



MINUTES

DRAFT

TECHNICAL COMMITTEE

2020 SummerMeeting

June 1st 2020

Note: These draft minutes have not been approved and not the official, approved record until approved by the Technical Committee.



1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400

DRAFT

TC/TG/MTG/TRG MINUTES COVER SHEET

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

TC/TG/MTG/TRG No. 5.1 DATE June 24th 2020

TC/TG/MTG/TRG TITLE Fans

DATE OF MEETING June 1st 2020 LOCATION virtual conference

VOTING MEMBERS PRESENT	YEAR APPT D	VOTING MEMBERS ABSENT	YEAR APPT D	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Mr Armin Hauer	2012	none		Mr Lee E Buddrus, CM
Dr Zhiping Wang	2008			Mr Franco Cincotti, CM
Mr Joseph Brooks, PE	2003			Mr Mark W Fly, PE, CM
Mr Brian L Reynolds	2002			Mr Timothy R Mathson, CM
Mr Akshay Bhargava	2018			Mr Kim G Osborn, CM
Mr Harold J Dubensky, PE	2013			Dr Rich Stauter, CM
Mr Zvirimumwoyo P Chinoda	2004			Mr Michael L Wolf, CM
Mr Jay Eldridge	2010			Mr Craig P Wray P.Eng, CM
Mr Michael J Feuser	2013			Mr Larry A Smith, PE, EX
Mr Jay H Fizer	2015			Mr John Bade, PCM
Mr Brent A Fullerton	2004			Mr Paul Francis Bauch, PCM
Mr Aresh K Raychaudhuri	2006			Mr Thomas A Bise, PCM
Mr Adam H Sterne	2017			Mr Aaron Kent Gunzner, PCM
				Matthew A Kauffmann, PCM
				Mr Kenneth W Kuntz, PCM
				Michael B. Lyda, PCM
				Mr Douglas Ross, PCM
				Mr Nathan Shoemaker, PCM
				Mr Robert A Valbracht, PE, PCM

				Miss Olivia R Volker, PCM
				Ms Jane Miller, PCM
				Mr Mark VanderKooy, PCM
				Mr Nathan Fetting, PCM
				Mr Brad Cochran, G
				M Farooq Saeed, G
DISTRIBUTION: TC 5.1 basecamp plus the following:				
TAC Section Head:			SH5@ashrae.net	
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)			RL1@ashrae.net ; SL1@ashrae.net ; hbs1@ashrae.net ; CTTC5@ashrae.net ; shammerling@ashrae.org	
Mike Vaughn, Manager Of Research & Technical Services			MORTS@ashrae.net	

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Fans

ASHRAE Technical Committee 5.1

Agenda Go-To-Meeting

Monday, 06/01/2020
4:15 pm to 6:30 pm EDT

1. Call to Order 4:15 pm EDT

The meeting was called to order at 4:16 pm EDT

2. Roll Call

The following Voting members were present

Armin Hauer –Chair
Zhiping Wang – Vice Chair & Handbook S/C Chair
Joseph Brooks – Secretary & Standards S/C chair
Brian Reynolds – Research S/C Chair
Harold Dubensky – Webmaster
Akshay Bhargava
Z. Patrick Chinoda
Jay Eldridge
Michael Feuser
Jay Fizer
Brent Fullerton
Aresh Raychaudhuri
Adam Sterne

The follow Non-Voting S/C Chair was present:

Rich Stauter – Program S/C Chair

3. Adoption of Agenda

Motion #1: “To adopt the agenda as presented.”

By: Brent Fullerton

Second: Patrick Chinoda

Passed 13-0-0

4. Approval of the Previous Meeting Minutes

The last meeting of this committee was held on February 3, 2020 in Orlando, FL. Draft minutes were available through basecamp.

Link was incorrect to past minutes. Also had 13 duplicated pages (corrected).

Motion #2, “To [approve the minutes of this TC from February 3, 2020](#) as modified.

By: Mike Feuser

Second: Akshay Bhargava

Passed, 13-0-0

5. Items of business

5.1. ASHRAE Code of Ethics

In this and all other ASHRAE meetings, the ASHRAE Code of Conduct requires us to act with honesty, fairness, courtesy, competence, integrity and respect for others, and that we avoid all real or

perceived conflicts of interests. (See full Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)

5.2. Chairman's report

The chair reported:

- We have 89 members overall
- 13 voting members
- 33 provisional corresponding members
- 53 liaisons and corresponding members
- New roster approval has not been communicated yet by TAC through staff. If approved as submitted then the new officers are:

Full Name	Company	old Position	new position
Dr Zhiping Wang	Morrison Products Inc	Vice Chair	Chair + Long Range Planning
Mr Timothy R Mathson	AMCA International		Vice chair
Mr Armin Hauer	ebm-papst	Chair	Secretary + Ethics/ASHRAE policies
Mr Brian L Reynolds	Trane Co	Research Subcommittee Chair	Research Subcommittee Chair
Dr Rich Stauter	Carrier Corporation	(Program Subcommittee Chair)	Program Subcommittee Chair
Mr Zvirimumwoyo P Chinoda	Revcor, Inc.		Handbook Subcommittee Chair
Mr Joseph Brooks, PE	Air Movement & Control Assoc	Secretary	Standards Subcommittee Chair
Mr Harold J Dubensky, PE	Johnson Controls Inc.	Webmaster	Webmaster
Jaime Rose Yeh	Twin City Fan Companies Ltd.	Program Subcommittee Chair	
Mr Akshay Bhargava	TRC Worldwide Engineering MEP	Standards Subcommittee Chair	

- TAC conducted an online meeting last week as a replacement of the TC chair breakfast.
- Each year the TC must reaffirm whether it continues, merges, or dissolves.
- If a TC wants to pursue a merger then a new title, purpose, and scope is needed. Including a new proposed leadership.
- 4 mergers of 2 committees each were mentioned since the Re-Org effort. I noted that each merger happened within the original section.
- The ReOrg committee is disbanding. The task will be handled within TAC now and Larry Smith is leading it there.
- Rollover of roster will be completed by August 1st; aliases by July 22nd.
- Again, we are encouraged to hold interim meetings. TAC requests that we give 2 weeks' notice..
- The ASHRAE Journal newsletter might include TC meeting announcements in the future.
- Hightower award nominations will be accepted until September.
- Tony Giometti constantly seeks conference track suggestions for the Conference and Exhibitions Committee.
- Seeking volunteers to review fan related papers and to chair technical sessions. – Report to section head #5.

5.3. Liaison Reports

Larry Smith joined the committee later and reported.

- TAC appreciates the use of more virtual meetings,
- Appreciation for Armin's work as the chair,
- The following organization changes will be made:

- He is rolling off as the Section 5 Section Head.
- TAC chair and head of the ASHRAE Re-Org committee chair are rolling off.
- Larry will become vice chair of TAC and chair of the Re-Org Committee.

5.4. Old business

5.4.1. TC Scope

Current scope is: ASHRAE TC 5.1 is concerned with the selection, application and testing-for-rating of fans, including recommended installation practices and field test procedures.

Previously it was suggested that commissioning, maintenance and recommissioning (CMR) should be added to the scope. At the last meeting a motion was made to recommend adding this to the TC 5.1 scope but was not moved forward since there was no second. Since then the TC learned that TC 7.3 has CMR in their scope. It was suggested that we work with 7.3 for our shared needs.

No one present desired to merge or disband TC5.1.

5.4.2. Use of Web Meetings for Subcommittees

It was suggested to have one face-to-face meeting for each subcommittee per calendar year.

5.5 New Business

5.5.1 Annual Review of TC Progress

From the TC MOP:

“Once a year, preferably at, or prior to, each Annual meeting, the Committee Chair and Committee Membership shall evaluate their progress in accomplishing the purpose for which they were constituted and recommend one of the following actions to their Section Head:

- a) Continue as a TC, TG, MTG, or TRG
- b) Convert from a TG to a TC
- c) Convert from a TRG to a TG or TC
- d) Merge with a TC/TG/TRG and submit a revised scope for the merged committee
- e) Dissolve the TC, TG, MTG, or TRG.

“If a TC/TG/TRG/MTG votes to disband, it must establish whether any current responsibilities should be continued and, if so, recommend existing TC/TRG/MTG(s) to assume responsibility and obtain those committee’s written concurrence.”

The committee would like to continue as a TC.

6. Subcommittee reports

6.1 Website Report

A comment was made recommending that the link to presentations on the TC 5.1 website be more prominent, that the introductory text should be checked on the document page, or the presentations moved to the program page.

Website analytics are attached.

The TC would like to do something to increase usage of the website. Some ideas were to include videos or add spreadsheets (e.g., a fan selection example).

6.4. Standards Development subcommittee – Joe Brooks

Joe's report for the Standards Subcommittee is attached.

6.5. Handbook Content Development subcommittee – Zhiping Wang

Zhiping reported that the only action taken recently was the completion of the galley proofs for the upcoming edition handbook. Patrick Chinoda will be taking over the chair of this subcommittee (as of August 1, 2020). Patrick will be looking for subcommittee members.

6.6. Program Development Subcommittee – Rich Stauter

For the 2021 meeting the following ideas were related:

- A 2–3 part seminar on Fan Basics (e.g., basic fan sound),
- A 3 part seminar on fan vibrations (Rad Ganesh had previously volunteered)
- Fan efficiency methods around the world (Lee Buddrus volunteered to chair the program offering)

The deadline for the winter conference is August 3 (for complete abstract and bios)

6.7. Research Subcommittee – Brian Reynolds

Brian's research subcommittee report is attached. In addition to the report, Brad Cochran, the WS #1835 author and chair of the PES for that RP reported that bids were due in mid-May and they received two bids, but had questions from bidders. They are on schedule to get the PES recommendation to TC 9.10 to vote on it. It is anticipated that research will start this fall. The PES will assign points without knowing the amounts. It was also noted that Ken Kuntz and Doug Ross were off the PMS and Craig Wray was now on it.

6.8 Long Range Planning Subcommittee – Zhiping Wang

The current draft of a long range plan is attached. It requires periodic review. Zhiping Wang recommended striking two of the eight items. The next meeting of this subcommittee will be in August or September 2020.

7. Five year plan

see 6.8.

8. Time and Place of Next Meeting

The TC will meet at the 2021 ASHRAE Winter Meeting in Chicago (23 – 27 Jan 2021), on Monday at 4:15 pm. Any interim meetings of this TC will be at the call of the chair.

9. Adjournment – The committee adjourned at 6:08 pm EDT.

- Attachments:**
- 1) ASHRAE TC5.1, Fans, Website Analytics
 - 2) Standards Subcommittee Report
 - 3) Research Subcommittee Report
 - 4) Long Range Planning Subcommittee

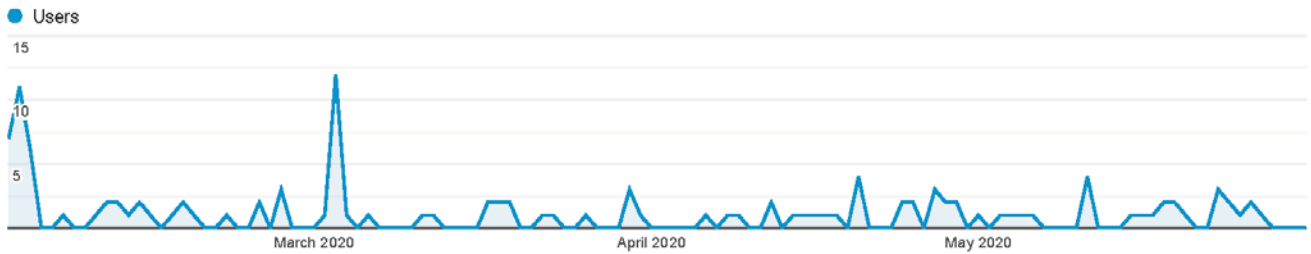
Attachment #1 – ASHRAE TC 5.1, Fans, Website Analytics

Audience Overview

Feb 2, 2020 - May 31, 2020

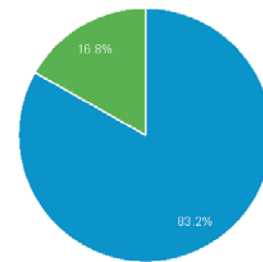
All Users
100.00% Users

Overview



Users 111	New Users 99	Sessions 138
Number of Sessions per User 1.24	Pageviews 260	Pages / Session 1.88
Avg. Session Duration 00:01:40	Bounce Rate 73.91%	

■ New Visitor ■ Returning Visitor



Language	Users	% Users
1. en-us	88	79.28%
2. en-ca	3	2.70%
3. en-gb	3	2.70%
4. es-es	3	2.70%
5. el	2	1.80%
6. zh-tw	2	1.80%
7. de-de	1	0.90%
8. en	1	0.90%
9. et-ee	1	0.90%
10. ja	1	0.90%

Attachment 2: Standards Subcommittee Report

ASHRAE TC 5.1, Fans, Standards Subcommittee Report

S/C Chair: Joe Brooks

S/C Members: None currently

1. Actionable Items: Re-energize the Standard Subcommittee by developing its purpose and scope and carrying out that purpose. Some milestones that may be decided upon are:

Plan	Target
Develop strawman scope and purpose	Winter Mtg. 2021
Develop list of standards that are of interest to TC 5.1	Winter Mtg. 2021
Recruit at least six members and a vice chair	May 2021
Subcommittee agree on a final scope & purpose	May 2021
TC 5.1 endorse S/C Purpose & Scope	Annual Mtg. 2021

2. Current Standards (and Publications) of Interest:

Ref ID	Title	Activity
ASHRAE 51/ AMCA 210-16	Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating	AMCA starting periodic revision
New/AMCA 214	Test Procedure for Calculating Fan Energy Index for Commercial and Industrial Fans and Blowers	New Standard being developed
AMCA 320-08 (R2013)	Laboratory Method of Sound Testing of Fans Using Sound Intensity	AMCA started periodic revision
New/AMCA 270	Laboratory Methods of Aerodynamic Testing Fan Arrays for Rating	New Standard being developed
AMCA 250-12	Laboratory Methods of Testing Jet Tunnel Fans for Performance	AMCA started periodic revision
Following Publications are not Standards		
AMCA 211-13 (Rev. 10-18)	Certified Ratings Program, Product Rating Manual for Fan Air Performance	Periodic Revision
AMCA 201-02 (R2011)	Fans & Systems	Under revision, jointly with ISO/TC117/WG12

3. ISO/TC117, Fans: Current Projects

- WG07 – PPVs (new-CD 24660 – CD comment review), amendment to address comments, compressibility annex (I), and VFD-> Motor Annex (I)

- WG 10 – Revising ISO 13349 (Vocabulary and definition of categories) – SAC convener, Call for experts is out
- WG11 – ISO 12759-1 thru -6
 - -1: General – CD stage
 - -2: AMCA 207- Published
 - -3: FEG – Published
 - -4: FMEG – Published
 - -5: Jet Fans – Preparing for FDIS
 - -6: FEI – DIS ballot closes in June
- WG12 – Joint w/ AMCA 201 – Revising SE in AMCA 201
- WG13 – Jet Fans revising sound standards
- WG14 – 13348 Tolerance – New scaling proc.
- WG15 – TR on Computation Performance Prediction for Fans

4. CAISEMS (Coordination and Alignment of IEC and ISO Standards of Energy Efficient Electric Motor Driven Systems)

Attachment 3: Research Subcommittee Report

TC 5.1 Fans Research

Meeting notes June 1, 2020

1. RP 1769 update - Tim Mathson
 - Test setup is ready
 - Drive part donor identified
 - Tim will schedule a PMS meeting to review the updated test plan.
 - Then schedule an on-site PMS meeting later in the summer
2. WS 1835 update – Brad Cochran
 - 2 bidders
 - TC 5.1 does not vote on the bids since we are not the sponsoring TC
3. WS 1829 - Kim Osborn
 - (latest draft version 10-25-2019)
 - AMCA has restarted the fan array committee (AMCA 270)
 - AMCA and AHRI are not interested in co-sponsorship
 - Hold off on WS to see if it can support AMCA 270
 - Very likely the WS will be cancelled
4. Terminated the EC fan motor PTAR.
 - More suitable for fan manufacturer research than ASHRAE
5. Possible Fan Subcommittee RTAR solicitation meeting? There were no suggestions at the meeting. Reminder to contact Brian Reynolds with potential fan research topics.

At this point there are not any new RTAR's. There does not seem to be any need for fan Research that would be suitable for ASHRAE in 2020-21.

Submitted by Brian Reynolds

TC 5.1 Fans Research Subcommittee Chair



Attachment 4: Long Range Planning Subcommittee

Long range planning TC 5.1

Draft for TC discussion and approval by vote

The Long Range Planning Subcommittee is charged with setting long range goals for our TC. It regularly solicits opinions from all concerning the future needs of fan designers and users. Presently pending ideas are:

1. Monitor development of CFD methods for aeroacoustic and evaluate their suitability for fan sound prediction in ASHRAE.
2. Periodic publications in concert with ASHRAE Journal and other strategic partnerships; include TC 5.6 (control of fire and smoke), other section 5 TCs, and others such as TC 1.11 (motors and motor controls)
3. Support or endorse external training courses based on strategic partnerships.
4. Initial creation of several **FAQ**, then maintain those and add more.
5. Support or endorse external conferences and papers based on strategic partnerships.
6. Based on strategic partnerships, co-development or sponsorship of new or revised standards or guidelines that directly relate to fans.