Metrics NA TC Chapter

Meeting Summary and Minutes

NA Spring Meetings

Thursday, March 28, 2024

3:00-5:30 PM Pacific

TC Chapter Announcements

Next TC Chapter Meeting

Tuesday, July 9, 2024

3:00-5:30 PM Pacific

SEMICON West

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: David Bouldin (Fab Consulting), Mark Frankfurth (Cymer), Vladimir Kraz (BestESD)
SEMI Staff: Michelle Sun

Company	*Last*	*First*	*Company*	*Last*	*First*
Axcelis	Brick	Clif	KLA Corporation	Ganev	Todor
Bird Technologies	Winter	John	SCREEN	Nishimura	Takayuki
Cymer	Frankfurth	Mark	SEMI	Sun	Michelle
Fab Consulting	Bouldin	David	SUNY RF (Albany)	Eisenbraun	Eric
Intel Corporation	Schneider	Paul	TEL	Mashiro	Supika

Table 2 Leadership Changes

WG/TF/SC/TC Name	*Previous Leader*	*New Leader*
None		

Table 3 TC Chapter Structure Changes

Previous WG/TF/SC Name	*New WG/TF/SC Name or Status Change*
None	

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
7129A	New Standard: Test Method for Measuring Particles and Contamination by A Liquid Particle Counter of Critical Chamber Components Used in Semiconductor Wafer Processing and Inspection	**Failed**
7130A	New Standard: Test Method for Measuring Surface Contamination by Particle Concentration Through Replacement Substrate and Optical Metrology of Critical Chamber Components Used in Semiconductor Wafer Processing and Inspection	**Failed**

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
6894	Line Item Revision to E33-0217E, Guide for Semiconductor Manufacturing Equipment Electromagnetic Compatibility (EMC) and E176-1017, Guide to Assess and Minimize Electromagnetic Interference (EMI) in a Semiconductor Manufacturing Environment	[redacted]
LI-1	Move Appendix 1 from SEMI E33 to E176	**Failed**
LI-2	Update References and Other Editorial Changes	**Passed with editorial changes**

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

#2 **Failed** ballots and line items were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 5 Ratification Ballot Results

Document #	*Document Title*	*ISC A&R Action*	*A&R Forms*
None			

Note 1: **Passed** Ratification ballots will be submitted to SEMI publication for final processing.

Note 2: **Failed** Ratification ballots were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 6 Activities Approved by the GCS between meetings of the TC Chapter

#	*Type*	*SC/TF/WG*	*Details*
N/A	Liaison	EMC	Approval of Gregory Larson (Intel) to be the official representative of SEMI, who makes technical contributions to and participates actively in the work of IEC TC 77 / Working Group 13
6894	Ballot Authorization	EMC	Line Item Revision to E33-0217E, Guide for Semiconductor Manufacturing Equipment Electromagnetic Compatibility (EMC) and E176-1017, Guide to Assess and Minimize Electromagnetic Interference (EMI) in a Semiconductor Manufacturing Environment

Table 7 Authorized Activities

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

#	*Type*	*SC/TF/WG*	*Details*
None			

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

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

Table 8 Authorized Ballots

#	*When*	*TF*	*Details*
7129B	Cycle 4 or 5-2024	CCC TF	New Standard: Test Method for Measuring Particles and Contamination by A Liquid Particle Counter of Critical Chamber Components Used in Semiconductor Wafer Processing and Inspection
7130B	Cycle 4 or 5-2024	CCC TF	New Standard: Test Method for Measuring Surface Contamination by Particle Concentration Through Replacement Substrate and Optical Metrology of Critical Chamber Components Used in Semiconductor Wafer Processing and Inspection

Table 9 SNARF(s) Granted a One-Year Extension

#	*TF*	*Title*	*Expiration Date*
None			

Table 10 SNARF(s) Cancelled

#	*TF*	*Title*
None		

Table 11 Standard(s) to receive Inactive Status

Standard Designation	*Title*
None	

Table 12 New Action Items

Item #	*Assigned to*	*Details*
None		

Table 13 Previous Meeting Action Items

Item #	*Assigned to*	*Details*
None		

1 Welcome, Reminders, and Introductions

David Boulding (Fab Consulting) called the meeting to order at 3:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: Required Meeting Elements March 2024

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion:	Approve the minutes as written
By / 2nd:	By: Supika Mashiro / Tokyo Electron Ltd. Second: Eric Eisenbraun / SUNY RF (Albany)
Discussion:	None
Vote:	5-Y 0-N

Attachment: NA-Metrics-TC-Chapter-Minutes-Nov2023

3 Liaison Reports

3.1 *Metrics Japan TC Chapter*

Michelle Sun (SEMI) reported for the Metrics Japan TC Chapter. Of note:

Meeting Information

- Last meeting
    - Wednesday, December 13, 2023
        - Tokyo Big Sight, Tokyo Japan/ Official Virtual TC Chapter Meeting (Hybrid)
- Next meeting
    - Friday, July 26, 2024
        - SEMI Japan Office / Official Virtual TC Chapter Meeting (Hybrid)

Ballot Results

- 6550A, Revision to SEMI E113-0306 (Reapproved 0518), Specification for Semiconductor Processing Equipment RF Power Delivery Systems
    - Passed with editorial changes

Attachment: 20240315_MetricsJapan_Liaison_Report_R0

3.2 *SEMI Staff Report*

Michelle Sun (SEMI) gave the SEMI Staff Report. Of note:

Calendar of Events

- SEMICON SEA
    - May 28-30
    - Kuala Lumpur, Malaysia
- SEMICON West
    - July 9-11
    - San Francisco, CA
- SEMICON Taiwan
    - September 4-6
    - Taipei
- SEMICON Europa
    - November 12-15
    - Munich, Germany
- SEMICON Japan
    - December 11-13
    - Tokyo Big Sight

Upcoming NA Meetings

- SEMICON West
    - July 8-11, 2024
    - Moscone Center, San Francisco
    - California/USA
- NA Standards Fall Meetings
    - Nov 4-7, 2024 (tentative)
    - SEMI HQ, Milpitas
    - California/USA

SEMI Standards discounted rate or complimentary (Expo Pass) link:

- https://bit.ly/SW_Standards_24

Standards Online Voting System Updated

- New system went live for Cycle 3, 2024
    - https://www.semi.org/standards/ballots or https://portal.semi.org
- The new voting system:
    - Integrates and streamlines sign-in process with various SEMI/Standards member services
    - Aims to bring updated user interface while maintaining functionality that's familiar to voters
    - Improves data management for SEMI internal database

Critical Dates for SEMI Standards Ballots

2024	Ballot Submission Deadline	Voting Opens	Voting Closes
Cycle 3	March 6	March 20	April 19
Cycle 4	April 24	May 8	June 7
Cycle 5	May 7	May 21	June 20

Regulations & Procedure Manual Updates

- Regulations (Feb 20, 2024)
    - New definition of "Standards Document"
    - Clarification of confidential presentation materials
        - https://www.semi.org/sites/semi.org/files/2024-02/Standards%20Regulations%20February%2020%202024.pdf
- Procedure Manual (Feb 20, 2024)
    - The use of Connect@SEMI for TF management and document development depository
    - Clarification on meeting quorum
    - TC Chapter Committee Express Report (CER) timing
    - Deletion of Appendix 4 - Nonconforming Standards Titles
        - https://www.semi.org/sites/semi.org/files/2024-02/Procedure%20Manual%20February%2020%2C%202024.pdf

The Use of Connect@SEMI for TF Management and Document Development Depository

- Refer to PM § 6.4.5 Operation of TFs
    - Task Forces have one year from 02/20/24 to implement use of Connect@SEMI. (https://connect.semi.org)
    - Once TFs have implemented use of Connect@SEMI, they shall use it to:
        - Maintain the TF member roster up to date.
        - Share the working drafts.
            - The default format for working Draft Document sharing shall be Adobe Acrobat PDF.
        - Distribute the Draft Document at least one week before ballot submission to SEMI.

New Meeting Required Elements

- The update is on slide 6.
    - New 3rd bullet below.
        - *Confidential information, whether marked or unmarked, shall not be presented and/or discussed in any Standards meetings.*
    - Download the latest version at

- www.semi.org/standards (under *Tools for Developing Standards*) or direct link below
    - https://www.semi.org/sites/semi.org/files/2024-03/Required%20Meeting%20Elements%20March%202024.pptx

SEMI Standards Publications

- Total SEMI Standards in portfolio: 1,086
    - Includes 335 Inactive Standards

Cycle	**New**	**Revised**	**Reapproved**	**Withdrawn**
November 2023	0	4	6	0
December 2023	0	6	0	0
January 2024	0	1	14	0
February 2024	1	12	9	0

New Standards

Cycle	Designation	Title	**Committee**
February 2024	SEMI FH3	Guide for Salt Mist and Washability Test Flow for Control Module Connector of Wearables	Flexible Hybrid Electronics

Five-Year Review

- SEMI E43-0813 (Reapproved 1019), Guide for Electrostatic Measurements on Objects and Surfaces
    - Reapproval authorized in last meeting

Attachment: Staff Report March 2024 v4

4 Ballot Review

NOTE 1: TC Chapter adjudication on ballots reviewed is detailed in the Audits & Review (A&R) Subcommittee Forms for procedural review. The A&R forms are available as attachments to these minutes. The attachment number for each balloted document is provided under each ballot review section below.

4.1 Document #7129A, New Standard: Test Method for Measuring Particles and Contamination by A Liquid Particle Counter of Critical Chamber Components Used in Semiconductor Wafer Processing and Inspection

Motion:	This Document failed TC Chapter review and will be returned to the TF for rework.
By / 2nd:	By: Supika Mashiro / Tokyo Electron Ltd. Second: Eric Eisenbraun / SUNY RF (Albany)
Discussion:	None
Vote:	6-Y 0-N

4.2 Document #7130B, New Standard: Test Method for Measuring Surface Contamination by Particle Concentration Through Replacement Substrate and Optical Metrology of Critical Chamber Components Used in Semiconductor Wafer Processing and Inspection

Motion:	This Document failed TC Chapter review and will be returned to the TF for rework.
By / 2nd:	By: Supika Mashiro / Tokyo Electron Ltd. Second: Eric Eisenbraun / SUNY RF (Albany)
Discussion:	None
Vote:	5-Y 0-N

4.3 Document #6894, Line Item Revision to E33-0217E, Guide for Semiconductor Manufacturing Equipment Electromagnetic Compatibility (EMC) and E176-1017, Guide to Assess and Minimize Electromagnetic Interference (EMI) in a Semiconductor Manufacturing Environment

4.4 Line Item #1, Move Appendix 1 from SEMI E33 to E176

4.5 Line Item #2, Update References and Other Editorial Changes

Attachment: AR - 6894

5 Subcommittee and Task Force Reports

5.1 *CCC Task Force*

Supika Mashiro (TEL) reported for the CCC Task Force. Of note:

- The Task Force reviewed the feedback for Ballots 7129A and 7130A and agreed to fail the ballots based on the feedback.

5.2 *EMC Task Force*

David Bouldin (Fab Consulting) reported for the EMC Task Force. Of note:

- The Task Force discussed the feedback from Ballot 6894.
- Intel has made a proposal to modify the ELF/VLF section of SEMI E33 and E176. Since this section narrowly deals with the effects of low-frequency magnetic fields on imaging using scanning electron microscopes (SEM) and similar equipment, the proposed changes could affect some equipment manufacturers' compliance with the above SEMI Standards.
- An email was sent to those manufacturers asking for feedback on those proposals. Of those, a representative from KLA responded.
- While some initial discussion was held at this meeting, it was decided that the Task Force would wait for further feedback from more SEM microscope manufacturers before moving forward.

Attachment: Intel EMC Proposal

5.3 *E-RAMP Task Force*

Paul Schneider (Intel) reported for the E-RAMP Task Force. Of note:

- The Task Force is continuing its work on revising the SEMI E10 and E79 webinars.

6 Next Meeting and Adjournment

The next meeting is scheduled for Tuesday, July 9, 2024, from 3:00-5:30 PM Pacific at SEMICON West. See http://www.semi.org/standards-events for the current list of events.

Adjournment: 4:30

Respectfully submitted by:

Michelle Sun
Coordinator
SEMI North America
Phone: 408.943.7982
Email: msun@semi.org

Minutes tentatively approved by:

<Name> (<Company>), Co-chair	<Date approved>
<Name> (<Company>), Co-chair	<Date approved>

Table 14 Index of Available Attachments[#1]

Title	*Title*
Required Meeting Elements March 2024	AR - 6894
NA-Metrics-TC-Chapter-Minutes-Nov2023	Intel EMC Proposal
20240315_MetricsJapan_Liaison_Report_R0	
Staff Report March 2024 v4	

#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 [SEMI Staff Name] at the contact information above.