): 1:59 PM: Good by . Have to go to another meeting. Sorry.
Hongyu Zhou (to Everyone): 2:17 PM: Sorry have to leave the meeting to teach. I can also help with creating some of these drawing if needed. If I can get a clear idea about what need to be drawn up
Dr. Fariborz Tehrani (to Everyone): 2:48 PM: Thank you!