

MEETING MINUTES
TC 2.3 - Gaseous Contaminants/Removal Equipment
Standards Subcommittee Meeting
Monday, June 27th 2011, 6:00 p.m.
Hilton Bonaventure, Fontaine Salon G (L), Montreal, QC, Canada

The meeting was called to order by Chair Paolo Tronville. Present were:

Name

- 1) Paolo Tronville (Chair)
- 2) Rupert Alfiler
- 3) Charlene Bayer
- 4) Barney Burroughs
- 5) Christopher Campion
- 6) Kyung-Ju Choi
- 7) Mick Flom
- 8) Gemma Kerr
- 9) Chang-Seo Lee
- 10) Bill Lull
- 11) Ashish Mathur
- 12) Matt Middlebrooks
- 13) Kathleen Owen
- 14) David Schaaf
- 15) Brad Stanley
- 16) Al Vatine
- 17) Christine Sun

1) Update on standards within scope of ASHRAE TC 2.3

- a) GPC 27P “Procedures for measurement of gases in indoor environments” - *Bill Lull*
- the Guideline is still in preparation, about half completed. The committee ran a useful Forum during the first part of the meeting. Probably about 30 people attended and provided feedback on material needed in the Guideline.
- b) SPC 145.2 “Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices” - *Kathleen Owen*
- the galley proofs have been submitted and the standard will be published, probably within 3 months. Barney Burroughs recommended that the Committee try to find ways to publicize the document. Manufacturers should help. Also would be good to run a Seminar or Forum on it. The Committee has applied to become an SSPC.
- c) ASHRAE Std.145.1-2008 “Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Loose Granular Media” – *Kathleen Owen*
 - i) TC 2.3 recommended to revise 145.1 in Las Vegas (January 2011). The three year date for Standard 145.1-2008 is August 18th 2011.
- It was recommended that this action item be tabled until ASHRAE has decided whether the SPC 145 Committee should be converted to an SSPC.

2) ASHRAE Unofficial Liaisons

- a) TC 2.4 “Particulate Air Contaminants and Particulate Contaminant Removal Equipment” – *Gemma Kerr*
- there was discussion at the SSPC 52.2 meeting about the ISO TC 142 Working Group 3 decision to move the ISO document in a different direction from 52.2. Some people felt that this provided an opportunity to improve 52.2, while others saw it as a threat to the continued existence of 52.2.
- b) TC 2.9 “Ultraviolet Air and Surface Treatment” – *Matt Middlebrooks*
 - i) SPC 185.1 “Method of Testing UVC Devices for use in air handling units or air ducts to inactivate airborne microorganisms”
- the standard is ready for public review. The test method is somewhat controversial because of the

- choice of challenge microbe. Probably the test can be carried out in a 52.2 test rig.
- ii) SPC 185.2 “Method of Testing Ultraviolet Lamps for Use in HVAC&R Units or Air Ducts on Irradiated Surfaces”
 - the test method covers determination of irradiance levels needed for inactivating microbes. It is not as far advanced as 185.1, but it is simpler and less controversial because no micro-organisms are involved.
 - c) TC 9.11 “Clean Spaces” – *Matt Middlebrooks*
 - the Design Guide is the only item that contains reference to gaseous contaminants. This is being written by a consultant, and no information on the content is available yet. Matt will ensure that he reviews this document.
 - d) SSPC 62.1 “Ventilation and IAQ High Rise Buildings” – *Chris Muller*
 - Brad Stanley attended the Admin meeting. An idea was put forward for an addendum that would use the Ventilation Rate Procedure for design, but would identify and monitor contaminants (such as ozone) indoors during operation. They plan to hold a forum on the IAQ Procedure and how to put it in code language for operational use..
 - e) SSPC 62.2 “Ventilation and IAQ Low Rise Buildings” – *Barney Burroughs*
 - no gaseous contaminants are being discussed by the Committee.

3) Information Exchange

- a) AFS – *KJ Choi*
 - Fall Topical Conference: “New Energy Era”, October 17-20, 2011, at the Hilton Westchase, Houston TX.
 - Annual Conference: “Sunshine Environment”, June 4-7, 2012, at the Embassy Suites, Boca Raton FL.
- b) ASTM D22.05 “Air Quality” SC “Indoor Air” – *Chris Muller*
 - there was no update
- c) ASTM D28.04 “Activated carbon” SC “Gas Phase Evaluation Tests” – *Chris Muller*
 - Brad Stanley attended the meeting. There was nothing new to us happening. They are now looking at carbon for mercury removal from air. However, it was mostly not HVAC applications of carbon use.
 - i) D6646 - 03(2008) “Standard Test Method for Determination of the Accelerated Hydrogen Sulfide Breakthrough Capacity of Granular and Pelletized Activated Carbon”
 - there was no update
 - Note that ASTM standards are not international or even national within the USA (ANSI is the USA national standards organization)
- d) CEN/TC144 “Tractors and machinery for agriculture and forestry” – *Paolo Tronville*
 - i) EN 15695-2:2009 “Agricultural tractors and self-propelled sprayers - Protection of the operator (driver) against hazardous substances - Part 2: Filters, requirements and test procedures”
 - there was no update
- e) CEN/TC 195 “Air filters for general air cleaning” WG 5 “Gas phase filters” – *Paolo Tronville*
 - WG5 is doing nothing except following ISO activity. Their approvals of documents happen in parallel with ISO.
- f) CEN/TC 346 “Conservation of cultural property” WG 4 “Environment” – *Chris Muller*
 - Paolo heard that WG4 is trying to avoid using permanganate-impregnated alumina, and is always recommending carbon instead because it is cheaper, in spite of the fact that carbon does not remove some chemicals that PIA does remove.
- g) CEN/TC 386 “Photocatalysis” – WG2 “Air Purification” – *Paolo Tronville*
 - there was no update
- h) ISO/TC 22/SC7/WG3 “Air and oil filters” – *Paolo Tronville*
 - i) ISO 11155-2: 2009 “Road vehicles - Air filters for passenger compartments - Part 2: Test for gaseous filtration”
 - there was no update
- i) ISO/TC 142 “Cleaning Equipment for Air and Other Gases” WG8 “Gas-phase air cleaning devices” – *Matt Middlebrooks*
 - i) DIS 10121-2 “Test methods for assessing the performance of gas-phase air cleaning media and

- devices for general ventilation - Part 2: Gas Phase Air Cleaning Devices (GPACD)” (public review ends June 20th 2011)
- this has been approved at the Draft International Standard (DIS) level, and it is expected that a final Draft International Standard (FDIS) will be available for comment soon.
- ii) CD 10121-1 “Test methods for assessing the performance of gas-phase air cleaning media and devices for general ventilation - Part 1: Gas Phase Air Cleaning Media (GPACM)” (two months ballot ends July 15th)
 - voting on the Committee Draft is not complete yet.
 - iii) US Technical Advisory Group (TAG) to ISO/TC 142 WG2 needs to appoint a new Convener
 - this is not related directly to gaseous contaminants, but is an important issue for the future effectiveness of WG2.
 - j) ISO/TC146 “Air quality” /SC6 “Indoor air” – *TBD*
 - there was no update
 - k) ISO/TC 205 “Building environment design” – *TBD*
 - i) ISO 16814:2008 “Building environment design - Indoor air quality - Methods of expressing the quality of indoor air for human occupancy”
 - there was no update
 - l) ISO/TC 206 “Fine ceramics”/WG 37 “Test methods for photocatalytic materials”
 - i) ISO 22197-x:2007 “Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials
 - (1) Part 1: Removal of nitric oxide
 - there was no update
 - (2) Part 2: Removal of acetaldehyde
 - there was no update
 - (3) Part 3: Removal of toluene
 - there was no update
 - (4) Part 4: Removal of formaldehyde
 - there was no update
 - (5) Part 5: Removal of methyl mercaptan
 - there was no update
 - m) ISO/TC209 “Cleanrooms and associated controlled environments” – *Chris Muller*
 - i) ISO 14644-8:2006 “Classification of airborne molecular contamination” (under revision)
 - there was no update
 - ii) ISO/DIS 14644-10 “Cleanrooms and associated controlled environments - Part 10: Classification of surface chemical cleanliness”
 - there was no update
 - n) ITRI (Taiwan) – *Chris Muller*
 - there was no update

4) Old Business

- a) Filter Energy Rating/Labeling Guideline/Standard
 - an ASHRAE Multi-Task Group (MTG) has been created to deal with this. TC 2.3 has a representative (Nick Agopian) who will participate in the MTG. The TC needs to select and vote on an alternate representative to participate if Nick is not available at any time.
- b) Life Cycle Cost Calculation Guideline/Standard
 - at some point this will need to be addressed, and this item should be retained on the Agenda.

5) New Business

- a) How can ASHRAE 145.x and ISO 10121-x be co-ordinated? Just ignore each other or something else?
 - This is a good question, and generated much discussion. It was noted that cultural usages may drive Standard 145 away from ISO standard. There are some political issues as well. Some countries will always reject ISO if it diverges too far from their national standard. The bottom line is that we do not know what will happen because this situation is new and we are facing it for the first time. Paolo

proposed an action item to prepare a table showing the difference between the two standards. Kathleen Owen will co-ordinate preparation of the Table. People were requested to read Standard 145.2 and DIS 10121-2, and send comments to her.

b) Protocol for Evaluation of Portable Air Cleaners (NRC Canada)

- this item is on the Agenda to alert the US TAG for TC142 in the hope that they will support pursuit of a portable air cleaner standard by TC142. The protocol covers testing of stand-alone air-cleaners (mainly used in residences) against both particulate and gaseous contaminant challenges in a large environmental chamber. In addition to the contaminant testing, air flow, electricity usage, ozone emission and noise are measured. Chang-Seo Lee commented that Korea already has a similar protocol, and France has just approved one.

6) The meeting was adjourned at 7:30 pm.