

**January 21, 2008**  
**Committee Meeting Minutes**  
**TC4.1 Load Calculations Data and Procedures**  
**New York, NY**

1. Meeting called to order at 2:15 p.m. by Gary Wingfield.
2. Roll call: 6 present out of 9 voting members. (Curtis arrived during meeting).

**Previous Meeting Minutes (Wingfield)**

3. Meeting minutes were reviewed.
4. Legarreta recommended corrections to Meeting Minutes Footer for Location and date. Wingfield accepted recommendation.  
Motion: [Motion by: Doeffinger- Seconded by Friedman] Previous meeting minutes approved.6-0-0-CV].

**Professional Development (Friberg)**

5. Friberg reported that Jeff Spittler is in the process of finishing the self learning HVAC design Handbook, and some reviewers may need to be furnished. Chairman Wingfield agreed to provide reviewers as needed.
6. Friberg questioned committee if the short course on Heat and cooling load calculations shall be presented at the ASHRAE meetings. Last time it was presented by Curt Pederson was in 2006 with an attendance of 51.
7. Motion [Friedmann Seconded Ferdelman] Continue to have short course at the winter meetings. Approved 5-0-1-CV. (Curtis abstained).
8. Hittle recommended issuing a Memorandum in the ASHRAE Journal to recognize the effort of the committee members since most software available in the market follows the RTS and Heat Balance methodology for load calculations. Rock stated that such statement was not accurate since Trace Software does not list Heat Balance or RTS as their default software; Bruning was not in favor of making such announcement in the Journal. Chair Wingfield stated that it was a good idea for promotion, but it was not a good idea to force software vendors when they have an option.  
Motion to postpone discussion to next meeting [Motion by Wingfield – Seconded by Ferdelman] Discussion postponed to next meeting. 4-1-1-CV.

**Program Liaison (Ferdelman)**

9. Ferdelman reported that programs materials must be uploaded 10 days before seminar day or there would be a penalty. Penalty could apply even if you are a co-sponsoring committee.
10. Chairman Sun reported that Program topics matching the theme will be 40% of slots. Handbook themes will also have a portion of the slots

**Handbook Liaison (Hittle)**

11. Hittle recommended reporting that there are no issues.
12. Reese questioned what has Trace done? Chairman Wingfield explained that 2005 HB Chapter re-wrote RTS methodology and Heat Balance; the committee recognized that it would take some time to implement the two new methodologies, and that the RTS and Heat Balance methods are offered as an option by software vendors instead of recommending the use the two methods. Such changes took 20 years of arguments and discussions. Chairman Wingfield stated that a discussion that went on for 20 years will not be opened again.

#### **Research Sub-committee (Doeffinger)**

13. TC has been recognized for the efforts in research; 23 million per year are used in Research.
14. Splitter is the Research Strategic Planner for the Society.
15. Research Project 1311-RP, *Improving Load Calculations for Fenestrations with shading devices*. This research is processing as was reported at the PMS meeting, the research team requested a no cost time extension until January 31; Hittle motion to grant another no cost extension to September 30, 2008.  
Motion: [Motion by Hittle – Seconded by Spittler] Grant the Research team for 1311-RP a 6 month, no cost extension. 7-0-0-CV.
16. Research Project 1326-RP, *Application Manual for Non-residential Load*. Splitter will submit draft for PMS to review; will complete in spring.
17. Research Project 1482-RP, *Update to measurements of office equipment Heat Gain Data*. Chris Wilkins is PDFD chair; Recommendation to be discussed in Executive Committee Meeting.
18. Research Project 1362-RP, *Revised Heat Gain and Capture and Containment Exhaust Rates from typical commercial cooking appliances*, Co-Sponsor with 5.10. Legarreta reported that work is progressing. Devices will be tested by end of February, the research team expects to have a final report by the end of may; TC 5.10 is expecting to have a paper on Heat gain by the end of September.
19. Research Project 1363-RP/1453-RP. These are two research projects that relate to weather data being executed by TC 4.2. Chip Barnaby reported that 1363-RP is a methodology to develop weather data, 1453-RP is the implementation of this to generate updated weather data. There will be a specific dew point profile. Clearness factors are being addressed. 1453 work will be done by end of the summer meeting.
20. Project 1416-RP *Development of Internal Surface Convection Correlations for Energy and Load Calculation Methods*, co-sponsor with TC 4.7. This project was reported to have been accepted. A PES/PMS will be assembled by TC 4.7. As an official co-sponsor, TC 4.1 will have a member on the PES/PMS. Our representative will be Steve Bruning.
21. 1482-RP *Update to Measurements of Office Equipment Heat Gain Data*. The work statement was approved (conditional) and will be in the next batch of projects bid once updated to reflect comments. A PES/PMS was nominated, Chris Wilkins (Chair), Curt Pedersen, Larry Sun, Bob Doeffinger.

22. Possible future topics for research were discussed. These included loads for extraordinary buildings such as radiant cooling, UFAD, double façade, and non-mixed air conditions.
23. Members of TC5.3 initiated a discussion on underfloor air distribution; a work statement is in the process; Chairman Wingfield will meet with them and possibly co-sponsor. No RTARS have been prepared; suggestions are welcomed.

#### **Research Liaison (Henderson)**

24. Did not attend.

#### **Program Subcommittee (Friedman)**

25. Chair Wingfield advised of Sub-Committee meeting on Sunday afternoon and opened invitation to other attendees at the meeting to participate in our Sub-Committee meetings.
  26. Friedman reported that programs submitted for New York were not accepted due to space limitations. Chairman Wingfield mentioned that the same speaker was giving the same presentation twice (Current trends in BIM).
  27. Ferdelman questioned PIE PDH's. In order for a presentation to have valid PIE PDH's, it has to be submitted ahead of time. Ferdelman will get dates to Friedman.
  28. Ideas for upcoming programs were nominated:
    - a. (Priority #1) Seminar in Salt Lake to address recent research that has resulted in Handbook Updates. Speakers will be:
      - i. Dan Fisher (Lighting Heat Gain)
      - ii. Jeff Spitler (RTS Method Enhancements)
      - iii. Rich Swierczyna from TC 5.10 (Kitchen Equipment)
    - b. (Priority #2) Forum in Salt Lake Moderated by Gary Wingfield. The Forum topic will be on our RTAR topic about whether we need methods to deal with non-well mixed spaces, and called, "Are load methods keeping up with zero energy strategies?"
    - c. (Priority #3) Seminar with TC 4.5 "Predicting Fenestration Loads Using TMY Data"
      - i. Steven Bruning (Reality vs. Theory - Fenestration Loads for the HVAC Engineer)
      - ii. Y. Joe Huang (Predicting Fenestration Loads Using TMY Data)
      - iii. Charles Barnaby (Advanced Software Methodology to Predict the Loads Through Windows)
- Motion: [Motion by Friedman – Seconded by Doeffinger] Establish items (a) and (b) above as the #1 and #2 program priorities for TC 4.1. 6-0-0-CV
- d. Topic on Double Skin Facades (Branislav Todorovic will initiate)

- e. Transaction Session (previously known as Symposium) for Chicago which would have a formal paper presentation from research recently or nearly completed: 5
  - i. 1311-RP (Improving Load Calculations for Fenestrations with Shading Devices)
  - ii. 1326-RP (Load Application Manual)
  - iii. 1362-RP (Revised Heat Gain and Capture and Containment Exhaust Rates from Typical Commercial Cooking Appliances)

Motion: [Motion by Friedman – Seconded by Doeffinger] Approve Transaction sessions. 6-0-0-CV

### **Section Head Report (LeViseur)**

- 29. High Tower Award – for Service to a TC; not based on the past year, but lifetime was awarded to a TC9.1 member; TC 4.1 has excellent candidate; September 1<sup>st</sup> of this year, nomination are due. Rosters are available at website on TC’s listings and Bio is available for review and recommendation.
- 30. Discussion about video tapping presentation; if not videotaped, registration will not be paid for the presenter. IF presenter does not sign the release to video-tape, there is no presentation. Curtis Objects to the recording as well as Hittle.
- 31. Splitter will join the Research Strategic Planning meeting which will take place on Tuesday from 8-12.
- 32. Chicago’s Meeting topic will be on “Sustainable Design; Louisville’s meeting topic will be “Optimal Air Quality”.

### **Handbook Subcommittee (Bruning)**

- 33. Jan 2008 is the date for the first draft of revisions to the chapters.
- 34. Bruning noted that research efforts to handbook products this round will be almost if not 1 million dollars. Research data transferred to usable information as an on-going effort. Data cannot be published until a paper has been submitted, peer reviewed and presented at the meetings; Bruning questioned LeViseur (Suzanne) if there is a way to accelerate. LeViseur stated that is the path to follow to publish any data.
- 35. Bruning stated that a second draft will be ready by the Salt Lake meeting. PDF to be distributed to members for review.
- 36. Friedman requested document in word; Bruning stated that PDF is easier to incorporate changes and to keep track of recommendations.
- 37. Bruning stated that more graphics are required and being requested.  
Motion: [By Hittle – Seconded by Spittler] Accept HB report 6-0-0-CV.

### **Standards**

- 38. Glenn Friedman developed a Title, Purpose, and Scope for a Standard for the Method of Testing and Reporting Space Heat Gain from Equipment. Sun submitted to our Section Head (Suzanne LeViseur) No word on it.

**Old Business**

39. There was no old business reported.

**New Business**

40. Wilkins reported there is a BIM steering committee; list of documents and an initiative to start a Smart Document. SPC 183 Load Calculation Standard. Wingfiled stated that there is a big effort by Code officials to build a Code Checking Model with promises of 15 minute approvals.
41. Barnaby stated that there is a key initiative to form a consolidated definitions of terms, and that there are 53 definitions of U factors as an example. The purpose is to have global definitions for interoperability.
42. Visitors Comments: Jim Reese – Design recommendations for UFAD. Wingfiled stated that is a two year process, and that we are about one year into the process; There are different scenarios to consider Plenum distribution, partially ducted, fully ducted; temperatures will vary, and values change; there are too many variables and issues; There is no way to scientifically substantiate existing data.
43. Bruning stated that 2009 HB will provide as much supportable information that can affect load calculations; more research is needed.

General Meeting Adjourned at 4:06 P.M.

Attachments:

(Additional email attachments when sent)

TC 4.1 Current Roster