



ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers

Inc.

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ASHRAE TC 1.3 – Heat Transfer and Fluid Flow Annual Meeting, 26 June 2012 (San Antonio, TX)

Introductions (S. Yana-Motta)

Samuel called the meeting to order at 1:03 and read the TC 1.3 TPS.

Confirmation of quorum (S. Yana-Motta)

7 of 11/13 (2 Non-quorum absent) voting members were present, so the quorum was established.

Members present: Ayub, Cremaschi, Eckels, Jokar, Kauffman, Schultz, Yana-Motta

Members absent: Al-Hajri, Brown, Couvillion, Kriegsmann (NQ), Thome (NQ), Thors

Approval of the Minutes from the previous meeting in Chicago, IL

Eckels moved to approve the minutes as submitted. Schultz seconded the motion. The motion passed by a vote of seven for, none opposed, none abstained (7-0-0).

Liaisons' Comments (S. Yana-Motta)

None present.

Report from Membership Sub-Committee Chair (J. Kauffman reporting for J. Hartfield)

TC 1.3 currently has thirteen members, including five from academia and eight from industry. Included in the thirteen are two members non-quorum. The corresponding member count is forty-four.

Beginning 1 July 2012 the TC will have fourteen members, with six from academia and eight from industry. Voting members as of 1 July 2012 are: Al-Hajri (2015), Ayub (2015), Brown (2015), Cremaschi (2013), Eckels (2014), Jacobi (2016), Kauffman (2013), Korenic (2016), Kriegsmann (NQ, 2013), Ohadi (2016), Perencevic (2016), Schultz (2014), Thors (2014), Yana-Motta (2013).

Hartfield requested that individuals wishing to become corresponding members provide contact information and ASHRAE number following the meeting. He also noted that TC 1.3 is an active committee, so being a corresponding member should indicate a willingness to help with committee activities. Individuals wishing to become corresponding members include Sankar Padhmanabhan, Kent Perkins, Ahmad Sleiti, and Michael Taras.

Announcements from TC Chairs' Breakfast Meeting (S. Yana-Motta)

Members have access to the roster for each committee they are a corresponding member or member of by visiting <http://eweb.ashrae.org/eweb/dynamicpage.aspx?webcode=ASHRAECommitteeInfo&Site=ASHRAE>.

ASHRAE has two new MTG's (multi-disciplinary task groups) including 'Alternative Low GWP Refrigerants' and 'Energy-Efficient Air-Handling Systems For Non-Residential Buildings'. The Hightower award nominations are due 1 September 2012. CEC stressed the importance of quality abstracts for papers and suggested that program chairs make track chairs aware of the ideas behind each program. Beginning in Dallas, speaker fees to attend the conference will be \$95. In Denver there will be a mini-conference focusing on research. Web meetings were again recommended for subcommittee

meetings between annual and winter meetings. Contact Mike Vaughn (mvaughn@ashrae.org) for more information.

Report from Program Sub-Committee Chair (L. Cremaschi)

The TC will present one seminar in San Antonio, Seminar 61, titled “Next Generation of Heat Exchangers and Energy Systems with Sustainability in Mind”.

A seminar was proposed for Dallas titled “Oil effects on heat transfer performance”, with Thome, Payvar, Cremaschi and a Honeywell representative mentioned as potential speakers with Eckels to chair. Ayub also volunteered to discuss ammonia and mineral oil if another speaker is needed.

Yana-Motta recommended a seminar for Dallas on properties and available data on new fluids with a focus on heat exchanger and system performance. He suggested a NIST presenter, possibly Marc McLinden, John Thome and Xudong Wang.

The submission deadline for the proposed seminars is 13 August 2012.

Report from Handbook Sub-Committee Chair (M. Ohadi reporting for R. Couvillion)

The two-phase flow chapter has been updated substantially with input from Couvillion, Ohadi, Shah and Schultz. Yana-Motta distributed an e-ballot on 4 June to approve chapters 3-6 as submitted by Couvillion. The vote was concluded at the meeting with a vote of ten for, none opposed, three abstained (10-0-3). Thanks to all involved for their efforts.

Report from Webmaster (E. Al-Hajri)

No update.

Report from Research Sub-Committee Chair (J. Huber)

Research Chair’ Breakfast

Five projects were submitted for the innovative research grant, but none was selected. The committee felt that none of the submissions were innovative enough and is rewriting the procedure to clarify the expectations. Submissions should be made directly to ASHRAE, not through a TC. TCs were encouraged to submit research proposals because ASHRAE may be out of projects by 2013. The research manual is being updated with new RTAR coversheet and form. Unsolicited research proposals (URPs) have surged recently but ASHRAE prefers the normal TC channel so the society is being very selective with URPs.

Current Research

1556-TRP, “Characterization of Liquid Refrigerant Flow Emerging from a Flooded Evaporator Tube Bundle”, went out for bid in the fall of 2011 and closed 15 December 2011. The PES had concerns that were negotiated with the preferred bidder. Official selection should occur at the RAC meeting on Wednesday morning.

New Research Ideas

Padhmanabhan prepared a draft RTAR title “Experimental Evaluation of two-phase flow of Ammonia in U-tube bends.” The draft needs to go to the research liaison before vote in TC. It was suggested to add goal 8 ‘natural refrigerants’ to the RTAR, to extend the duration to 24 months, and to provide justification for the cost and duration. Concerns were expressed about availability of a suitable pump for the low flow rate test conditions. Yana-Motta will provide comments to Padhmanabhan.

Nelso is still interested in research regarding impacts of modified surface energy on heat and mass transfer from chilled plates.

Kulankara will prepare an RTAR regarding pressure drop and flow distribution of two-phase flashing flow across orifices.

Shah expressed interest in a research project to develop generalized flow boiling correlations using the results of prior AHSRAE research.

Jokar and Ayub are developing an RTAR regarding wetting and drainage of water evaporative condensers. The RTAR is approximately 70% complete and Jokar will submit it to Huber, Ayub and Nelson when complete. Joe will then submit it to the liaison and then to the committee.

Cremaschi noted that there is difficulty in defining heat transfer coefficients with liquid and/or frosting on heat transfer surfaces. This could provide research and/or handbook material. Cremaschi will provide data and contact TCs 8.4 and 8.11.

New Business (S. Yana-Motta)

No new business.

Adjourn.

Kauffman motioned to adjourn the meeting. Jokar seconded the motion. Unanimous vote. The meeting was adjourned at 2:32.