



Facilities and Gases North America Technical Committee Chapter

Liaison Report
April 2016 v1

Facilities North America Technical Committee Chapter

Facilities Co-chair



Steve Lewis – LPCiminelli

N.A. Facilities Organization Chart

N.A. Facilities Technical Committee Chapter

C: Steve Lewis – LPCiminelli

**Building Information Modeling (BIM)
for Semiconductor Capital
Equipment TF**

L: Ben Bruce – Applied Materials

F51 (Elastomer) Revision TF

L: Dalia Vernikovsky – Applied Seals

Meeting Information

- Last meeting

- April 4 & 5, 2016 at N.A. Standards Spring 2016 Meetings
 - SEMI Headquarters in San Jose, CA

- Next meeting

- July 11 & 12, 2016 at SEMICON West 2016 Standards Meetings
 - San Francisco Marriott Marquis in San Francisco, CA

SEMI F51 (Elastometric Sealing) Revision TF

- Document R5080B

Ratification Ballot *Revision of SEMI F51-0200, Guide for Elastomeric Sealing Technology*

– Published as F51-1115

– The TF will follow up with feedback received for Document R5080B

Building Information Modeling (BIM) for Semiconductor Capital Equipment TF [1/2]

- A 3-D model will work with multiple different software applications and needs to reflect true dimensions of the semiconductor fabrication tool with its location and interface point.
- Drafting Doc. 5155, *New standard: Guide for Building Information Modeling (BIM) for Semiconductor Capital Equipment*
 - Approved for ballot Cycle 5
- No TF report received, but TC Chapter approved that this activity is continuing.
 - Prior minutes posted on:
<https://sites.google.com/a/semi.org/bim-tf/>

Building Information Modeling (BIM) for Semiconductor Capital Equipment TF [2/2]

- The TF is assisting the PI&C committee to update SEMI E72, *Specification and Guide for 300 mm Equipment Footprint, Height, and Weight*
 - SEMI E72 is long overdue for 5-year review
 - Future plans and activities to update SEMI E72:
 - » Implementing Building Information Modeling (BIM) for equipment modeling and floor plans
 - » Future joint TF between the NA PIC TC Chapter and NA Facilities TC Chapter – Doc. 5817 is being revised by NA PIC TF
 - Approved for ballot in Cycle 5
 - » Address issues such as variations in fab layout, factory, ceiling height, moving weight, and ergonomics for the equipment
 - » Standardization of definitions, concepts, and interfaces with input from suppliers, vendors and end users
 - » Revise SEMI E6 (Semiconductor Equipment Installation) and SEMI E52 (Facilities Services) at the same time

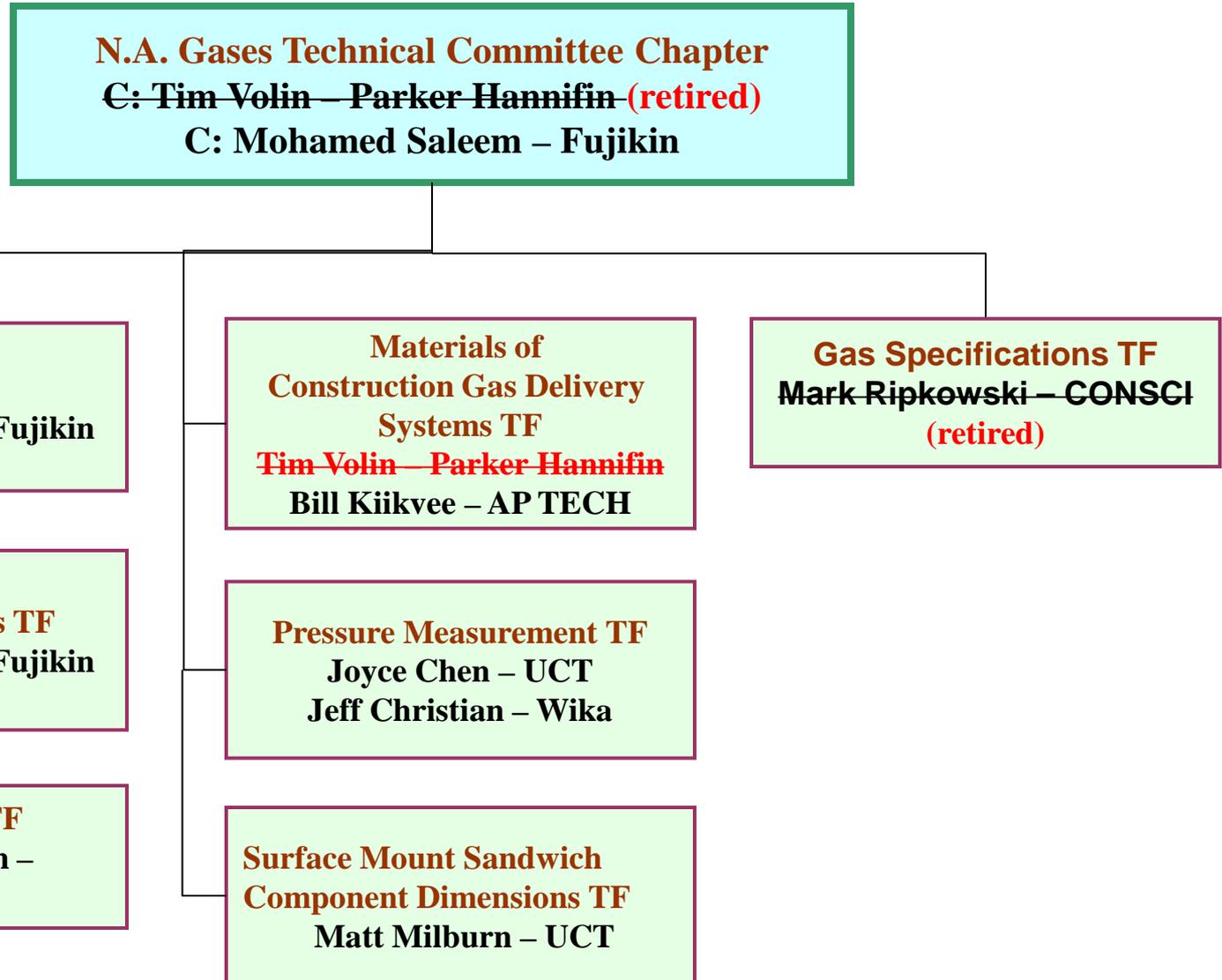
Gases North America Technical Committee Chapter

Gases Cochair



Mohamed Saleem – Fujikin

N.A. Gases Organization Chart



Meeting Information

- Last meeting

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Ballot Review Summary

Document #	Document Title	TC Chapter Action
5964	Line item revision to SEMI E56-0314, Test Method For Determining Accuracy, Linearity, Repeatability, Short-Term Reproducibility, Hysteresis, And Dead Band Of Thermal Mass Flow Controllers	Failed, send back to TF for rework
5963	Line Item Revision to SEMI F62-0701 (Reapproved 1111) Test Method For Determining Mass Flow Controller Performance Characteristics From Ambient And Gas Temperature Effects	Failed, send back to TF for rework
3440B	New Standard: Test Method for Pressure Measurement Devices	Failed, send back to TF for rework

New Activities

- **New SNARFs:**

- **Doc. 5997**, Line Item Revision to SEMI C3-0413, Specifications for Gases
- **Doc. 5998**, Line Item Revision to SEMI C54-1103 (Reapproved 0211), Specifications and Guidelines for Oxygen
- **Doc. 5999**, Line Item Revision to SEMI C56-0305 (Reapproved 0211), Specifications and Guidelines for Dichlorosilane (SiH_2Cl_2)
- **Doc. 6000**, Line Item Revision to SEMI C57-0305 (Reapproved 0211), Specifications and Guidelines for Argon

New Activities

- **New SNARFs:**

- **Doc. 6001**, Line Item Revision to SEMI C58-1213, Specifications for Hydrogen
- **Doc. 6002**, Line Item Revision to SEMI C59-1104 (Reapproved 0211), Specifications and Guidelines for Nitrogen
- **Doc. 6003**, Line Item Revision to SEMI C60-0305 (Reapproved 0211), Specifications and Guidelines for Nitrous Oxide (N₂O)
- **Doc. 6004**, Line Item Revision to SEMI C70-0611, Specifications for Tungsten Hexafluoride (WF₆)

Upcoming Ballots

Doc #	Document Title	When	Task Force
3440C	New Standard: Test Method for Pressure Measurement Devices	Cycle 4, 2016	Pressure Measurement
5244B	Revision of SEMI F21-1102, Classification of Airborne Molecular Contaminant Levels in Clean Environments	Cycle 5, 2016	Filters & Purifiers
5155	New Standard: Guide for Facilities Data Package for Semiconductor Equipment Installation	Cycle 5, 2016	BIM
5997	Line Item Revision to SEMI C3-0413, Specifications for Gases	Cycle 4, 2016	Gases Specification
5998	Line Item Revision to SEMI C54-1103 (Reapproved 0211), Specifications and Guidelines for Oxygen	Cycle 4, 2016	Gases Specification
5999	Line Item Revision to SEMI C56-0305 (Reapproved 0211), Specifications and Guidelines for Dichlorosilane (SiH ₂ Cl ₂)	Cycle 4, 2016	Gases Specification

Upcoming Ballots

Doc #	Document Title	When	Task Force
6000	Line Item Revision to SEMI C57-0305 (Reapproved 0211), Specifications and Guidelines for Argon	Cycle 4, 2016	Gases Specification
6001	Line Item Revision to SEMI C58-1213, Specifications for Hydrogen	Cycle 4, 2016	Gases Specification
6002	Line Item Revision to SEMI C59-1104 (Reapproved 0211), Specifications and Guidelines for Nitrogen	Cycle 4, 2016	Gases Specification
6003	Line Item Revision to SEMI C60-0305 (Reapproved 0211), Specifications and Guidelines for Nitrous Oxide (N ₂ O)	Cycle 4, 2016	Gases Specification
6004	Line Item Revision to SEMI C70-0611, Specifications for Tungsten Hexafluoride (WF ₆)	Cycle 4, 2016	Gases Specification

Gases Task Force Reports [1/5]

- **Heater Jacket TF**

- No report given; currently working on a Materials and Recommendations document.
 - Requesting support from the committee to draft SNARF

- **Mass Flow Controller (MFC) TF**

- Two ballots adjudicated at Spring Meeting:
 - **Doc. 5964**, Line item revision to SEMI E56-0314, *Test Method For Determining Accuracy, Linearity, Repeatability, Short-Term Reproducibility, Hysteresis, And Dead Band Of Thermal Mass Flow Controllers*
 - **FAILED, re-balloted in Cycle 5**
 - **Doc. 5963**, Line Item Revision To SEMI F62-0701 (Reapproved 1111) *Test Method For Determining Mass Flow Controller Performance Characteristics From Ambient And Gas Temperature Effects*
 - **FAILED, re-balloted in Cycle 5**

Gases Task Force Reports [2/5]

- Pressure Measurement TF

- One ballot adjudicated:

- [Doc. 3440B](#), New Standard: *Test Method for Pressure Measurement Devices*

- FAILED, re-balloted in Cycle 4

- Surface Mount Sandwich Component Dimensions TF

- Document 5595, *New Standard: Guide for the Development of Dimensional Standards for “Sandwich” Surface Mount Components*, published as [SEMI C88-0815](#)

- TF is now in dormant stage.

Gases Task Force Reports [3/5]

- **Filter and Purifiers TF**

- Doc. 5667A (*New Standard: Test Method for Determination of Moisture Dry-Down Characteristics of Gas Delivery Components*)
 - [published as C91-1115](#)
- Doc 5816A, Line item Revision to SEMI F30-0710 - Start-Up and Verification of Purifier Performance Testing for Trace Gas Impurities and Particles at an Installation Site with title change to Test Method for the Start-Up and Verification of Purifier Performance Testing for Trace Gas Impurities and Particles at an Installation Site
 - Failed A&R Review
 - Revised SNARF to be approved at West, and reballot for Cycle 6
- Doc. 5244B, Revision to SEMI F21, *Classification of Airborne Molecular Contaminant Levels in Clean Environments*
 - Approved for ballot in Cycle 5

Gases Task Force Reports [4/5]

- **Materials of Construction of Gas Delivery Systems TF**

- The TF reviewed Draft Document 5876 and recommended it for balloting. [Published as SEMI C92-0216.](#)
- Seven Standards are being reviewed by the TF for title, terminology and 5-year reviews:
 - SEMI F6, *Guide for Secondary Containment of Hazardous Gas Piping Systems*
 - SEMI F13, *Guide for Gas Source Control Equipment*
 - SEMI F14, *Guide for the Design of Gas Source Equipment Enclosures*
 - SEMI F37, *Method for Determination of Surface Roughness Parameters for Gas Distribution System Components*
 - SEMI F41, *Guide for Qualification of a Bulk Chemical Distribution System Used in Semiconductor Processing*
 - SEMI F69, *Test Methods for Transport and Shock Testing of Gas Delivery Systems*
 - SEMI F101, *Test Methods for Determining Pressure Regulator Performance In Gas Distribution Systems*

Gases Task Force Reports [\[5/5\]](#)

- Gas Specifications TF

- Mark Ripkowski retired from the TF leader position
- Mohamed Saleem will be overseeing this task force until the position is filled
- Eight SNARFS have been approved and authorized to go out for Cycle 5
 - *See Slides 14-17 more details*

Thank you!

For more information or to participate in any
N.A. Facilities & Gases activities, please contact:

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