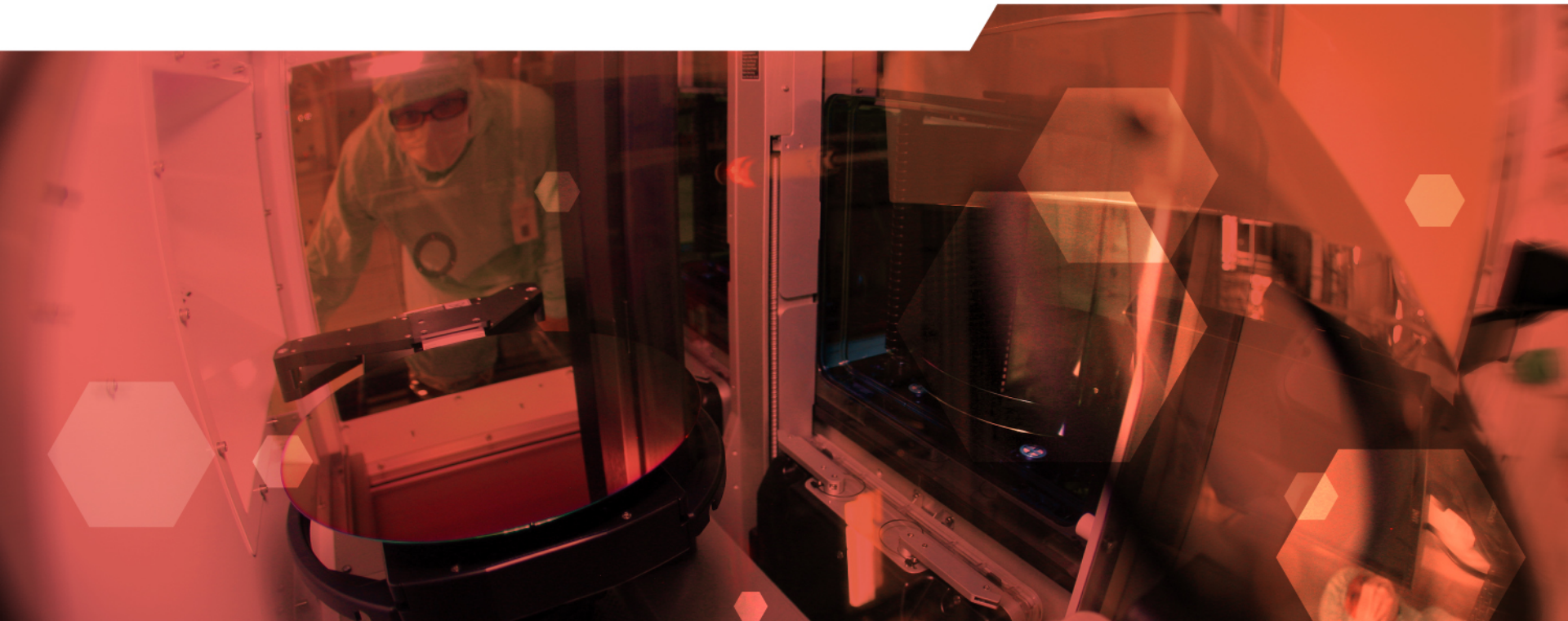


North America TC Chapter Metrics Global Technical Committee

Liaison Report

April 2019

v1



Outline

- Leadership
- Organization Chart
- Meetings Information
- Ballot Results
- Authorized Activities/Other Activities
- Authorized Ballots
- Open SNARFs
- Inactive Status
- Five-Year Review
- Task Force Highlights
- Next Meeting Schedule
- SEMI Staff Contact

Leadership

- N.A. Metrics TC Chapter Cochairs
 - David Bouldin (Fab Consulting)
 - Mark Frankfurth (Cymer)
 - Vladimir Kraz (BestESD)
- Leadership Change
 - Critical Chamber Components (CCC) Test Methods TF
 - Michael Cox (Intel) – co-leader of the TF
 - Manufacturing Ownership Diversity (MOD)TF
 - Beckett Tracy (Intel) – co-leader of the TF
 - Carlos Dones (AMAT) – co-leader of the TF

N.A. Metrics TC Updated Organization Chart

Legend

C Chair/Co-Chair
L Task Force Leader
TF Task Force
TA Technical Architect
TE Technical Editor

North America Metrics TC Chapter

C: David Bouldin (Fab Consulting)
C: Mark Frankfurth (Cymer)
C: Vladimir Kraz (BestESD)
TE: Carolyn Busing (self)
TA: Greg Francis (Cymer)

EMC TF

L: Vladimir Kraz (BestESD)
L: Mark Frankfurth (Cymer)

Equipment RAMP TF

L: Steven Meyer (Intel)
L: David Busing (Consultant)
L: Russell Fitzpatrick (Applied Materials)

Equipment COO TF

L: David Bouldin (Fab Consulting)
L: David Jimenez (WWK)

ESD/ESC TF

L: Chuck McClain (NorthWest Electrostatic Services)
L: Russell Fitzpatrick (Applied Materials)

RF Measurements TF

L: Jay Osselburn (QEI-RF)

Critical Chamber Components (CCC) Test Methods TF

L: Supika Mashiro (TEL)
L: Michael Cox (Intel)

Factory Level Productivity Metrics TF

L: Ron Billings (Ore. State/FABQ)
L: Jim Irwin (Irwin Consulting)

Manufacturing Ownership Diversity (MOD)TF

L: Beckett Tracy (Intel)
L: Carlos Dones (AMAT)

NEW

Inactive

NOTE: *Italics* means group is currently inactive.

Manufacturing Ownership Diversity (MOD)TF <new>

- TF Charter:
 - Create a new SEMI standard covering Manufacturing Ownership Diversity.
 - Customers increasingly require diverse ownership within the semiconductor supply chain and there is not an efficient and consistent method to measure or assess success. It appears there are not many companies owned by diverse individuals based on preliminary searches. In addition, the industry is missing the innovation that comes from diverse ideas driven by supplier owners..
- TF Scope:
 - This task force will meet regularly to define standards that contain the following:
 - Definitions needed for Manufacturing Ownership Diversity
 - Globally recognized method to determine a supplier is diverse (e.g. >51% owned, controlled, and operated)
 - Needs to be affordable and certified by a third party
 - Criteria for a public company to state they have a Supplier Diversity program

Meeting Information

- Last meeting
 - April 3, 2019 at the SEMI Standards NA Spring 2019 Meetings
 - SEMI Headquarters, Milpitas California
- Next meeting
 - July 10, 2019 at SEMICON West 2019 Standards Meetings
 - Moscone Center, San Francisco California

Authorized Activities

#	Type	SC/TF/WG	Details
6508	SNARF	ESD/ESC TF	Reapproval to SEMI E43-0813: <i>Guide for Electrostatic Measurements on Objects and Surfaces</i>

Authorized Ballots

#	When	TF	Details
6472	Cycle 5-2019	CCC TM TF	New Standard: <i>Test Method for Measuring Surface Metal Contamination Through ICP-MS of Critical Chamber Components Used in Semiconductor Wafer Processing</i>
6508	Cycle 5-2019	ESD.ESC TF	Reapproval to SEMI E43-0813: <i>Guide for Electrostatic Measurements on Objects and Surfaces</i>

Open SNARFs

- 6472, New Standard: Test Method for Measuring Surface Metal Contamination Through ICP-MS of Critical Chamber Components Used in Semiconductor Wafer Processing
- 6473, New Subordinate Standard: Test Method for Measuring Surface Metal Contamination Through ICP-MS of Showerheads Used in Semiconductor Wafer Processing
- 6468, Line-item Revision to SEMI E78-0912, Guide to Assess and Control Electrostatic Discharge (ESD) and Electrostatic Attraction (ESA) for Equipment
- 6467, Line-item Revision to SEMI E129-09-12, Guide to Assess and Control Electrostatic Charge in a Semiconductor Manufacturing Facility
- 6466, Line-item Revision to SEMI E10-0814E, Specification for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM) and Utilization
- 6469, Line-item Revision to SEMI E79-0814E, Specification for Definition and Measurement of Equipment Productivity
- 6508, Reapproval to SEMI E43-0813, Guide for Electrostatic Measurements on Objects and Surfaces

5 Year Review Metrics

Designation	Standard Title	Action By	Assigned to
SEMI E78-0912	Guide to Assess and Control Electrostatic Discharge (ESD) and Electrostatic Attraction (ESA) for Equipment	9/28/2017	Ballot postponed to Cycle 5-19 or later
SEMI E129-0912	Guide to Assess and Control Electrostatic Charge in a Semiconductor Manufacturing Facility	9/28/2017	Ballot postponed to Cycle 5-19 or later
SEMI E43-0813	Guide for Electrostatic Measurements on Objects and Surfaces	8/21/2018	Assigned to ESD/ESC TF
SEMI E165-0813	Guide for a Comprehensive Equipment Training System When Dedicated Training Equipment is not Available	8/30/2018	TF plans to resume in Spring 2019
SEMI E150-0314	Guide for Equipment Training Best Practices	3/14/2019	TF plans to resume in Spring 2019
SEMI E149-0314	Guide for Equipment Supplier-Provided Documentation for the Acquisition and Use of Manufacturing Equipment	3/14/2019	TF plans to resume in Spring 2019
SEMI E79-0814E	Specification for Definition and Measurement of Equipment Productivity	3/14/2019	SNARFs by Eq RAMP TF

Task Force Highlights

Critical Chamber Components (CCC) Test Methods Task Force Report

- Leadership change
 - Michal Cox (Intel) appointed as a second co-leader of CCC Test Methods TF
- New SNARFs
 - None
- Ballots Adjudicated
 - None
- Upcoming Ballots
 - 6472, New Standard: *Test Method for Measuring Surface Metal Contamination Through ICP-MS of Critical Chamber Components Used in Semiconductor Wafer Processing*
 - Ballot authorized for Cycle 5-2019 submission
- Other
 - Plan to resume drafting of the Subordinate Standard (6473) when drafting of the Primary Standard is completed (i.e., the first Letter Ballot is ready)

EMC Task Force Report

- Leadership change: None
- SNARFs proposal / Ballots Adjudicated: None
- Industry Update
 - EMC: IEEE EMC Symposium, July 2019, New Orleans, LA
 - ESD:
 - EOS/ESD Symposium and Standards, Riverside, CA 9/15...20, 2019
 - EOS/ESD Standards Meeting – Riverside, CA, 9/8...15, 2019
- Upcoming Activities – To popularize E33 and E176
 - submitted a paper for IEEE EMC Symposium in NOLA on introduction of SEMI Standards to IEEE Standards
 - Encourage SEMI members, such as tool manufacturers, to popularize E176 among their customers:
 - It will improve operability and uptime of their equipment; It will improve process and yield at the FABs; Everyone wins
 - Working on an article at inCompliance magazine on guidance to compliance with SEMI E176. This magazine is the key resource for EMC professionals
 - SEMI will do some promotion, including webinar in the future

ESD/ESC Task Force Report

- Leadership change
 - None
- SNARFs proposal / Ballots Adjudicated
 - None
- Current and upcoming activities:
 - Continue review of E78 and E129
 - Major update now need for compliance to style manual and alignment with industry association documents.
- Upcoming Activities
 - SEMI E43-0813, *Guide for Electrostatic Measurements on Objects and Surfaces*
 - Due for 5 year review. TF recommendation to issue reapproval ballot.

Equipment RAMP Task Force Report

- Leadership change
 - None
- SNARFs proposal / Ballots Adjudicated
 - None
- Open Activities
 - SNARF for Line-time Revision to SEMI E10-0814E, *Specification for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM) and Utilization*
 - Due to technical questions the work on E10 is postponed till next TF meeting.
 - SNARF for Line-item Revision to SEMI E79-0814E, *Specification for Definition and Measurement of Equipment Productivity*

RF Measurements Task Force Report

- TF Leadership & changes (if any):
 - Ya-hong Neiryneck (Intel), stepping down;
 - Position currently open
- SNARFs proposals: None
- Ballots Results: None
- Upcoming Activities:
 - Focus on revision to SEMI E136
 - TEGAM 1st lead to review currently published version of the E136 and provide first screening for NA RF TF review by 4/30/2019
 - Draft SNARF for E136 Revision – for authorization at SEMICON West 2019
 - Will be distributed to the Metrics GTC members for 2-week review in June;
 - Collaborate with JA RF Measurement TF for review/liaison on E113
 - TEL 1st lead on revision to SEMI E113
 - 1st draft of the revision management table was made and sent out to both JA and NA TF members
 - Consideration for the next topic is creating a new standards to address reliability/transient load testing that could not be structured within the scope of existing SEMI E135.
 - Upon significant progress on revision to E136 & E113 is completed ~ 2020;

Equipment COO Task Force Report

- No meeting / no updates.
- “inactive” status effective July 2018.

Next Meeting Schedule

The next N.A. Metrics Standards Meetings are tentatively scheduled* for July 9-10, 2019 at San Francisco, California in conjunction with the SEMICON West 2019. Exact meeting date and details will be announced when finalized and available at <http://www.semi.org/en/standards-events>

Tuesday, July 9, 2019, Moscone Center, San Francisco, CA

- EMC TF (11:00 – 12:00)
- ESD/ESC TF (13:00 – 14:30)
- Critical Chamber Components (CCC) Test Methods TF (14:30 – 16:30)
- Manufacturing Ownership Diversity (MOD) TF (17:00 – 18:00)

Wednesday, July 10, 2019, Moscone Center, San Francisco, CA

- Equipment RAMP Metrics TF (9:00 – 11:00)
- RF Measurements TF (12:30-14:30)
- Metrics NA TC Chapter (15:00 – 18:00)

*All times are in Pacific Time. Times and dates are subject to change without notice.

Thank you!

For more information or to participate in any N.A. Metrics activities,
please contact Inna Skvortsova at SEMI
iskvortsova@semi.org