

NATIONAL HYDROGEN AND FUEL CELLS CODES AND STANDARDS COORDINATING COMMITTEE

Wednesday, December 1, 2010

TIME: 3:00 – 4:30 pm (Eastern Daylight Time)

CALL-IN NUMBER: (641) 594-7000 Passcode: 824011#

WEBINAR: <https://www1.gotomeeting.com/register/524293056>

- 1 Roll Call
See list at end of document
- 2 Review of Anti-Trust Guidelines
http://www.usfcc.com/members/antitrust_guidelines_rev.pdf
Robert Wichert reviewed the guidelines
- 3 Review of/Corrections to November Draft Minutes (attached and can be found at www.hydrogenandfuelcellsafety.info/)
Minutes were accepted as written without comment
- 4 DOE/HQ Update Antonio Ruiz
No update
- 5 Calendar of C&S Events and Fuel Cell Safety Information Kelvin Hecht
http://www.fuelcellstandards.com/calendar_new.html
Robert reviewed the calendar, additions will be emailed to Kelvin Hecht
<http://www.hydrogenandfuelcellsafety.info/> Karen Hall
Brian Schorr reviewed the calendar
- 6 Discussion Topics Discussion Leader

Hydrogen Fuel Quality Jim Ohi
No Update

AGENDA

Continued

ASTM

Jackie Button

Committee meetings will be held next week in Jacksonville, FL

ASTM D03.14 Hydrogen and Fuel Cells Update

Work Item	Title	Constituents (DL)	Update
4548	Standard Test Method for Determination of Trace Contaminants in Hydrogen and Related Fuel Cell Feed Gases	CO ₂ (0.5 ppm), nitrogen (5 ppm), argon (1 ppm), oxygen (2 ppm), and water (1 ppm)	In publishing
5847	Standard Practice for Sampling of High Pressure Hydrogen and Related Fuel Cell Feed Gases	Gaseous sampling	2 Negatives to be addressed
6527	Standard Test Method for Ion Selective Electrode Based Determination of Ammonia in Hydrogen and Other Fuel Cell Feed Gases	Ammonia (unknown)	N/A
6624	Standard Test Method for Determination of Formaldehyde and Other Carbonyl Compounds in Hydrogen and Other Fuel Cell Feed Gases	Formaldehyde (unknown)	N/A
9211	Standard Test Method Ion Chromatography Based Determination of Cations in Hydrogen and Other Fuel Cell Feed Gases	Formic Acid (low ppb to ppm)	<i>Published official item: D7550-09</i>
9688	Standard Test Method for Sampling of Particulate Matter in High Pressure Hydrogen used as a Gaseous Fuel with an In-Stream Filter	Particulate sampling	<i>Published official item: D7650-10</i>
10196 (27163)	Standard Test Method for Determination of Ammonia and Trace Water in Hydrogen and Other Gaseous Fuels by Infrared Spectroscopy	Ammonia, CO ₂ , CO, formaldehyde, formic acid, and water (defined by EPA 40 CFR part 136 Appendix A "meet detection limits of SAE TIR J2719")	In publishing: D7653-10
21162	Standard Test Method for the Characterization of Particles from Hydrogen Fuel Streams by Scanning Electron Microscope	Particulates	N/A
21597	Standard test method for microscopic measurement of particulates in hydrogen fuel	Particulates	In publishing
21611	Standard test method for gravimetric measurement of particulates in hydrogen fuel	Particulates	<i>Published official item: D7651-10</i>
22378	Determination of Total Hydrocarbons (C1 basis) in Hydrogen by Total Hydrocarbon Analyzer (THC)	Total hydrocarbons (0.1 ppm)	1 negative to be addressed
23815	Determination of Total Halocarbons contained in Hydrogen and other gaseous fuels	Total halogenated compounds ("halocarbon determination requirements contained in SAE J2719" 0.1 ppb)	1 negative to be addressed

AGENDA

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NIST

Juana Williams does not have an update

SAE J2719

Mike Steele provided an update. Standard is ready to go to ballot.

ISO TC 197 WG 12

No update

ISO TC 197 WG 14

The group has met and drafted a committee draft matrix that will be released for review.

Fuel Cell Forklifts

Aaron Harris provided an update. CSA HPIT-1 and CHMC work has been finalized pending documents being put in place.

Tank Testing

Dan Dedrick provided an update. Tank testing is active and on-going. End of March timeframe for testing completion. No failures have been observed.

CSA

Josip does not have any updates. The new work item (IEC 62282-3-201) proposal closes on March 4th

NFPA 52/55

Marty Gresho provided an update. Interim cycle pre-ROP meeting for NFPA 52 the proposal was submitted to remove the H2 sections from NFPA 52. As a result, the chair wrote a letter to change the scope of NFPA 52 to remove H2. It will be voted on and then will go to the NFPA committee will approve or reject. NFPA 55 deadline passed last week. There were 153 proposals. NFPA 2 will be issued this month and will be available for use in early 2011.

Report on Workshop at Sandia

Dan Dedrick provided an update. There were several sessions held: Open Session on R&D needs, and a materials compatibility workshop. Technology development, codes and standards, and research needs were discussed. Proceedings will be distributed in the next few weeks and will be provided to participants as well as the DOE web site. An additional session was held related to system and component qualifications. Key barriers and actions to be taken were discussed for the qualification of components. Validation testing, regulations, certification process issues, and materials R&D were identified as areas for discussion. The proceedings will also be sent to the participants, as well as posted on the DOE Web site.

Report on Workshop for 70 MPa Fueling Connector

No report

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Codes and Standards Organizations

This is the opportunity for CDOs, SDOs, Panels, Committees, etc. to provide updates and issues to the group.

Juana Williams

Mike Steele

Jim Ohi

Robert Wichert

Aaron Harris

SNL

Josip Novkovic

Paul May

SNL

Attendee

All

AGENDA

Continued

IEC TC 105 Update

Kelvin Hecht

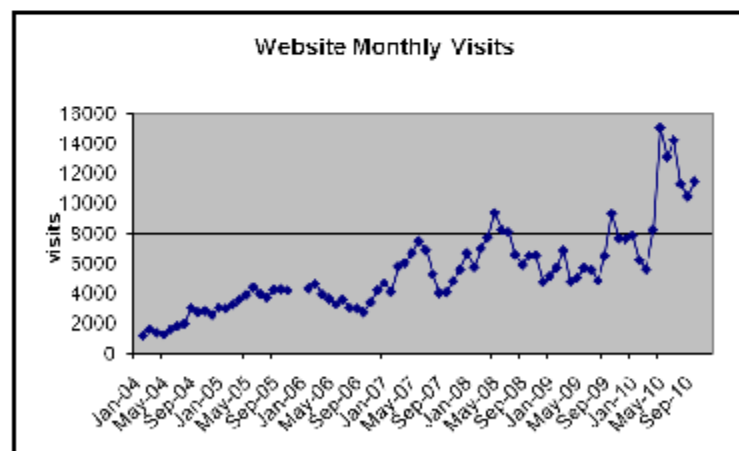
December 2010 Meeting
of the
DOE Hydrogen
Codes & Standards Coordinating Committees
(DOE/FCHEA)

Input for Agenda & Minutes
Kelvin Hecht

TC105 – Fuel Cell Technologies

- **WG#3 (IEC 62282-3-1 Ed.2, Stationary Fuel Cells-Safety)**
 - Vote on CDV by April 15, 2011.
- **WG#4 (IEC 62282-3-2 Ed.2, Stationary Fuel Cells-Performance)**
 - Vote on CDV by March 25, 2011
- **WG#5 (IEC 62282-3-3 Ed.2, Stationary Fuel Cells – Installation)**
 - Comments on CD by January 14, 2011
- **WG#6 (IEC 62282-4-100 Ed.1, Forklifts)**
 - Vote on NWIP by March 4, 2011 – USTAG by February 4th)
- **WG#7 (IEC 62282-5-1 Ed.2, Portable Fuel Cells –Safety)**
 - Vote on CDV by February 4, 2011
- **WG#8 (IEC/PAS 62282-6-150, Micro Fuel Cells – Safety – Water reactive compounds in indirect PEM fuel cells)**
 - Vote on NWIP by February 4, 2011.
- Meeting December 13-14; Frankfurt, Germany; NWIP –EN50465 (Heating Appliance)

www.fuelcellstandards.com



AGENDA

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ISO TC 197 Update

Jill Thompson

December 2010 Update ANSI-Accredited U.S. TAG for ISO/TC 197, *Hydrogen technologies*

1. Ballots closed – awaiting results

- Systematic review of **ISO 16110-1:2007**, *Hydrogen generators using fuel processing technologies — Part 1: Safety*
The U.S. TAG voted to *confirm*. The ISO ballot terminated on June 15; official results of the vote have not been circulated.

2. Results from closed ballots

- **N472**, proposal to revise **ISO/TR 15916:2004**, *Basic considerations for the safety of hydrogen systems*
This proposal was approved and has been allocated to a new working group, WG 16, *Basic considerations for the safety of hydrogen systems*.

3. Upcoming meetings

- WG 15, *Gaseous hydrogen — Cylinders and tubes for stationary storage*
December 7-8 in Paris, France
- WG 6, *Gaseous hydrogen and hydrogen blends - Land vehicle fuel tanks* (joint with ISO/TC 22 and ISO/TC 58/SC 3)
December 16-17 in Vancouver, British Columbia

4. Recent meetings & events

- WG 11, *Gaseous hydrogen - Fuelling stations*, TG 1
Teleconference on November 4
- 70 MPa Hydrogen Vehicle Fueling Connector Workshop
November 22-23 in Germany
- Chair advisory group (CAG) on hydrogen storage
November 25 in Paris, France

AGENDA

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Robert Wichert - United Nations Subcommittee on Dangerous Goods will be meeting this week to make decisions on issues that have been presented over the past couple of years.

International Civil Aviation Organization met a few weeks ago. Fuel Cell cartridges and fuel cells were discussed and those issues will be clarified in January. Information and status of both of these issues can be found at the fuel cell council web site at www.usfcc.com.

7 Open Discussion & Other Issues

Tom Joseph reminded the group of the planned workshop in India next month. He will provide further information to the group as the agenda becomes available.

Next meeting: Wednesday, January 5th

Members Present:

Aaron Harris, Nuvera Fuel Cells, 617.245.7592	aharris@nuvera.com
Anthony Amato, ASME, 212.591.7003	amatoa@asme.org
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Bruce Johnson, ICC, 1.888.422.7233 X7276	BEJohnson@iccsafe.org
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