

These draft minutes have not yet been approved by the Technical Committee. They will not be the official minutes until approved at the subsequent meeting.

**AMERICAN SOCIETY OF HEATING, REFRIGERATING
AND AIR-CONDITIONING ENGINEERS, INC.**
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TC/TG/TRG MINUTES COVER SHEET

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC NO TC 8.12 DATE 9/11/05

TC TITLE Desiccant Dehumidification Equipment and Components

DATE OF MEETING 6/27/2005 LOCATION Denver, CO

| VOTING MEMBERS PRESENT | YEAR APPTD | VOTING MEMBERS ABSENT | YEAR APPTD | CORRESPONDING MEMBERS & GUESTS |
|------------------------|------------|-----------------------|------------|--------------------------------|
| Doug Kosar | 04 | | | Jim Sand (CM) |
| Ed Vineyard | 01 | | | Dharam Punwani (guest) |
| Wayne Caudle | 01 | | | William Lull (CM) |
| Jerry Wurm | 01 | | | Ali Jalalzadeh (CM) |
| Marek Czachorski | 01 | | | Lew Harriman (CM) |
| Steve Brickley | 04 | | | Rich Sweetser (CM) |
| Stan Slabinski | 03 | | | Richard Taft (Guest) |
| | | | | Phil Nowicki (CM) |
| | | | | Charlie Cromer (CM) |
| | | | | Bruce Urban (guest) |
| | | | | Ronnie Moffitt (CM) |
| | | | | Eric Johnson (CM) |
| | | | | Mark Nunnely (CM) |
| | | | | Milt Meckler (CM) |
| | | | | Eric Kozubal (Guest) |
| | | | | Isadore Tucceri (Guest) |
| | | | | Larry Hoagland (Guest) |
| | | | | Drake Erbe (Guest) |
| | | | | Cedric Trueman (Guest) |
| | | | | Tim Wagner (Guest) |
| | | | | Doug Fitts (Guest) |

| | | | | |
|--|--|--|--|----------------------|
| | | | | Davor Novosel (CM) |
| | | | | Andy Lowenstein (CM) |
| | | | | Andrew Mongar (CM) |
| | | | | Bede Welford (CM) |

DISTRIBUTION

All Members of TC/TG/TRG plus the following:

| | |
|---|--|
| TAC SECTION HEAD: | Bryan Becker |
| TAC CHAIR: | Eckhard Groll |
| ASHRAE MANAGER OF TECHNICAL SERVICES: | Tara Thomas |
| ALL COMMITTEE LIAISONS AS SHOWN ON TC/TG/TRG ROSTERS: | Hank Bagheri (Hdbk Liaison 2009 Fundamentals) Doug Fitts (Hdbk Liaison 2008 Systems & Equip) Lynn Werman (Program Liaison) Michael Middleton (Chapter Tech Transfer Liaison) Steve Skalko (Standards Liaison) Ron Bailey (RAC Research Liaison) |
| MANAGER OF STANDARDS MANAGER OF RESEARCH | Claire Ramspeck Mike Vaughn |

Minutes of the ASHRAE TC 8.12 Meeting

Denver, CO Monday June 27th, 2005

- 1) The meeting was called to order by Doug Kosar at 2:20 p.m.
- 2) The TC 8.12 scope was read aloud to the attendees by the TC Chair.
- 3) Self-introductions were made by those in attendance.
- 4) Roll call: 5 of 7 voting members present; quorum was met. (Later in the meeting, the remaining two voting members arrived as well) In addition to the voting members, 15 corresponding members and 10 guests were present for a total attendance of 32.
- 5) The agenda for the meeting was approved, 5-0-0.
- 6) The previous Nashville meeting minutes were approved without correction, 5-0-0
- 7) Section 8 communications and news items:
 - a. Pat Graef, Section Head for Section 8, has tasked every TC with presenting at least one recommendation for the “Hightower” award. Those who have suggestions should contact Doug Kosar after the meeting. Forms are due in September.
 - b. Pat Graef is also looking for recommendations for reviewers of the planned publication :”HVAC Simplified”. Those who can participate should notify Doug Kosar.
 - c. Any material for the CD-Plus version of the handbook is due by January 2006.
 - d. For those who might benefit from a letter of thanks for participation in ASHRAE meetings and activities, such a letter is now available, signed by the President. Advise Doug Kosar when such a letter would be helpful to show employers and others who support your attendance and participation.
- 8) Subcommittee reports:
 - a. Handbook: Subcommittee Chair Steve Brickley reported that this TC’s Chapter 22 *Desiccant Dehumidification and Pressure Drying Equipment* for the 2008 Handbook of Systems and Equipment has been reviewed, and that only minor changes and corrections seem useful. Specifically, correcting the spelling error on page 6, providing better examples of blended desiccants and an improved diagram for figure 7. He advised the committee that he can complete all of these in time for the January 2006 deadline. The committee voted 6-0-0 to approve the changes as suggested by Steve.

Steve also asked for approval of a disclaimer to be added to the “Desiccant Performance Estimator”, which is the Java-based calculator currently active on the TC 8.12 website, and planned as an addition to the CD-Plus version of the handbook. The disclaimer points out that the estimator is for educational purposes, represents generic performance not based on any specific equipment,

and should not be used for actual engineering specifications. The committee approved the use of Steve's suggested disclaimer 7-0-0.

Lew Harriman reported on the joint efforts of TAC and handbook committees to improve the clarity and utility of the handbook volumes. An extensive workshop attended by 12 diverse users has produced many recommendations for the Systems & Equipment Volume, and more than 150 pages of specific suggestions for individual chapters in that volume. TAC will be advising the TC's of these suggestions and will provide direction for future revisions based on these suggestions. Lew was the Workshop Facilitator for this effort.

- b. Program: Subcommittee Chair Andrew Mongar reported that the TC 8.12 sponsored Denver seminar on "How to Properly Apply Desiccant Dehumidification for Energy Savings" was held this morning, and attended by 100+ people. He also reported that:
 - i. A joint seminar is planned for Chicago under the tentative topic of "Dehumidification Performance of Unitary Equipment." TC 8.10 (Mechanical Dehumidification Equipment & Heat Pipes) is the lead TC, and TC 8.11 (Unitary Equipment and Room AC and Heat Pumps) is another participant. For its part TC 8.12 has recruited two authors and papers for the seminar: Mike Witte on cooling season evaluation of humidity control by unitary equipment, and Doug Kosar on state point performance comparison of conventional vs. enhanced dehumidification cooling systems.
 - ii. Andrew also suggested a second seminar for Chicago, on the topic of liquid desiccant systems. He advised that four papers have been committed for the seminar. The committee agreed to make this second seminar our number one priority for scheduling, given that the other multi-TC seminar will probably have enough support to guarantee a slot without the additional boost of our number one preference.
 - iii. Bill Lull observed that, although the title of this morning's seminar was "applying desiccant systems for energy savings", the papers did not really address the fact that most consultants do not have a clear idea of how to accomplish this goal. This is one reason the systems are not widely applied, and in Bill's opinion, the TC needs to address this lack of information in some meaningful way so that designers become less likely to resist the technology. He suggests a seminar titled "how to apply desiccant systems for COST savings."
- c. Research: On behalf of subcommittee chair Steve Slayzak, Eric Kozubal reported that work statements will be accepted 3 times each year, with RTAR's due 45 days in advance of RAC meetings. Regarding specific activities:

- i. The TC 8.12 sponsored *Guidelines for the Selection of Desiccant Equipment at Altitude*, has been rejected by the RAC committee after earlier indications that the project would receive funding. Apparently some on the committee believe that the projected market of \$5 million in sales affected by this issue is not sufficient to justify ASHRAE funding. The research subcommittee will be providing clarification of that market size number in hopes of regaining consideration for the project, which is needed by all engineers who have projects above 2,000 ft altitude. The RAC was also unaware that this was the 3rd time the project has been submitted, much to the annoyance of those who have spent a great deal of time preparing the complex and accurate work statement required for the project.
 - ii. Eric explained procedures for the visit to the National Renewable Energy Lab's desiccant research facility in Golden, CO, which will be take place after the TC meeting.
- d. Education & Website: On behalf of Subcommittee Chair Bill Worek, Doug Kosar reported that the TC 8.12 web site has been relocated from its former UIC server to the ASHRAE server and is now active at that location. Further, ASHRAE education has decided to again offer "Humidity Control Parts 1 & 2" at the Chicago meeting.
- e. Standards: Subcommittee Chair Wayne Caudle, reported that:
 - i. Standard 139 is now out for public review and comments. To date, no comments have been received.
 - ii. Our proposed Standard 174 *Method of Test for Rating Performance of Unitary Desiccant Systems* has been suggested as qualifying for "fast track" consideration by the ASHRAE staff. With that in mind, the subcommittee will attempt to produce a draft for consideration at the January 2006 meeting in Chicago.
 - iii. Prompted by discussion of Standard 174, Andrew Mongar suggested it's time to consider developing a similar standard for rating performance of liquid desiccant systems. The committee in general agreed. Wayne Caudle will guide Andrew in the steps he'll need to take to initiate such an effort.
- f. Membership: Subcommittee Chair Doug Kosar noted that after this meeting, voting members will include:
 - 1. Doug Kosar
 - 2. William Lull
 - 3. Steve Brickley
 - 4. Stan Slabinski

5. Richard Sweetser
6. Andrew Mongar
7. Deepak Pahwa – International

The following 4 members have completed their voting member terms and will be shifted to corresponding members after the Denver meeting: Ed Vineyard, Jerry Wurm, Marek Czachorski, and Wayne Caudle.

A discussion followed as to the appropriate number of voting members for this TC, with numbers suggested between six and twelve. It was generally agreed that six to eight voting members was an appropriate number, and that new members should be corresponding members prior to being voting members.

Doug next observed that the positions of Vice-chair, Secretary and Liaison for the ASHRAE Learning Institute (ALI) are currently open, and he asked for volunteers to fill these. Phil Nowicki offered to be the secretary for the committee and quickly received an enthusiastic round of applause from all present.

- g. Professional Development: Outgoing ALI Liaison Ali Jalalzadeh provided a brief update on the new ASHRAE distance learning activities. With respect to these, Lew Harriman participated as an online instructor for the “Humidity Control Parts 1 & 2” courses held last fall. Ali also described the agenda for fall professional development courses, which include three (3) onsite and three (3) online offerings, including “Prevention of Mold & Moisture Problems in Buildings.”
- 9) New business:
 - a. Richard Taft, of Munters DryCool described his proposed exception to ASHRAE Standard 90.1, which would explicitly allow the use of heat-activated desiccant systems for ventilation systems that would otherwise require heat recovery systems, provided that the desiccant system in question only uses site-recovered energy for reactivation. His analysis shows that such systems actually consume less energy than conventional heat-recovery-assisted cooling-based dehumidification systems currently allowed under the standard. The committee briefly discussed the proposed exception, until two guests from the Standard 90 committee itself observed that it may not be necessary to provide an exception for such a system. It may be that it would already qualify as a heat-recovery system meeting the intent of that section of Standard 90. They advised that Richard might choose instead to ask for an official interpretation with respect to the system he has in mind. The formal interpretation process would be less onerous and time-consuming than consideration of a full exception, and it also allows for the petitioner to be present during the meeting of the Standard 90 committee to answer questions.
 - b. Homeland security – Doug Kosar noted that all TC’s should be thinking of aspects of their technologies that relate to homeland security. But as far as he and Steve Brickley (Former Research Committee Chair) know, the only direct connection already being explored between desiccant equipment and security

issues is airborne microorganism “deactivation” with liquid desiccants (salt solutions). He asked for other observations on this topic from the committee, but received none.

10) Old business:

- a. Doug Kosar will continue to seek volunteers for the position of Vice Chair, noting that his term is complete next year, and that it would be unfortunate if nobody were prepared by a year’s experience to assume the duties of Committee Chair.
- b. New TC name (*Desiccant Dehumidification Equipment and Components*), approved by the TC four years ago, is still not in consistent use within ASHRAE documents. Doug asked that, if committee members see any examples of the old name being used, that they bring these to his attention so that they can be corrected.

11) Motion for adjournment carried 7-0-0. The meeting was adjourned at 4:10 pm.