

ASHRAE TC 5.1 FANS

MEETING MINUTES

Monday, January 27, 2003

PALMER HOUSE

CHICAGO, ILLINOIS

1. CALL TO ORDER

The meeting was called to order at 2:15 P.M. by Chairman **ROBERT SMITH**.

2. ROLL CALL

Members

- | | |
|--|---|
| <input checked="" type="checkbox"/> Gary Kile | <input checked="" type="checkbox"/> Suleman Becirspahic - International |
| <input checked="" type="checkbox"/> Paul Heitzmann | <input checked="" type="checkbox"/> Paul Saxon - Membership |
| <input checked="" type="checkbox"/> Mark Fly | <input checked="" type="checkbox"/> Walt Ziemann - Handbook |
| <input checked="" type="checkbox"/> Charles W. Coward - Website | <input checked="" type="checkbox"/> Robert Z. Smith - Chairman |
| <input checked="" type="checkbox"/> Ron Lievens - Research | <input checked="" type="checkbox"/> Brian Reynolds - Secretary |
| <input checked="" type="checkbox"/> John Murphy - Standards | <input checked="" type="checkbox"/> Eric Cole – Vice-Chairman |
| <input checked="" type="checkbox"/> Ashesh Raychaudhuri - Programs | |

Corresponding Members & Guests

- | | |
|-----------------------------------|----------------|
| John Cermak – Long Range Planning | Bill Swim |
| Jim Schick | Bill Cory |
| Hakan Bard | L Z Zeng |
| Steve Hancock | George Gamble |
| David Carroll | Peter G. Danos |
| Wilfred Laman | Zhiping Wang |

3. ADOPTION OF AGENDA

The agenda was adopted by consensus.

4. APPROVAL OF MINUTES

The minutes of the meeting held on Monday, June 24, 2002 in Honolulu, Hawaii were approved as written.

5. ITEMS OF BUSINESS

5.1 LIAISON REPORT: (Davor Novosel)

ANSI rule changes no longer allow a standard to be reaffirmed more than once without a review. There is an ANSI reaffirmation committee that can do that work for the TC. ANSI is in the process of changing standards from a 10 year review cycle to a 5 year review cycle.

Deleted: ??

5.2 STANDARDS (JOHN MURPHY)

A motion was made and approved (13-0-0) to reaffirm (ASHRAE 149) (Testing of Components for Smoke Control) with referencing AMCA 210-99 instead of AMCA 210-85. There were no changes in AMCA 210-99 that affected ASHRAE 149.

5.2.1 SPC 87.1 Method of Testing Fan Vibration and Critical Speeds (John Murphy)

Nothing to report. There will be an update at the next meeting.

5.3.2 SPC 87.2 Method of Fatigue Testing of Propeller Fans (L.Z.Zeng)

This project is complete.

5.3.2 AMCA 210 (Paul Saxon)

AMCA 210 is up for review. There is a call for committee members. Volunteer by February 28. It is expected to meet 4 times per year for about 2 years.

5.3.3 SPC 68-97 LABORATORY METHOD OF TESTING TO DETERMINE THE SOUND POWER IN A DUCT

The Standards group recommended that a new review committee (SPC) be formed to update ASHRAE 68-97. It will not be possible to adopt the International version of the standard (ISO 5136) since ISO is not willing to add a sampling tube construction section to the standard, something which ASHRAE believes is essential to anyone who would like to use the standard correctly.

5.4 TC 5.1 HANDBOOK (WALT ZIEMANN)

Walt distributed copies of the Chapter showing proposed changes in red. The proposed updated chapter will be distributed to the committee for their review. **Comments need to be back to Walt by April 15.** Walt will provide a final draft to the 5.1 committee by May 31, 2003. The committee will vote to accept the final draft at the summer meeting in June 2003. Walt needs to submit the final approved draft of Chapter 18 by the end of July in order to be included in the 2004 Handbook. In the future the Handbook will be provided on CD with the paper book version available at an additional fee. The CD will be updated annually.

The Handbook Committee asked TC 5.1 to address suggested updates in several areas:

- Fan class – Walt will add a section.
- Fan arrangement – Walt will add a section.
- 'When to use what' – The committee decided it is not possible to do at this time.
- Fan inertia – Jan Cermak will add a section.
- Vibration isolation at reduced speeds – Chuck Coward
- Variable Frequency Drives –The committee decided that it was not possible to complete in the current review cycle. – Gary K and Asesh R. will be responsible for completing this section
- Sound Generation & Control – Not possible in the next few months. This section will be coordinated with TC 2.6 by ??

5.5 TC 5.1 RESEARCH (RON LIEVENS)

5.5.1 RP-1010 VANEAXIAL FANS

Principal Investigator Prof. Bill Swim presented a summary report. System effects were much smaller than expected. There is evidence of auxiliary fan background noise contamination at low frequency. There appears to be absorption of high frequency sound by the plastic film wall boundaries. Data from 400 Hz. To 1 KHz appears to be reliable. The goal is for the PMS to approve the final report at or

before the Kansas City meeting.

5.5.2 URP-1126 OPTIMIZATION OF SAMPLING TUBE FOR IN-DUCT SOUND TESTING

Peter Baade is prepared to write a section to be added to ASHRAE 68 with information on the construction of a sampling tube that will meet the performance specification of ISO 5136.

5.5.3 URP-1076 PROPELLER FAN VIBRATION ANALYSIS

Doug Reynolds reported that he will work with the researcher to resolve remaining issues and errors in the report by the end of February.

5.5.4 WORK STATEMENT ON CENTRIFUGAL FANS-1216

The project was approved but will be delayed because of the research funding shortage. No progress since the last meeting.

5.5.5 WORK STATEMENT ON PROPELLER FAN-1223

The project was approved but will be delayed because of the research funding shortage. No progress since the last meeting.

5.5.6 PROPOSED RESEARCH PROJECTS

1) INLET INSTALLATION EFFECTS ON FC CENTRIFUGAL FANS, AIR & SOUND – (Paul Heitzmann, Mark Fly, and Ron Lievens)

No progress since the last meeting.

2) MEASUREMENTS OF PURE FAN TONE – (Peter Baade and Paul Saxon)

This proposed work statement has been withdrawn.

5.6 TC 5.1 PROGRAM (ASESH RAYCHAUDHURI)

- Thanks to John Cermak for the successful forum on New Trends in ISO Standardization of Methods for Testing of Fans for their Aerodynamic and Acoustic Performance
- It is not known what happened to a proposed symposium on Plenum Fans, which will be co-sponsored by TC 5.1 and TC 2.6. Mark Fly to report. (BLR comment – TC 2.6 plans to have this symposium at Anaheim)
- A forum has been proposed for Kansas City . "Participation in setting long term goals for Handbook Chapter 18 - Fans " - Moderator: John Cermak
- A forum has been proposed for Kansas City on fan airflow and sound testing comparisons.
- A proposal was made to have a seminar based on RP 1010. Bill Swim and John Murphy would be presenters and a third presenter is needed. The papers need to be sent for peer review by April 15 in order to have the symposium in Anaheim.
- Aesh will inform TC 4.7 that our committee agrees with co-sponsoring a seminar on energy calculations.

6. TC 5.1 MEMBERSHIP REPORT (ROBERT SMITH)

Robert Smith announced his resignation as the TC chairman. A motion was made and approved

(13-0-0) that Brian Reynolds will be the Chairman effective July 1 and George Gamble will be the Secretary. Eric Cole will remain as vice chairman.

6.1 MEMBERSHIP

AMCA International President Bill Cory and International Representative Suleman Becirspahic were recognized by Chairman Robert Smith.

William F. Laman requested to be added to the roster for 2002-2003 as a corresponding member. Chairman Robert Smith needs to contact ASHRAE and have William F. Laman (ASHRAE number 03035590) added to the current roster as a corresponding member.

8. LONG TERM PLANNING (John Cermak)

John suggested that TC 5.1 have the 2012 version of the Handbook be the central goal of the research and work of the committee.

A motion was made and approved to approve the establishment of a long term planning committee. Ron Lievens, Asesh Raychaudhuri, Walt Ziemann, and Paul Heitzmann volunteered to be on the committee and help John Cermak with Long Term planning. Z. Whang and L. Zeng will also participate to provide a younger perspective.

9. WEBSITE (Chuck Coward)

There is nothing to report. Chuck will report at the next meeting. The minutes from the Chicago meeting will be posted on the web site.

It is now permitted to put presentations from seminars on the web site with the permission of the author and the approval of the TC. This does not include symposiums which are published separately.

9. OTHER BUSINESS

10. TIME AND PLACE OF NEXT MEETING

The next regular meeting of the committee is scheduled to be held in Kansas City on June 30, 2003.

11. ADJOURNMENT

The meeting was adjourned at 4:15 PM

Minutes recorded by
Brian Reynolds
Secretary, ASHRAE TC 5.1 FANS