

NA Facilities and Gases Committees Meeting Minutes

SEMICON West 2013

Tuesday, 9 July, 2013, 09:00 AM - 12:00 PM

San Francisco Marriott Marquis, San Francisco, CA

Next Committee Meeting

October 29, 2013, SEMI HQ, San Jose, CA in conjunction with NA Fall Standards Meetings. Check www.semi.org/standards for latest update.

Attendees:

SEMI Staff

Kevin Nguyen – SEMI North America

Natalie Shim – SEMI Korea

Cher Wu – SEMI Taiwan

Co-chairs – Steve Lewis (CH2M Hill) and Tim Volin (Parker Hannifin)

Table 1 – Meeting Attendees

<i>Last Name</i>	<i>First Name</i>	<i>Company</i>
Balson	Scott	Swagelok
Chen	Yanli	UCT
Colquhoun	David	BriskHeat
Crockett	Mark	MEMSmart
Crockett	Alan	KLA-Tencor
Jung	Peter	Mesa Labs
Kiikvee	Bill	AP Tech
Milburn	Matt	UCT
Mohammed	Bala	Applied Materials
Ripkowski	Mark	CONSCI
Saleem	Mohamed	Fujikin of America
Savadkouhi	John	Brooks Instrument
Stubbs	Bill	Parker Hannifin
Wagner	Mathew	Pall Corporation

Table 2 – Leadership Changes

<i>Group</i>	<i>Previous Leader</i>	<i>New Leader</i>
NA Gases Committee		Mohamed Saleem (Fujikin)

Table 3 – Ballot Summary

Passed ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

Failed ballots and line items were returned to the originating task forces for re-work and re-balloting.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5505A	Revision of SEMI C58-0305 (Reapproved 0211) with Title Change to: Specifications for Hydrogen	Passed superclean
5577	Reapproval of SEMI F105-0708, Guide for Metallic Material Compatibility in Gas Distribution Systems	Failed and rebalot
5520A	Revision of SEMI F69-0708, Test Methods for Transport and Shock Testing of Gas Delivery Systems	Passed superclean

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5568	Reapproval of SEMI C14-95 (Reapproved 0309), Test Method for Particle Shedding Performance of 25 cm Gas Filter Cartridges	Passed superclean
5578	Reapproval of SEMI F36-0299 (Reapproved 1104), Guide for Dimensions and Connections of Gas Distribution Components	Passed superclean
5504A	Revision of SEMI E52-0912, Practice for Referencing Gases, Gas Mixtures and Vaporizable Materials Used in Digital Mass Flow Controllers	Passed as balloted
5569	Revision of SEMI E12-0303 (Reapproved 0309), with Title Change to: Guide for Standardized Pressure, Temperature, Density, and Flow Units Used in Mass Flow Meters and Mass Flow Controllers	Passed superclean
5571	Reapproval of SEMI E56-0309, Test Method for Determining Accuracy, Linearity, Repeatability, Short Term Reproducibility, Hysteresis, and Deadband of Thermal Mass Flow Controllers	Failed and reballot
5573	Reapproval of SEMI E68-0997 (Reapproved 0309), Test Method for Determining Warm Up Time of Mass Flow Controllers	Passed superclean
5574	Reapproval of SEMI E69-0298 (Reapproved 0309), Test Method for Determining Reproducibility and Zero Drift for Thermal Mass Flow Controllers	Passed superclean
5570	Revision of SEMI E51-0200, Guide for Typical Facilities Services and Termination Matrix	Failed and reballot
5572	Revision of SEMI E6-0303, Guide for Semiconductor Equipment Installation Documentation	Failed and reballot
5575	Revision of SEMI E70-1103, Guide for Tool Accommodation Process	Passed as balloted
5576	Reapproval of SEMI E76-0299, Guide for 300 mm Process Equipment Points of Connection to Facility Services	Passed as balloted
5579	Reapproval of SEMI F49-0200 (Reapproved 1108), Guide for Semiconductor Factory Systems Voltage Sag Immunity	Passed superclean
5580	Reapproval of SEMI F50-0200 (Reapproved 1108), Guide for Electric Utility Voltage Sag Performance for Semiconductor Factories	Passed superclean

Table 4 – Authorized Ballots

<i>#</i>	<i>When</i>	<i>SC/TF/WG</i>	<i>Details</i>
5609	Cycle 5-2013	Gases Specification TF	Revision of SEMI C3.24.0309, Specification for Sulfur Hexafluoride (Sf6) in Cylinders, 99.97% Quality
5611	Cycle 5-2013	Gases Specification TF	Reapproval of SEMI C3.20-0309, Specification for Helium (He), in Cylinders, 99.9995% Quality
5570A	Cycle 6-2013	Facilities Committee	Revision of SEMI E51-0200, Guide for Typical Facilities Services and Termination Matrix
5572A	Cycle 6-2013	Facilities Committee	Revision of SEMI E6-0303, Guide for Semiconductor Equipment Installation Documentation
5571A	Cycle 6-2013	Mass Flow TF	Revision of SEMI E56-0309, Test Method for Determining Accuracy, Linearity, Repeatability, Short Term Reproducibility, Hysteresis, and Deadband of Thermal Mass Flow Controllers
5444	Cycle 5-2013	Materials of Construction for Gas Delivery Systems TF	Revision of SEMI F72, Test Method for Auger Electron Spectroscopy (AES) Evaluation of Oxide Payer of Wetted Surfaces of Passivated 316L Stainless Steel Components
5577A	Cycle 5-2013	Materials of Construction for Gas Delivery Systems TF	Revision of SEMI F105-0708, Guide for Metallic Material Compatibility in Gas Distribution Systems

Table 5 – Authorized Activities

#	Type	SC/TF/WG	Details
5610	SNARF	Mass Flow TF	Auxiliary Information: Codes of Gases, Gas Mixtures and Vaporizable Materials Used in Digital Mass Flow Controllers
5609	SNARF	Gases Specification TF	Revision of SEMI C3.24.0309, Specification for Sulfur Hexafluoride (SF6) in Cylinders, 99.97% Quality
5611	SNARF	Gases Specification TF	Reapproval of SEMI C3.20-0309, Specification for Helium (He), in Cylinders, 99.9995% Quality

Note: SNARFs and TFOFs are available for review on the SEMI Web site at:

<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

Table 6 – Previous Meeting Actions Items

Item #	Assigned to	Details	Status
1011 -1	David Colquhoun (BH Thermal)	To submit a SNARF for a new document for a Guide for Materials with Temperature Range	Closed
0413-1	Kevin Nguyen (SEMI Staff)	Look into the SEMI Regulations for other alternative to regional standards.	Closed.
0413-2	Kevin Nguyen (SEMI Staff)	Create a LinkedIn site for the Facilities and Gases Group	Pending
0413-3	Kevin Nguyen (SEMI Staff)	To check whether recent chemical standards (Section 4.3) approved from Europe have codes assigned in SEMI E52, Practice for Referencing Gases, Gas Mixtures, and Vaporizable Materials Used in MFC	Closed. Most gases have codes assigned.
0413-4	Kevin Nguyen (SEMI Staff)	To provide contact information of Gordon Ferrier (Air Products) to Bala Mohammed (Applied Materials)	Completed.

Table 7 – New Actions Items

Item #	Assigned to	Details
0713-1	Kevin Nguyen (SEMI Staff)	To ask Dalia Vernikovsky (Applied Seals) for the F51 Elastometric Sealing Revision TF meeting minutes
0713-2	Kevin Nguyen (SEMI Staff)	To ask Ben Bruce (Applied Seals) for the Building Information Modeling (BIM) TF meeting minutes

1.0 Call to Order

Tim Volin called the meeting to order and welcomed everyone who attended. A round of self introduction was made. All SEMI standards meetings are subjected to SEMI Anti-Trust Reminder and Guidelines concerning Patentable Technology. SEMI Regulations now require all attendees to be members of SEMI standards. If anyone is not a member of SEMI Standards, please enroll at www.semi.org/standardsmembership. Contact SEMI Staff for a copy of meeting required elements. Agenda was reviewed and proceed as written.

Tim also announced that Mohamed Saleem was officially approved by the NARSC as the co-chair of the NA Gases committee. The committee is extremely delighted to have Mohamed on board.

2.0 Review and Approval of Meeting Minutes from NA Spring, April 2, 2013.

The minutes were reviewed. No changes were made. See attachment for minutes.

Motion: To accept the minutes of the previous meeting as submitted

By / 2nd: Bill Stubbs (Parker Hannifin)/Mark Ripkowski (CONSCI)

Discussion: None

Vote: 10-0. Motion passed

[Attachment – 1, NAFac&Gases Minutes20130402](#)

3.0 Staff Report

Report was given by Kevin Nguyen. Highlights.

- 2013 & 2014 Event

<i>Event Name</i>	<i>Event Details</i>
SOLARCON India	August 1-3, 2013 Bangalore
SEMICON Taiwan LED Taiwan	September 4-6, 2013 Taipei
SEMICON Europa	October 8-10, 2013 Dresden, Germany
PE2013 – Plastic Electronics Exhibition and Conference	October 8-10, 2013 Dresden, Germany
PV Taiwan	October 30 – November 1, 2013 Taipei
SEMICON Japan	December 4-6, 2013 Chiba
SEMICON Korea	February 12-14, 2014 Seoul
LED Korea	February 12-14, 2014 Seoul

- Silicon Wafers – Future Standardization to Enable the Transition (2:30 PM to 6:00 PM)
 - Agenda:
 - Towards 450 mm Silicon Wafers, Mike Goldstein (Intel)
 - Notchless Wafer, Pinyen Lin (G450C)
 - New Edge Exclusion Proposal, Kwangwook Lee (G450C)
 - Wafer Geometry for Advanced Nodes, Gerd Pfeiffer (IBM)
 - Challenges during 450 mm Silicon Processing, Hisashi Furuya (SUMCO)
 - 450 mm Facilities Planning, Allen Ware (F450C)
 - G450C Component Lift Program Update, Les Marshall (G450C)
 - Proceedings are available at <https://sites.google.com/a/semi.org/siwaferfuturestandardstransition/>
- NA Standards Fall 2013 Meetings
 - October 28-31
 - SEMI Headquarters in San Jose, California
 - Inviting local companies willing and able to host some of the meetings to maintain one-week format.
- Technical Ballot Critical Dates
 - Cycle 5, 2013
 - Ballot Submission Date: July 18
 - Voting Period Starts: July 29
 - Voting Period Ends: August 29
 - Cycle 6, 2013
 - Ballot Submission Date: August 15
 - Voting Period Starts: August 29

- Voting Period Ends: September 30
- June 2013 Cycle Publication Cycle
 - New Standards: 10
 - Revised Standards: 2
 - Reapproved Standards: 4
 - Withdrawn Standards: 0
- Total SEMI Standards in portfolio: 887
 - Includes 94 Inactive Standards

[Attachment – 2, SEMI Staff Report \(West 2013\)](#)

4.0 Liaison Reports

4.1 Luh-Maan Chang (National Taiwan University) – High Tech Facility

- Dr. Chang is a Professor of the High Tech Facility Research Center (National Taiwan University). He enthusiastically reported a proposal for SEMI Taiwan High-Tech Facility Working Group. Report includes
 - Taiwan Semiconductor Market cap.
 - Life cycle for a fab constructed project
 - Planning, Design, Procurement, Construction, O&M
 - Vision
 - Global pre-standardization group focus on crucial technologies for high tech facilities
 - Crucial technologies are EMI, AMHS, FIM, AMC, TMT, 4D Scheduling, and green fab
 - Objective
 - Integrate related resources in Taiwan and abroad
 - Organization/companies interested in Work Group
- Steve Lewis is very supportive of such proposal. The NA region will be delighted to assist Taiwan if needed.

[Attachment – 3, SEMI-Taiwan-Working-Group-7-9-2013](#)

4.2 SEMI Japan

Report was presented by Kevin Nguyen. Highlights.

- Last Meeting
 - June 28, 2013 during Japan Summer Meetings 2013 at SEMI Japan, Tokyo, Japan
- Next Meeting
 - September 27, 2013 during Japan Fall Meetings 2013 at SEMI Japan, Tokyo, Japan
- 5-year-review Task Force
 - Will start to review SEMI F80-0309, Test Method for Determination of Gas Change/Purge Efficiency of Gas Delivery System for the 5-year-review procedure
- New Business
 - Standardization of live Gas Flow Rate Study Group
 - A study group was newly set up to explore the possibility of the Standardization of live Gas Flow.
 - Discussing the measurement of the small particles in the gas components and systems.

[Attachment – 4, 1307_JA_G+F_LiaisonR_for_SWest_r1.0](#)

4.3 SEMI Korea

Report was presented by Kevin Nguyen. Highlights.

- Last meeting
 - Jan 30, 2013 @ Coex, Seoul, Korea in conjunction with SEMICON Korea 2013
- Next meeting
 - TBD
- Equipment Cleanness TF
 - 4771C, New Standard, Particle Removal Test Method for Equipment Fan Filter Unit, EFFU Passed committee review on Feb 28, 2013.
 - 4922C, New Standard, Guide for Equipment Fan Filter Unit (EFFU) Performance needs to be rebaloted for the next committee meeting.

[Attachment – 5, KR_Facilities_committee_July](#)

4.4 SEMI Europe

Kevin Nguyen reported that Europe Gases and Chemicals Committee. Highlights

- Last Meeting
 - October 10, 2012 at SEMICON Europa, Dresden, Germany
- Next Meeting
 - October 2013 at SEMICON Europa, Dresden, Germany
- Ballot passed
 - Doc. 5328, New Standard: Guide for Tetrakis(Dimethylamino) Silane (TDMAS), assigned SEMI C80
 - Doc. 5329, New Standard: Guide for Tris(Dimethylamino) Silane (3DMAS), assigned SEMI C81
- New SNARFs Approved
 - Doc. 5491, New Standard: Guide for Titanium Tetrachloride (TiCl₄)
 - Doc. 5492, New Standard: Guide for Ethylene Glycol
 - Doc. 5493, New Standard: Guide for Octa Methyl Cyclo Tetra Siloxane (OMCTS)
 - Doc. 5494, New Standard: Guide for Tetra Methyl Cyclo Tetra Siloxane (TMCTS)
 - Doc. 5495, New Standard: Guide for Cyclo Hexanone
- Upcoming Ballots for 2013
 - Doc. 5491, New Standard: Guide for Titanium Tetrachloride (TiCl₄)
 - Doc. 5492, New Standard: Guide for Ethylene Glycol
 - Doc. 5493, New Standard: Guide for Octa Methyl Cyclo Tetra Siloxane (OMCTS)
 - Doc. 5494, New Standard: Guide for Tetra Methyl Cyclo Tetra Siloxane (TMCTS)
 - Doc. 5495, New Standard: Guide for Cyclo Hexanone
- Precursor Specifications Task Force
 - Standards published :
 - SEMI C65 Guide for TriMethylSilane (3MS)
 - SEMI C66 Guide for TriMethylAluminium (TMAI)
 - SEMI C67 Guide for Hafnium Amides
 - SEMI C68 Guide for Zirconium Amides
 - SEMI C73 Guide for Hafnium Tetrachloride
 - SEMI C74 Guide for Hafnium t-Butoxide
 - SEMI C75 Guide for Tetrakis(Dimethylamino)Titanium (TDMAT)
 - SEMI C76 Guide for Zirconium t-Butoxide
 - SEMI C80 Guide for Tetrakis(Dimethylamino) Silane (TDMAS)
 - SEMI C81 Guide for Tris(Dimethylamino) Silane (3DMAS)
- Under Development
 - Permeation Tubes For Accurate Gas Standards In The Absence Of A True Zero

- While moisture contamination in gases is important to customers (corrosion, process damage, yield declines), there are no standards covering controlled generation of trace levels of moisture to support analyser calibrations
- Europe Standards Staff
 - Yann Guillou , SEMI Europe yguillou@semi.org

[Attachment – 6, EU_GasChem_ERSC_March_2103_Berlin](#)

5.0 Ballot Review

- 5.1 Doc. #5505A, Revision to SEMI C58-0305 (Reapproved 0211), Specifications for Hydrogen
 - 5.1.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 7, 5446ProceduralReview](#)
- 5.2 Doc. #5577, Reapproval of SEMI F105-0708, Guide for Metallic Material Compatibility in Gas Distribution Systems
 - 5.2.1 Document **failed** technical and was sent back to the task force for rework and rebalot. See attachment below for detail of ballot adjudication.
[Attachment – 8, 5577Failed](#)
- 5.3 Doc. #5520A, Revision of SEMI F69-0708, Test Methods for Transport and Shock Testing of Gas Delivery Systems
 - 5.3.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 9, 5520AProceduralReview](#)
- 5.4 Doc. #5568, Reapproval of SEMI C14-95 (Reapproved 0309), Test Method for Particle Shedding Performance of 25 cm Gas Filter Cartridges
 - 5.4.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 10, 5568ProceduralReview](#)
- 5.5 Doc. #5578, Reapproval of SEMI F36-0299 (Reapproved 1104), Guide for Dimensions and Connections of Gas Distribution Components
 - 5.5.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 11, 5578ProceduralReview](#)
- 5.6 Doc. #5504A, Revision of SEMI E52-0912, Practice for Referencing Gases, Gas Mixtures and Vaporizable Materials Used in Digital Mass Flow Controllers
 - 5.6.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 12, 5504AProceduralReview](#)
- 5.7 Doc. #5569, Revision of SEMI E12-0303 (Reapproved 0309), with Title Change to: Guide for Standardized Pressure, Temperature, Density, and Flow Units Used in Mass Flow Meters and Mass Flow Controllers

- 5.7.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 13, 5569ProceduralReview](#)

- 5.8 Doc. #5571, Reapproval of SEMI E56-0309, Test Method for Determining Accuracy, Linearity, Repeatability, Short Term Reproducibility, Hysteresis, and Deadband of Thermal Mass Flow Controllers
 - 5.8.1 Document **failed** technical and was sent back to the task force for rework and rebalot. See attachment below for detail of ballot adjudication.
[Attachment – 14, 5571Failed](#)

- 5.9 Doc. #5573, Reapproval of SEMI E68-0997 (Reapproved 0309), Test Method for Determining Warm Up Time of Mass Flow Controllers
 - 5.9.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 15, 5573ProceduralReview](#)

- 5.10 Doc. #5574, Reapproval of SEMI E69-0298 (Reapproved 0309), Test Method for Determining Reproducibility and Zero Drift for Thermal Mass Flow Controllers
 - 5.10.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 16, 5574ProceduralReview](#)

- 5.11 Doc. #5570, Revision of SEMI E51-0200, Guide for Typical Facilities Services and Termination Matrix
 - 5.11.1 Document **failed** technical and was sent back to the task force for rework and rebalot. See attachment below for detail of ballot adjudication.
[Attachment – 17, 5570Failed](#)

- 5.12 Doc. #5572, Revision of SEMI E6-0303, Guide for Semiconductor Equipment Installation Documentation
 - 5.12.1 Document **failed** technical and was sent back to the task force for rework and rebalot. See attachment below for detail of ballot adjudication.
[Attachment – 18, 5572Failed](#)

- 5.13 Doc. #5575, Revision of SEMI E70-1103, Guide for Tool Accommodation Process
 - 5.13.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 19, 5575ProceduralReview](#)

- 5.14 Doc. #5576, Reapproval of SEMI E76-0299, Guide for 300 mm Process Equipment Points of Connection to Facility Services
 - 5.14.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.
[Attachment – 20, 5576ProceduralReview](#)

- 5.15 Doc. #5579, Reapproval of SEMI F49-0200 (Reapproved 1108), Guide for Semiconductor Factory Systems Voltage Sag Immunity
 - 5.15.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.

[Attachment – 21, 5579ProceduralReview](#)

- 5.16 Doc. #5580, Reapproval of SEMI F50-0200 (Reapproved 1108), Guide for Electric Utility Voltage Sag Performance for Semiconductor Factories
- 5.16.1 Document passed technical review as balloted and was forwarded to the ISC Audits and Reviews Subcommittee for procedural review. See attachment below for detail of ballot adjudication.

[Attachment – 22, 5580ProceduralReview](#)

6 Vice Chair Reports

6.1. Facilities Activities

6.1.1. *F51 Revision TF/Dalia Vernikovsky (Applied Seals North America)*

Task force met. But report was not given. Action Item #1 – Send an email to Dalia for the Meeting report.

6.1.2. *Building Information Modeling (BIM) for Semiconductor Capital Equipment/Ben Bruce (Applied Materials)*

Steve Lewis reported the TF held the meeting since he was in attendance. The TF is making progress on the data structure. Action Item #2 – Send an email to Ben for the completed Meeting report.

6.2. Gases Activities - Components

6.2.1. *Heater Jacket TF/David Colquhoun (BH Thermal)*

David reported the task force is still researching on the EH&S issue on RoHS. The document is still under development. More will be reported at the next meeting.

6.2.2. *Mass Flow Controller TF/Mohamed Saleem (Fujikin)*

Mohamed Saleem reported all 5 year review ballots passed except for doc. 5571, Reapproval of SEMI E56-0309, Test Method for Determining Accuracy, Linearity, Repeatability, Short-Term Reproducibility, Hysteresis, and Deadband of Thermal Mass Flow Controllers. Matt Milburn/UCT reported inaccuracies in the linearity and precision equation, as well as overall review of definitions in the documents. Doc. 5571A will be submitted for cycle 6-2013 for review at the next meeting.

EtherCAT protocol development; EtherCAT.org released device specification for MFCs; no action necessary from the MFC TF is required.

A new SNARF for auxiliary information on Practice for Referencing Gases and Gas Mixtures was submitted, so that a revision of E52 is not required. SEMI staff will maintain the database.

Motion: To approve the SNARF for Auxiliary Information document

By / 2nd: Mohamed Saleem (Fujikin)/Tim Volin (Parker Hannifin)

Discussion: None

Vote: 12-0. Motion passed

[Attachment – 23, Task Force Reports_07_08_2013](#)

[Attachment – 24, Gases Codes SNARF](#)

6.2.3. *Pressure Measurement TF/Justin Hough(Applied Materials), David Colquhoun (BH Thermal)*

Doc. 3440B, Test Method for Pressure Transducers in Gas Delivery Systems is still being finalized. The document should be ready for ballot for cycle 6-2013.

6.2.4. *Surface Mount Sandwich Component Dimensions TF/ Matt Milburn (UCT)*

Matt Milburn reported the TF held its kickoff meeting. Key members are still being identified. The next meeting will be held in October 2013.

6.3. Gases Activities - Contamination

6.3.1. *Filters and Purifiers TF/Mohamed Saleem (Fujikin)*

Mohamed reported ballot for doc. 5244B, Revision of SEMI F21-1102, Classification of Airborne Molecular Contaminant Levels in Clean Environments, is being handled by Jurgen Lobert of Entegris and Mark Camenzind of Air Liquide. This document requires significant changes and they are making progress on the revision.

The TF discussed separating moisture drydown test method for components from gas delivery systems, Steven Rowley of Tiger Optics will submit a SNARF.

[For complete report, see Attachment – 23 above.](#)

6.4. Gases Activities - Materials and Processes

6.4.1. *Materials of Construction of Gas Delivery Systems TF/Tim Volin (Parker Hannifin)*

Tim Volin reported the TF discussed the reject submitted by Mark Camenzind on ballot Doc. 5577, Reapproval of SEMI F105-0708, Guide for Metallic Material Compatibility in Gas Distribution Systems. The document was sent back to task force for rework and rebalot in cycle 5-2013. See attachment below for TF's response.

Document 5444, Revision of SEMI F72-0309, Test Method for Auger Electron Spectroscopy (AES) Evaluation Of Oxide Layer Of Wetted Surfaces Of Passivated 316l Stainless Steel Components, is ready for submission on cycle 5-2013 for review at the next meeting. The revision will include adding an appendix.

Motion: To send doc. 5444 for cycle 5-13

By / 2nd: Bala Mohammed (Applied Materials)/Bill Stubbs (Parker Hannifin)

Discussion: None

Vote: 12-0. Motion passed

[Attachment – 25, Response to Reject of Doc F105](#)

6.5. *Gases Specification Task Force / Mark Ripkowski (CONSCI)*

Mark Ripkowski reported some standards are in need of reviewing to conform with the Procedure Guide. These standards are

- SEMI C54-1103 (Reapproved 0211) - Specifications and Guidelines for Oxygen
- SEMI C56-0305 (Reapproved 0211) - Specifications and Guidelines for Dichlorosilane (SiH₂Cl₂)
- SEMI C57-0305 (Reapproved 0211) - Specifications and Guidelines for Argon
- SEMI C59-1104 (Reapproved 0211) - Specifications and Guidelines for Nitrogen
- SEMI C60-0305 (Reapproved 0211) - Specifications and Guidelines for Nitrous Oxide (N₂O)
- SEMI C71-0611 - Specification and Guide for Boron Trichloride (BCl₃)

SEMI C3.20.0309 Specification for Helium in Cylinders, 99.9995% Quality, is up for 5 year review. Changes are made before sending for 5 year review.

Motion: To send SEMI C3.20 for cycle 5-13 ballot

By / 2nd: Mark Ripkowski (CONSCI)/Tim Volin (Parker Hannifin)

Discussion: None

Vote: 13-0. Motion passed

SEMI C3.24.0309, Specification for Sulfur Hexafluoride in Cylinders 99.97% Quality, is also up for 5 year review. SNARF is submitted to cover these significant changes.

Motion: To approve a SNARF for revision of SEMI C3.24 and authorize for cycle 6-13 ballot.

By / 2nd: Mark Ripkowski (CONSCI)/Tim Volin (Parker Hannifin)

Discussion: None

Vote: 13-0. Motion passed

[Attachment – 26, GasesSpec TF Minutes 7_8_2013](#)

[Attachment – 27, SNARFFORM_C3_24_0309](#)

7 Old Business

See **table 6** above.

8 New Business

None

9 Action Item Reviews

Action item was reviewed by Kevin Nguyen. See **table 7** above.

10 Next Meeting

The next meeting of the NA Facilities & Gases committee is scheduled for Tuesday, October 29, 2013 in San Jose, CA at SEMI HQ in conjunction with NA Fall Standards Meetings. Check www.semi.org/standards for the latest update.

11 Adjourn

Adjournment of the meeting was held at 11:20 AM

These minutes are respectfully submitted by:

Kevin Nguyen, SEMI
NA Standards Committee Manager
Phone: 408-943-7997
Email: knguyen@semi.org

Minutes approved by:

Steve Lewis (CH2M Hill) – Facilities Co-chair	July 30, 2013
Tim Volin (Parker Hannifin) – Gases Co-chair	July 29, 2013
Mohamed Saleem (Fujikin) – Gases Co-chair	

Please email to Kevin Nguyen at knguyen@semi.org or phone at 408-943-7997 if you have any questions. All attachments available from www.semi.org/standards (meeting minutes section).

Table 8 – Index of Attachment Summary

#	<i>Title</i>	<i>Title</i>
1	NAFac&Gases Minutes20130402	155573ProceduralReview
2	SEMI Staff Report (West 2013)	165574ProceduralReview
3	SEMI-Taiwan-Working-Group-7-9-2013	175570Failed
4	1307_JA_G+F_LiaisonR_for_SWest_r1.0	185572Failed
5	KR_Facilities_committee_July	195575ProceduralReview
6	EU_GasChem_ERSC_March_2103_Berlin	205576ProceduralReview
7	5446ProceduralReview	215579ProceduralReview
8	5577Failed	225580ProceduralReview
9	5520AProceduralReview	23Task Force Reports_07_08_2013
10	5568ProceduralReview	24Gases Codes SNARF
11	5578ProceduralReview	25Response to Reject of Doc F105
12	5504AProceduralReview	26GasesSpec TF Minutes 7_8_2013
13	5569ProceduralReview	27SNARFFORM_C3_24_0309
14	5571Failed	

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact Kevin Nguyen at the contact information above.