

June 25, 2007
Committee Meeting Minutes
TC4.1 Load Calculations Data and Procedures
Long Beach, CA

1. Meeting called to order at 2:18 by Larry Sun.
2. Roll call: 11 present out of 13 voting members. (International Member Todorovic arrived during the meeting and left early, not participating in all actions).

Previous Meeting Minutes (Sun)

3. Meeting minutes were reviewed.

Motion: [Motion by Hopper - Seconded by Hittle] Previous meeting minutes approved. 11-0-0-CV].

Program Liaison (Ferdelman)

4. 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 cosponsoring committee.
5. 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)

6. Hittle reported that there are no issues. Brian Rock will be the new Handbook Head.
7. Barnaby noted that GPC-20 tried to refer to definitions but that the Handbook lacked good definition. An update to TC 1.6 Terminology Chapter is needed.

Section Head Report (LeViseur)

8. Refer to item 15 under program.

Research Liaison (Henderson)

9. Did not attend.

(Note: Research Chair Wilkins had met at the Research Chair Breakfast Meeting. There were no action items for our committee. Hakim Elmahdy will be our new Liaison for Research.)

Research Subcommittee (Wilkins)

10. Research Project 1282-RP, *Lighting Heat Gain Distribution in Buildings*. This research is completed and the final papers have been completed. The final papers, *Lighting Heat Gain Parameters: Experimental Method*, and *Lighting Heat Gain Parameters: Experimental Results* have been published in the HVAC&R Research Journal.
11. Research Project 1311-RP, *Improving Load Calculations for Fenestrations with Shading Devices*. This research is progressing as was reported at the PMS research review meeting. The draft final report is expected by the NY Meeting. The issues being dealt with are how to boil down the data to allow concise and practical presentation in the Handbook Chapter.
12. Research Project 1326-RP, *Application Manual for Non-Residential Load Calculations*. Research is progressing as was reported at the PMS Research Review Meeting. Steve Bruning discussed treatment of the RTS limitation where radiant heat loss back out of a large, clear glass, fenestration area is not accounted for. An adjustment for this will be presented as an appendix along with documentation on the frequency of occurrence.

The PMS and the Research Team PI discussed a no cost extension of 6 months. This will allow for a draft final deliverable (the manual) to be completed by November 30, 2007. This timing will coordinate well with publication of the Handbook Chapter.

Motion: [Motion by Bruning – Seconded by Sun] Grant the Research Team for 1326-RP a 6 month, no cost extension. 10-0-0-CV

13. Research Project 1343-RP *Method of Testing and Data Collection for Energy Characteristics of Healthcare Medical Equipment*, Co-Sponsor with TC 9.6. Bob Doeffinger reported that the selected contractor is a consulting engineer. Much of the equipment that will be tested is bench top equipment. Larger equipment cannot be tested.
14. Research Project 1362-RP *Revised Heat Gain and Capture and Containment Exhaust Rates from Typical Commercial Cooking Appliances*, Co Sponsor with 5.10. Rolando Legarreta reported that the work is progressing. About 80-90 devices have been completed. A total of 101 devices will be tested. A 6 month no cost extension was granted to the research team. Rolando will give a presentation to the committee (as a proxy for the research team) in NY based on the findings of the research team.
15. 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.

Dew point was previously assumed to remain constant unless over 100%. This is not proving to be an accurate approach. A more accurate approach for dew point has not been worked out.

The current clear sky model predicts too much diffuse solar in most cases. They are exploring completely new ways to tabulate clear sky solar for the handbook.

They are coming down to the wire to get this work done for the 2009 Handbook of Fundamentals. At a SPC-169 meeting, Steve Bruning suggested going back to the 1999, single line per stations version of the published data.

Motion: [Motion by Wingfield – Seconded by Friedman] Recommend to Handbook Committee that loads related data, for example weather data, be on the base CD in spreadsheet or other readable format. 10-0-0-CV

16. 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.

17. 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.

[Note: Following the meeting, the work statement was resubmitted by Chris Wilkins and is now accepted (all conditional comments met)].

18. 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.

Section Head Report (LeViseur)

19. A certificate of appreciation was presented to outgoing Chair Larry Sun.

Program Subcommittee (Friedman)

20. A reminder was given that Larry Sun, Gary Wingfield, and Chip Barnaby were giving a seminar on Tuesday.

21. Ideas for upcoming programs were nominated:

- a. (Priority #1) Seminar in NY 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 Swierckyna from TC 5.10 (Kitchen Equipment)
- b. (Priority #2) Forum in NY 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 Hittle] Establish items (a) and (b) above as the #1 and #2 program priorities for TC 4.1. 10-0-0-CV

22. Future program topics for Salt Lake City were discussed:

- a. Topic on Double Skin Facades (Branislav Todorovic will initiate)
- b. 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)

Handbook Subcommittee (Bruning)

23. Jan 2008 is the date for the first draft of revisions to the chapters.

24. Bruning noted that it would be good to include more health care equipment data and hoped that there could be some information from 1343-RP by then. Bob Doeffinger is our liaison and will monitor the progress of the work and report to Handbook Chairman Bruning.

Standards

25. Glenn Friedman developed a Title, Purpose, and Scope for a Standard for the Method of Testing and Reporting Space Heat Gain from Equipment. Larry Sun will email Motion to our Section Head (Suzanne LeViseur) TSP as approved is attached.

Motion: [Motion by Friedman – Seconded by Hittle] Approved the Title Purpose and Scope for the Standard by TC 4.1. 10-0-0-CV

Old Business

26. There was no old business reported.

New Business

27. There was no new business reported.

Meeting Adjourned at 4:10 PM.

Attachments:

(Additional email attachments when sent)

TC 4.1 Current Roster
TSP for Method of Testing and Reporting Space Heat Gain from Equipment