

DRAFT Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 12 Jan. 2019, 8:00 am – 12:00 pm

Atlanta, GA

Votes: Font is Bold, Black
Task Groups: Font is Bold, Blue
Action Items: Font is Bold, Red

©2012 ASHRAE. All rights reserved. This is a draft document for review only by the cognizant ASHRAE groups and other designated reviewers and is not intended for distribution to any private interests, individuals, or third parties that are not designated as ASHRAE reviewers for this document. This document may not be distributed in whole or in part in either paper or in digital form without the express permission of the chair of the committee originating this document. The appearance of any technical data or editorial material in this draft document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, design, or the like, and ASHRAE expressly disclaims same.

1) Call to Order – 8:01

a) Introductions

b) Roll call & quorum confirmation

Kathleen Owen, Chair Y

Todd A McGrath, Vice Chair NonVoting

Leslye Sandberg, Secretary Y

Zied Driss Y

Dr. Dara Marina Feddersen Y

Kevin Kwong Y

Dr. Sanjeev K Kingorani Y

Marisa Jimenez Segovia Y

Kevin Morrow N

Donna M Sullivan N

Jim Rosenthal Y

Dr Rahul Bharadwaj Y

Robert B Burkhead Y

Richard K Chesson Jr, Chair Research Subcommittee Y

Dr. Carolyn Kerr (Gemma) Y

Dr. John Zhiqun Zhang N

Joe Fly III, Organizational Vote NAFA Y

Len Duello N

13Y Voting Member present

2) Review of this agenda – ok

DRAFT Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size

Saturday, 12 Jan. 2019, 8:00 am – 12:00 pm

Atlanta, GA

- 3) Review of “Draft” Houston 2018 Minutes – Jim Rosenthal Moved Gemma 2nd **12Y 0N 1Abstention – Chair nonvoting**
- 4) Chair Remarks – if you have signed up to be a “nonvoting” member of the committee you will receive everything from the committee. Without that you will not. Also – you must update your contact information with ASHRAE to stay up to date with communications.

ISO16890 still under discussion. PM Efficiency change proposal from Mike Corbat –to be presented today.
- 5) Membership – NAFA organizational voting person updated. Roster changes typically take place July after summer meeting. If you want to come on as a voting member – please turn in an application. This **MUST** be done for chair to move you from nonvoting to voting. Committee must maintain a balance so multiple people from same company may not sit at same time. Sign in sheets are routing.
- 6) Website – Todd McGrath 52.2 site is up. Todd will be able to load the minutes for all to see. Other presentations will be available with the approval of presenter. See link below
 - a) <http://sspc522.ashraepcs.org/>
- 7) Liaison Report – none present
- 8) ISO 16890
 - a) Changes in fibers during IPA conditioning - Crystal Jolliffe –

Questions for further research and study:
 - What studies were done to show how isopropyl alcohol changes the media?
 - What media attributes could be studied besides efficiency?
 - Fiber size
 - Density
 - Thickness
 - Stiffness
 - Basis weight
 - Charge
 - Can the differences here be explained by
 - variation in testing?
 - variations in the media?

From the group: Can this be repeated? Can the samples be retested? No same samples are gone. Is the change permanent? Some of the changes may be at the fiber level - can this be tested? The effects of drying? How many fibers were evaluated? (SEM is 10K data points) Temperature changes? Vapor changes? Condensation? Instrument calibration? Has anyone else seen pressure drop changes? Were the medias similar chemical base? Change in basis weight?

Don suggested that pressure drop changes haven't been seen in completed filters through testing to date. Chrystal mentioned not a lot of that data is shared so an RTAR to discover wider published data is her request.

Move by Chair to evaluate whether or not discussion of ISO16890 should still be a topic of discussion. This was the last of the formal presentations to the committee on the subject. If nobody else has discussions/presentations should the topic be tabled? Removed from the agenda?

DRAFT Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
Saturday, 12 Jan. 2019, 8:00 am – 12:00 pm
Atlanta, GA

Jim Rosenthal made a motion that we discontinue discussion on ISO16890 topic unless asked by ASHRAE. Bob Burkhead seconded. From the floor – what about others not “ASHRAE”? Jim Rosenthal withdraws the motion.

Chair will drop the topic from the agenda.

9) Open Action Items

- a) Air Density Equation addendum - went through publication for public review – no comments – it is up on the website with changes – 52.2 addendum 2017
- b) PM and OPC measurements – Vijay has done some analysis of inlet size and PM. Preliminary results suggest new avenues for calculation going forward. Not an RTAR request at this time.
- c) Improving Charge Neutralization – Bruce McDonald – presentation on neutralization. See attached presentation and support documents.
- d) PM efficiency Change Proposal –
 - i) Mike Corbat – Other committees using 52.2 output and citing it in standards are not happy with MERV. They are interested in a PM2.5 efficiency number for health concerns. Note: It has been discovered that many are equating the E2 as a representation of PM 2.5 which it is not. So as a committee 52.2 is asked to come up with a PM efficiency to cite in their standards.
 - ii) Discussion – Chair clarified what a change proposal was and how it works. Committee is required to respond to the proposal. Also noted that 62.1 and 62.2 have stated that they must have a ‘PM’ efficiency – those letters must be in it. They need the PM2.5 level, but would like PM10 and PM 1.0 efficiencies in addition. From the floor – the proposed MERV table doesn’t match up to the E-1 to E-3 calculation. Consensus from the floor is that the existing MERV table should remain and the PM_{EST} calculation could be added. Per Bob Burkhead it’s easy enough put additional calculations onto a test result. Some dissension about what/how the calculation is done. Per Jim Rosenthal – if they need a way to estimate PM efficiency from the test add a calculation to the standard that everyone can use IF they want such a number.

Chair summary – feel from the room is mostly people agree that there could be a calculation added but no change to the MERV table. Flat distribution as proposed. **Matt Middlebrook, Zied Driss, Bob Burkhead, Jenny Berens volunteer to work on this with Mike to revise the request.**

Committee must reply formally that they accept with revisions. Barney B will help clarify and push for fast answer – need revisions do go with the acceptance form back to ASHRAE.

10) New Business

Negative Pressure Dust Feeding Ducts – Kathleen Owen – is anyone interested in this? No response

Bob Burkhead – chamber testing Micro balance QCM new instrument – this arena is work in progress but is likely to contribute to PM data going forward.

Leslye Sandberg stepping down as secretary; Kevin Kwong taking the place.

11) Adjourn Main meeting Moved Jim Rosenthal Second Gemma Kerr

12) SSPC 52.2 Research – Keith Chesson – went straight into the research meeting

- a) Get ASHRAE to fund an official comparison between 52.2 and ISO16890?

DRAFT Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
 Saturday, 12 Jan. 2019, 8:00 am – 12:00 pm
 Atlanta, GA

Since the committee has removed from the agenda do we want to continue? Do we want an RTAR? Before spending ASHARE money should we try to get comparative data from companies just to see what is available now. Ask chair of TC2.4 Mike Corbat and Kathleen as chair of SPC52.2 to send an email to companies asking for data they can share. Camfil (Don Thornburg), Freudenberg Filtration Technologies (Jenny Berens), AAF (Jonathan Rajala), Filtration Group (Phil Winters) at the meeting have offered. If we can't get adequate data that way, then look to research. **Keith Chesson will collect the data. Christine Sun willing to champion this project with Kathleen's help.**

IPA Vapor changes – 2014 there was discussion on this talking about doing round robin testing. There was interest in impact on different fibers back then. Tabled while waiting for ISO standard to complete. Are we interested in reopening discussion on this topic for research? **Crystal willing to work on it but hasn't done an RTAR proposal before...Phil Winters will help with the RTAR, Jon Rajala will help. Marquita Beard (eSpin) also volunteered.**

Another interest in 2014 comes back with Bruce's presentation on neutralization. Bruce can help but not champion all himself. Research to improve the standard. Nobody stepped forward as champion.

Update on 1784 – Geoff – received bids for round robin on 52.2 – group will meet today to make recommendations to TC2.4 for ASHRAE on Tuesday. TC2. If funded it should start this summer.

13) Adjourn Research 11:12

Attendees:

Name	Company	Name	Company
Joel Davis	AAF Flanders	Thomas Arnold	Puget Sound Navel Shipyard
Jonathan Rajala	AAF Flanders	Chris Stewart	Puget Sound Navel Shipyard
Satish Dinakaran	AAF Flanders	Robert Kellogg, Engineer	Puget Sound Navel Shipyard
Vijay Kumar	Aerfil	Brandon Boor	Purdue University
Andrew Goodby	Ahlstrom	Randy Bramen	Quality Filters, Inc.
Chris Stone	AHRI	Jim Hanley	Retired
Marisa Jimenez de Segovia	Air-Care de Mexico	Bruce McDonald	Retired
Thad Ptak	AO Smith	Mark Tucker	SWM Intl
Bob McAfee	Berry Global	Stevan Brown	Tex Air Filter
Bob Burkhead	Blue Heaven Technologies	Jim Rosenthal	Tex Air Filters
Bobby Singer	Blue Heaven Technologies	Phil Maybee	The Filterman
Connie Burkhead	Blue Heaven Technologies	Ray Rite	Trane
HE Barney Burroughs	BWCI	Tim Johnson	TSI
Zied Driss	Camfil	Oludami Adesanya	United Technologies
Don Thornburg	Camfil	Kevin Kwong	LMS Technologies
Daniel Vangilder	Camfil APC	Kia Kiantaj	LMS Technologies
Alex Wells	Camfil APC	Rahul Bharadwaj	Lydall
Randi Huckaby	Camfil APC	Geoff Crosby	Lydall

DRAFT Meeting Minutes

ASHRAE SSPC 52.2

MOT - General Ventilation Air-Cleaning Devices for Removal Eff. by Particle Size
 Saturday, 12 Jan. 2019, 8:00 am – 12:00 pm
 Atlanta, GA

Jim Benson	Camfil Power Systems	Trey Fly	NAFA
Gemma Kerr	Canada	Michelle Czosek	NAFA
Kyung-Ju Choi	Clean & Science	Kathleen Owen, Chair	Owen Consulting
Tim Ahn	Clean & Science	Dan Haas	Parker Hannifin HVAC
Yeo	Clean & Science	Keith Chesson, Research Chair	Parker Hannifin HVAC
Jeong Hwan Shin	Clean & Science	Christine Sun	FTI
Vivek Gaur	Columbus Industries	Todd McGrath, ViceChair	Glasfloss
Chrystal Jolliffe	Columbus Industries	Monroe Britt	Green Leaf
Chris Fischer	Donaldson	Dara Feddersen	H & V
Jayesh Doshi	eSpin Technologies	Donna Kasper	H & V
Marguita Beard	eSpin Technologies	Jay Reese	JBR Associates, LLC
Mustafa Ozturk	Fibrix	John Simenson	Johns Manville
Matt Middlebrooks	Filtration Group	Jeni Wong	Johns Manville
Phil Winters	Filtration Group	Sanjeev Hingorami	Lennox Industries
Jenny Berens	Freudenberg	Henry Greist	Lennox Industries
Thomas Caesar	Freudenberg	Leslye Sandberg, Secretary	Permatron
Kia Kiantaj	LMS Technologies		

Attachments:

Changes in fibers during IPA conditioning - Chrystal Jolliffe

Improving Charge Neutralization – Bruce McDonald – presentation on neutralization and support documents.

PM efficiency Change Proposal – Mike Corbat