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ASHRAE TC 6.7 – SOLAR ENERGY UTILIZATION Annual Meeting – June 25, 2002 Honolulu, Hawaii

MEETING NOTES

Meeting Called to Order: 1:10 PM by Incoming Chair Svein Morner

Meeting Attendees:

Svein Morner (VM)	- Webmaster; Incoming TC 6.7 Chair
Mark Hertel (VM)	- Handbook Subcommittee Chair
Brian Dougherty (VM)	- Acting Secretary
Tim Merrigan (CM)	- Vice Chair/Standards Subcommittee Chair
Dave Menicucci (CM)	- Sandia National Labs
Edwin Seiler (CM)	- Retired
Bill Black (G)	- Sandia National Labs
Mike Wassmer (G)	- University of Colorado (Grad Student)
David Meredith (G)	- Pennsylvania State University (Staff)
Bruce Hunn (G)	- ASHRAE staff

Three of seven voting members were present thus a quorum was not achieved.

INTRODUCTIONS

The meeting was called to order by acting Chair, Svein Morner. The attendees made self-introductions and a sign-in sheet was circulated. International voting member A. H. Malek was not present and did not count towards the quorum requirement.

Minutes from the January 2002 meeting in Atlantic City were not completed prior to the meeting. Svein Morner noted that ASHRAE requests that meeting minutes be submitted to headquarters within two months of the meeting.

As with previous years, TC 6.7 members split attendance between the annual ASES/ASME/ASHRAE Solar Energy conference and the Annual ASHRAE meeting. Technical committee 6.7 did not have a meeting at this year's Solar Energy conference that was held in Reno, Nevada.

CHAIRMAN'S REPORT

Svein Morner attended the TC Chair breakfast. Svein reported on the societies progress with handling program submittals on-line, with developments to review technical papers on-line, and for the delay until October 2002 was to when ASHRAE will make server space available for each technical committee.

Svein also reported that TC 6.7 has yet to file its recommended response to a question received at headquarters prior to the January 2002 meeting. The question, which was submitted by an ASHRAE member, asked: "Where can I find information on solar energy and solar heating equipment?" Henry Healy had generated an initial response that was discussed at the January 2002 meeting. The only change made at the meeting was the addition of useful web links.



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STANDARDS SUBCOMMITTEE REPORT

Standards subcommittee chair Tim Merrigan reported that ASHRAE Standard 93, “Methods of Testing to Determine the Thermal Performance of Solar Collectors,” and ASHRAE Standard 109, “Methods of Testing to Determine the Thermal Performance of Flat-Plate Solar Collectors Containing a Boiling Liquid,” were sent back to TC 6.7 for reconsideration. Technical Committee 6.7 had voted at its January 1998 meeting in San Francisco to recommend that the Standard 93-1986 (RA 91) be reaffirmed. TC 6.7 voted to reaffirm Standard 109-1986 (RA96) at its February 2001 meeting in Atlanta. These reaffirmation votes didn’t move forward within the ASHRAE Standards Committee and, in the interim, the ASHRAE Standards Committee implemented a policy change that limited cases where references could be updated as part of a reaffirmation. The most applicable text on the issue is provided in Normative Appendix N2 to the Standards Committee Manual of Procedures (MOP - 6/27/02):

“Reaffirmations shall be processed without any substantive change to the main text or the standard. All non-substantive changes in the main text of the standard shall be explained, or noted, in a foreword. A Standard undergoing an update of references necessary to implement the standard shall be processed as a revision. If the updated reference is only a reaffirmation of the referenced standard, the standard undergoing an update shall be processed as a reaffirmation.”

In a letter to standards subcommittee chair Tim Merrigan, the ASHRAE staff reviewer noted concern of outdated references as the reason for the reconsideration request.

Tim Merrigan reviewed the references cited in ASHRAE Standards 93 and 109 and judged them to be current. The attendees at the Honolulu meeting recommended that Jim Huggins be contacted to see if he concurs with republishing the two standards as is.¹

PROGRAMS

The programs subcommittee chair, Henry Healey, did not attend the meeting. Attendees discussed possible programs for future meetings. Possibilities include:

1. Seminar or symposium on the Solar Decathlon; tentatively would seek to have four participating universities describe their designs. If a narrower scope was needed, the suggestion was made to have presenters focus on their HVAC systems.
2. Having Henry Healey conduct another workshop on the design of solar thermal systems.
3. Symposium on recent research and developments. Possible participants and topics include:
 - a. Combined PV/thermal collector -- University of Colorado graduate student that is working under Jan Kreider.
 - b. Combined PV/thermal collector issues addressed by ASHRAE URP-1109 – Solar Design Associates
 - c. Roof-integrated thermosyphon systems – Dave Menicucci
 - d. Duke Solar
4. Symposium on materials considerations for solar energy applications. Possible participants and topics include:
 - a. Copper piping degradation due to circulating mildly aggressive, high temperature water having a mild CO₂ level – Sandia National Labs

¹ Note: At the October 5-6, 2002 meeting of the ASHRAE Standards Committee, members of the Standing Reaffirmation Subcommittee recommended that ASHRAE Standards 93 and 109 be approved for reaffirmation public review. The motion was unanimously passed by the full ASHRAE Standards Committee.



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- b. Using CPVC piping and no expansion tank in a solar thermal system – Sandia National Labs and/or Florida Solar Energy Center
 - c. Tradeoffs from using stainless steel components.
5. Forum to and identify the needs of the membership (e.g., solar cooling, building integrated technologies, low/no energy buildings). The forum could benefit the TC in planning its research proposals and handbook content. A similar forum, held at the 1996 Winter meeting in Atlanta (“What role should ASHRAE now take in the development of solar energy?”) was judged successful and so should be conducted again.

February 7, 2003 is the deadline for program submittals for the Annual meeting in Kansas City. Packages for the 2004 Winter meeting in Anaheim are due August 8, 2003.

Bruce Hunn inquired whether TC 6.7 would be able to chair/organize a session as part of the 2003 ASES Solar Energy conference, which will be held in Austin, Texas. ASHRAE is a co-sponsor. Four or five people willing to write papers would be needed. (The conference does not hold the equivalent of the ASHRAE forum or seminar.) ASES abstracts are peer reviewed but the papers are not.

RESEARCH

The research subcommittee chair, Paul Zeigler, did not attend the meeting. Beginning with past work, attendees questioned whether the URP-1109 final report had been accepted by Bill Seaton.

As for future work, the attendees tried to recall the status of past/on-going efforts:

1. One-page Research Topic Acceptance Requests (RTARs)
 - a. Objective: To create a design guide for the utilization of solar radiant heating and cooling; First draft completed by Svein Morner.
2. Research Plan 2000
 - a. Project Title: Develop and enhance various forms of solar assisted and solar powered cooling, dehumidification, ventilation and refrigeration systems and equipment for residential, commercial, institutional, industrial/process applications.
 - b. Project title: Increased optimization of passive solar, thermal solar, and photovoltaic systems and equipment.
 - c. Project title: Develop strategies to improve building integration of solar technologies.
 - d. Project title: Develop hybrid/integrated solar systems and hybrid/integrated solar/mechanical, ventilation, refrigeration, electrical, and lighting systems, applications and controls.
 - e. Project title: Develop electronic and computer based tools which will simplify and aid in the integration of all solar technologies.
3. Work statements
 - a. Title: Optimization and Testing of a 2E Solar Driven Absorption Chiller
 - i. Primary author: Dave Menicucci
 - ii. Previously submitted to the ASHRAE Research Administration Committee (RAC) and, as of April 2001, the write-up needed to be revised in accordance with comments received from RAC (Katherine Hammack) before being resubmitted.
 - iii. Need to check with Paul Zeigler on the status of this work statement. Given ASHRAE current procedures, the TC may need to write an RTAR for this double-effect absorption system proposal.

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

A N I N T E R N A T I O N A L O R G A N I Z A T I O N



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HANDBOOK

Mark Hertel, the handbook subcommittee chair, reported that ASHRAE is having an internal debate on all aspects of the handbook: revenue, content, format, release schedule. With the transition to electronic/CD-based handbooks, greater flexibility occurs and more information can be added, and at any time. The CD offers the benefit of adding links to other parts of the handbook and, eventually, to non-handbook documents (e.g, design guides).

The next handbook chapter up for revision is Chapter 33, "Solar Energy Equipment," within the HVAC Systems and Equipment Handbook. The goal is to have revisions to that chapter completed in time for the Chicago meeting. The revised Chapter 33 must be submitted in May 2003. Thereafter, work on writing a completely new chapter will be initiated. This new chapter will be targeted towards consulting engineers. The information needs to be better organized (as compared to the existing handbook chapters) and possibly needs to include discussions of the type: "we tried this and it did or did not work." A draft outline on this new chapter will be discussed at the Chicago meeting. The goal is to approve the outline at the 2003 Annual meeting in Kansas City. Mark will be recruiting handbook reviewers and authors.²

OLD BUSINESS

The TC needs to follow up with Henry on responding to the frequently asked question that the TC debated and voted on at the Atlantic City meeting.

NEW BUSINESS

ISO TC 180, Subcommittee 4 (Thermal Systems) chairman Byard Wood has decided to step down. ASHRAE, which is the secretariat of this ISO subcommittee, is actively seeking a new chair. TC 6.7 has requested that ASHRAE's Doug Tucker provide general information on what duties are associated with the position along with a list of working groups and ISO standards for which SC4 is responsible.

The meeting was adjourned at 3:35 pm.

Submitted by Brian Dougherty

² In an October 5, 2002 email message to TC 6.7 corresponding and voting members, Mark Hertel summarized upcoming handbook activities and solicited volunteers to help with the process.