

**AMERICAN SOCIETY OF HEATING, REFRIGERATION,
AND AIR-CONDITIONING ENGINEERS, INC.**

Minutes
Technical Committee 8.5
Liquid-to-Refrigerant Heat Exchangers
February 7, 2000
ASHRAE Winter Meeting, Dallas, Texas, February 4-9, 2000

1. **Introduction of Members and Guests (Sign attendance sheet)**

Chairman Mark Spatz called the meeting to order at 4:20 PM. Members and guests introduced themselves. The following were present:

Jim Larson	The Trane Company 3600 Pammel Creek Road La Crosse, WI 54601-7511
Joe Huber	API Ketema 2300 W. Marshall Grand Prairie TX 75051
S. A. Sherif	Univ. of Florida Department of ME Box 116300 Gainesville FL 32611-6300
Satish Oza	Wieland Metals 1052 Harvard Lane Buffalo Grove IL 60089
Axel Kriegsman	Wieland-Werke AG Graf Arco Strasse Ulm Germany D-89070
Parviz Payvar	Northern Illinois University Dept. of Mech. Engr. Dekalb IL 60115
Shane Moeykens	The Trane Company 3600 Pammel Creek Road La Crosse, WI 54601-7511
Petur Thors	Wolverine Tube 2100 Market Street NE Decatur AL 35603
Mark Spatz	Allied Signal 20 Peabody Street Buffalo NY 14210
James Bryan	Outokumpu Copper 4720 Bowling Green Rd. Franklin KY 42134

John Thome	EPFL/LTCM LTCM-DGM Lausanne CH-1015 Switzerland
Kash Oza	Standard Refrigeration Co. 205 N. Ruby Street Melrose Park IL 60160
Ming Chyu	Texas Tech. Univ. Dept. of Mech. Engr. Lubbock TX 79409-1021
Jamal Seyed-Yagoobi	Texas A & M Univ. Dept. of Mech. Engr. College Station TX 77843
Neel Gupte	Carrier PO Box 4808 Carrier Parkway Syracuse NY 13221
Mike Ohadi	University of Maryland Dept. of Mech. Engr. College Park MD 20742
John Judge	York International PO Box 1592 York PA 17405
Karim Amrane	ARI 4301 N. Fairfax Drive #425 Arlington VA 22203
Louay Chamra	Mississippi State University PO Box ME Mississippi State MS 39762
Josua Meyer	Rand Afrikaans University PO Box 524 Auckland Park 2006 South Africa
Majid Molki	University of Maryland Dept. of Mech. Engr. College Park MD 20742
Nabil Hanna	Koax Corp. 510 N. Indiana
Karine Brand	Wieland Werke AG MS 3123 College Station TX 77845

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Gabe Nahigian UOP
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2. Establish Quorum Requirement

Voting members J. Larson, K. Oza, J. Seyed-Yagoobi, P. Payvar, N. Hanna, P. Thors, S. Oza, J. Judge, N. Gupte, J. Huber, M. Chyu, and M. Spatz were present. M. Ohadi arrived later. Z. Ayub was absent.

3. Review/Approve Seattle Meeting Minutes

After a motion by J. Judge (seconded by M. Chyu) the TC voted unanimously to accept the minutes from the previous meeting

4. Chairman's Comments

M. Spatz reported that the Journal and Insight are seeking articles for August through the end of 2000 on the following subjects:

August; Contemporary Refrigeration Issues; Determining Service Life

September; Outdoor Air Rates and VAV Systems

October; Air Distribution Issues for Labs

November; Rooftop Units: Problems and Costs

December; New Approaches to Facility Management

He notes that the vote for the 2002 Handbook is due this year. The deadline for the Minneapolis program is 2/8/00. Information on the Dublin Conference in September was distributed.

5. Section Head's Comments

The new Section Head, Stan Westhoff noted that he was aware of the inconsistencies between actual committee memberships and the roster provided by headquarters, and will help to resolve the discrepancies.

6. Comments from Liaisons (Handbook, Standards, Journal, Research, Program,)

The new Refrigeration Liaison is Al Guerra. He volunteered their committee's help if requested.

G. Yuil suggested the ASHRAE website be checked to see if specific forms are available for transmitting the research plan. He noted that the purpose of RTAR's is to give the TC approval of a research topic before effort is invested in a work statement. The dates for RTAR submittal are the same as those shown in the Research Manual for submitting work statements. The Research Manual has not been updated to refer to RTAR's.

7. Handbook Subcommittee Report

N. Gupte reported he has approved and returned the final proofs of the Evaporator chapter for the Handbook. M. Ohadi reported that he has approved and returned them for the Condenser chapter.

8. Program Subcommittee Report

M. Ohadi reported the flow visualization seminar planned for this conference has been postponed until the summer meeting in Minneapolis. Otherwise, program plans as outlined at the Seattle meeting are still current.

9. Membership Sub-Committee Report

S. Oza presented Louay Chamra's application for TC membership. After a motion by N. Gupte (seconded by J. Judge) the TC voted unanimously to accept his application. James Bryan is now officially a corresponding member. (The committee vote was at the Toronto meeting). His name is not on the roster. The roster will be corrected.

10. Standards Sub-Committee Report

S. Moeykens reported that he has heard nothing further on the status of Standard 22. ASHRAE Standards has accepted the rewritten Standard 24 which included the review comments received. This final version will now be published.

11. Journal/Insight Article Subcommittee

J. Huber reported that there is still the \$100 ASHRAE Bookstore credit available for authors of future articles. He noted not many of the current topics are relevant to TC 8.5 technology and encouraged members to suggest topics for 2001.

12. Research Sub-Committee Report

S. Moeykens reported that he is still coming up to speed on Research Chairman duties. He encouraged members to keep submitting research project ideas. RTAR's on Fouling and Long-Term EHD were submitted to headquarters in October. Apparently, the fouling RTAR was given priority and the TC was asked by W. Seaton to write a Work Statement. S. Moeykens will submit the Work Statement in time for review at the summer meeting. He will also determine the process by which the TC will be formally notified about decisions by the RAC on RTAR status. P. Payvar has submitted an RTAR on the Effect of Tube Pitch on the Performance of Flooded Evaporators and a first draft of the Work Statement for Immiscible/Insoluble Oil/Refrigerant Pairs. The TC will update the Research Plan at the summer meeting. M. Spatz noted that Research subcommittee chairman are invited to the Chairman's breakfast.

13. 752-RP: Heat Transfer - Brazed Plate HX's

A. Fovargue reported that the PI had informed ASHRAE that he was out of funding. The PMS recommended that the project be terminated and their recommendation was accepted by ASHRAE headquarters. A summary report will be written by the PI. The deadline for the summary report is not known at this time.

14. 857-RP: EHD Enhancement in Evaporating Refrigerants

J. Larson reported that the revisions and additions requested by the PMS had been included in the final report. He made a motion (seconded by J. Judge) to accept the final report. The vote to accept was unanimous.

15. 984-TRP: Effects of Inundation and Oil on Condensing R-134a

J. Huber reported that the PMS will include K. Oza, P. Thors, S. Oza, S. Moeykens, and J. Huber. Single tube tests are complete. The bundle facility has been leak tested, charged and is running. Some preliminary data was presented. The data acquisition software is nearly complete. Inlet superheat is difficult to control. Sensitivity testing will be done to determine if the superheat tolerance can be increased without adversely affecting consistency of the rest of the data. The PMS is reviewing whether the minimum heat flux specified should be revised from 1000 to 2000-2500. They will make a recommendation. The refrigerant testing without oil should be complete by the June meeting. After a motion by J. Huber (seconded by M. Chyu) the TC voted to grant a 6 month, no cost, extension.

16. 1089- RP: Flooded Evaporator: Using R-410A and R-507

S. Moeykens reported that a "state of the art" review was complete and a technical paper summarizing the literature review written. The PMS has recommended that it be submitted to the ASHRAE Research Journal for publication. Many of the sample tubes have been received. The test vessel is complete.

17. New Business

No new business was presented.

18. Schedule Next Meeting and Adjourn

The next meeting will be 4:15 to 6:30 PM, Monday, June 26, 2000, in Minneapolis. The meeting was adjourned at 5:30 PM.