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Meeting Minutes

TC 5.5 Air-to-Air Energy Recovery

Room City View 8, Adams Mark Hotel, Dallas
3:30 p.m., 8 February 2000

1. Chairman Dilip Vyavaharkar opened the meeting with table introductions.
2. Kirk Mescher moved, Peter Grinbergs seconded, approval of the minutes for the Chicago meeting. Bert Phillips moved, Kirk Mescher seconded, approval of the minutes for the Seattle meeting.
3. Subcommittee Reports
 - a. Membership - Bert Phillips
 - Members present –Dilip Vyavaharkar (Chair), Bede Wellford (Vice Chair), Dave Shipley, Peter Grinbergs, Kirk Mescher, Bob Besant, Prakash Damshala, Hoy Bohanon, Gursaran Mathur, Elbert Phillips, Dipak Shah, Katherine Hammack.
 - Members absent – John McNab.
 - The current membership is shown on the membership listing posted on-line. Shipley and Mescher cycle off the committee after the June meeting in Minneapolis, so Bert will be working on identifying new voting members to take their places. (**Action Item: Bert Phillips**).
 - b. Standards - Kirk Mescher
 - Kirk reported that the Standard 84 Committee met: they are working hard on revisions and hope to have a draft ready enough to vote it out for public review at the Minneapolis meeting. An e-mail and web posting will go out as soon as it's ready. (**Action Item: Standard 84, Secretary**).
 - c. Research - Peter Grinbergs
 - The Research Subcommittee reviewed two unsolicited proposals and one one-pager. They recommended forwarding URP1177 "Energy Wheel Performance and Control under Frosting Conditions" to proceed.
 - They also identified follow-on work that will be needed to determine the impact of defrost on the test standard. This follow-on work needs to be fleshed out into a research plan and work statement. (**Action Item: Peter Grinbergs**).
 - The TC submitted a work statement, but it was rejected by RAS.
 - The new one-pager is called "Air-to-Air Energy Recovery System Design Guideline and Short Course". It has not been formally

placed on our priority list. A new plan with priorities identified will need to be submitted after the Minneapolis meeting.

- The Environmental Health Committee has circulated a list of priority research areas. A number of them match this TC's priorities very closely, so it is an excellent opportunity to further our research goals by collaborating with them to push forward some of these projects. One of EHC's items is an existing ARTI project, so we could put that forward as a work statement with existing co-funding.
- The Research Subcommittee also needs to identify volunteers to work on some of the ideas from our straw poll at the Seattle meeting (see the minutes from that meeting). (**Action Item: Research**).
- The Research Subcommittee planned to meet again for a short time after the TC to get all these possibilities organized.
- There is a draft Research Subcommittee Report that is partially up-to-date, but needs to be revised and finalized at our Minneapolis meeting. (**Action Item: Research**).

d. Program - Katherine Hammack

- Katherine distributed a Program Subcommittee Report.
- There was a discussion on whether to repeat the Minneapolis seminar ("Wheels, Plates, Pipes and Run-Arounds - What Are They and How Do They Work?") at Atlanta, in a somewhat different form.
- There are no papers yet for the Atlanta symposium under its current title. Peter Grinbergs has two papers on energy calculations and illustrations of energy impacts. They are more applicable to commercial than residential. By consensus, the TC decided to change the name of the symposium to "Energy Impacts of Mechanical Ventilation - Applications and Solutions." A couple more papers are needed. Everything has to be to ASHRAE by April 7th to get through the review process by August 4th. If we get more papers than needed for Atlanta, we could use some of them at a Symposium in Cincinnati ("Staying in the Comfort Zone of Standard 55 with Energy Recovery Ventilation"). (**Action Item: Peter Grinbergs**).
- Davor Novosel had proposed a forum called "How Would you Meet Standard 90.1 with Energy Recovery Ventilation?." It's currently scheduled for Atlanta, but he's willing to do it in Minneapolis if they will still accept it. Katherine planned to find out. (**Action Item: Katherine Hammack**).
- We also have have an idea for a seminar in Atlantic City called "Casino Ventilation - Keeping Gamblers Awake." There could be an interesting discussion on the advantages casinos see in high rates of ventilation.

release date of around Christmas. The programs are intended to use ARI certified ratings. Manufacturers will be able to create a database of their own products and send that out with the product.

2. More Liaison Reports

b. Standard 62.1 - Bede Wellford

- A summary of recent activities of SSPC 62.1 was distributed. Bede gave a verbal report on some specific items. The SSPC has received a lot of comments on Addendum N, many of them negative. There has been a lot of discussion on ventilation rates at both the committee meetings and the forum. In addition to some proposed changes to the rates themselves, they are also discussing a simplified pathway for rate calculation as well as a more detailed procedure.
- The Committee's working process is much more positive and collaborative than it has been in the past.
- William Fisk presented to the SSPC a paper he published on "Association of Ventilation Rates and CO₂ Concentrations with Health and Other Responses in Commercial and Institutional Buildings." That research showed continued benefits to increasing ventilation rates in the buildings studied.
- There was an interpretation issued in response to a question from Charles Lane about a design for a school where the wheel stops for defrost for 15 minutes every hour. If the designer increases ventilation rate to compensate, maintaining an average ventilation rate of 15 cfm/person, is that in keeping with ASHRAE Std 62? Answer was yes.
- There are a number of people on the committee pushing for reduction of rates in schools from 15 cfm to something lower. We need to be responsive to the public comments. If we want to reduce it, there needs to be solid research to establish the risks and benefits before we proceed with that. There is an approved policy by the Board that ASHRAE standards should consider health when appropriate. That ruling clearly speaks to the discussion of rates in Std 62. Std 62.2 did not go out because there wasn't consensus within the Society: the public review process can be potentially embarrassing if there isn't internal consensus. Std 62.1 may be held back for similar reasons.
- The addenda the SSPC has put out are actually affecting ventilation rates being used in schools, even before approval. There are schools being built with 7.5 cfm per student. The research primarily pertains to office buildings in colder climates such as Northern Europe. Schools in the southeastern US are not necessarily covered by this research.
- The 62.1 committee has also proposed a model that separates the 20 cfm considered appropriate in an office building into a 15

cfm/person rate for the building component and a 5 cfm/person rate for the people component. This becomes the basis for the model for other types of buildings. Rates then go up dramatically for buildings like libraries and supermarkets and drop for schools. This suggests the model may not correspond with a realistic division into building and people components.

- *Bede Wellford moved, Katherine Hammack seconded, that the TC write a letter to SSPC 62.1, with copies to the Standards Committee, Tech Council, Environmental Health Committee, and TC 4.3, stating that:*
 - *It is the position of 5.5 that any addenda proposing to change the ventilation rates in standard 62 need to be supported by peer reviewed and preferably ASHRAE peer-reviewed research prior to their going out for public review*
 - *If necessary Board direction should be sought on this issue.*
 - *And that our reasons for this request include the negative impact of proposed addenda that do not meet these criteria on public health, ASHRAE, the engineering community and industry.*

11-0-1 in favor. Motion passes. (Action Item: Secretary, Bede Wellford, Chair).

- c. Standard 62.2 - Peter Grinbergs
 - Standard 62.2 had discussions about requiring ducted mechanical ventilation to all spaces in a residence, but there were so many objections that this was taken out. A proposed requirement for kitchen ventilation was removed also. NAHB is now on board with the standard, and they had a joint press conference with NAHB and ASHRAE at which NAHB announced their support for the proposed draft. The Committee voted out the Standard for public review.
 - Peter volunteered to liaison to 62.2. Dilip will write a letter officially appointing him. (**Action Item: Chair**).
- d. ARI/ISO Standard - Bede Wellford
 - Bede was asked by the AA/ERV group at ARI to work on implementing their resolution to develop jointly with ISO a rating/test standard. ARI needs to submit a proposal to ISO before a work group can be established. The ballot would occur in April for that; the work group probably would be established in late summer. It takes about two years, minimum, to get a standard final draft done.
- e. TC 3.5 - Davor Novosel
 - TC 3.5 are still working on an MOT for rating packaged dessicant based dehumidification systems. They are still word-smithing the scope. No action required right now.

2. More New Business

- Katherine needs to resign as program chair. We need to find a new one. **(Action Item: Chair)**.
- ASHRAE has changed the rules on scheduling of subcommittee meetings. We can no longer meet from 1-3 on Sundays. We have several other choices. The consensus was to meet from 3-5 on Sundays from now on. Dilip will request this time for our subcommittees. **(Action Item: Chair)**.
- We have a potential new international member. Dipak Pahwa serves on TC 3.5 and would be interested in joining this TC as an international member. The group supported this. Bert will follow up. **(Action Item: Membership)**.

2. Executive Session

- Visitors and proposers were asked to leave so the TC could go into executive session to discuss the URP recommended by the Research Subcommittee. Details of the discussion will not be recorded here. A motion passed to recommend rejection of URP 1177.

3. Adjournment

SUMMARY OF ACTION ITEMS

Description	Responsible Party	Status
Identify new voting members to replace departures	Membership	Open
Provide copy of Std. 84 draft to website when done	Std 84 (Kirk)	Open
Post draft copy of Std. 84 to website	Website	Open
Write work statement on frost control	Peter Grinbergs, with review from Bede, Prakash, and Kirk	Open
Identify volunteers for other research ideas	Research	Open
Finalize research plan by end of Minneapolis meeting	Research	Open
Gather remaining paper for Atlanta symposium to send to ASHRAE by 7 April - authors get them to Peter by 31 March!!	Peter Grinbergs	Open
Find out if Atlanta forum can move to Minneapolis	Programs	Open
Obtain recent handbook chapter and provide to Website	Handbook	Open
Post new draft chapter to subdirectory of website known only to TC members	Website	Open
E-mail Bede the text of the motion about 62.1	Secretary	Open
Draft letter from TC for Dilip's signature	Bede Wellford	Open
Sign and send letter	Chair	Open

Send letter appointing Peter Grinbergs liaison to 62.2	Chair	Open
Recruit new Program chair	Chair	Open
Request new subcommittee meeting time	Chair	Open
Forward Dipak Pahwa's membership request	Membership	Open

Status of items carried over from previous meetings but not discussed:

Provide brief written reports to the TC	Subcommittee chairs and liaisons	Open
Provide input to 5.8 chapter	Handbook	Open