Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: North America
Global Technical Committee: Silicon Wafer
TC Chapter Cochairs: Dinesh Gupta/STA, Noel Poduje/SMS
Standards Staff: Kevin Nguyen

	Scheduled in Background Statement	Actual
Date	07/09/2019	07/09/2019
Location	Moscone South Hall, San Francisco, CA	Moscone South Hall, San Francisco, CA
Reason for Change of Date and/or Location (if changed)		

Note: See *Regulations* ¶ 9.5 Exceptions for allowable reason to change.

I. Document Number and Title

Document Number	Document Title
6519	Revision of SEMI M53-0219, Practice for Calibrating Scanning Surface Inspection Systems Using Certified Depositions of Monodispere Reference Spheres on Unpatterned Semiconductor Wafer Surfaces

II. Tally

Standards staff to fill in.

Voting Tally: As-cast tally after close of voting period

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. (*Regulations* ¶ 9.6.2.1.1)

Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	58	÷	90	=	64.4%	≥60%
Intercommittee Ballot	42					
Voting Interest Reject(s)	0			Total Voters with Rejects	0	
Voting Interest Accept(s)	45					

Note: See *Regulations* § 3.2.1 for definition of Voting Interest.

III. Rejects

None

IV. Other Technical Issues

Note: TC Chapter may choose to address a technical issue that is not part of a Negative received on a Letter Ballot (i.e., a Comment or a reason not addressed by a Vote response) by handling it as a Negative and finding it related and technically persuasive. The TC Chapter may then fail the Document or address such technical issue by using the procedure defined in *Regulations* § 9.6.1.4.3 to make a technical change to the Document. (*Regulations* ¶ 9.6.1.4.2.5)

<table>
<tr>
<td rowspan="3">Technical Issue</td>
<td>Origin</td>
<td colspan="4">*TF/TC Chapter to choose
Comment # (Voter: Name and company) / A reason not addressed by a Vote response
Noel Poduje (SMS)/Comment made during the TC Chapter meeting</td>
</tr>
<tr>
<td>Referenced Section/ Paragraph</td>
<td colspan="4">*TF/TC Chapter to fill in including text in the ballot as appropriate.

3.7.3   For these reasons, it is recommended: a) deposition processes and calibration procedures be carried out in a clean environment meeting, ISO 14644-1 or better; b) reference wafers be handled in such a way as to avoid contamination between deposition and calibration.</td>
</tr>
<tr>
<td>Reason</td>
<td colspan="4">*Original Comment text, if applicable, and problem statement, including justification and suggestion, should be copied.
The original intent was to indicate Class 4 or better.</td>
</tr>
<tr>
<td colspan="6">Handle technical issue identified above as a Negative.</td>
</tr>
<tr>
<td rowspan="7">Related</td>
<td rowspan="4">Motion and Reason (check one)</td>
<td>x</td>
<td colspan="2">'Related' is mutually agreed upon. (Needs no motion.)</td>
<td>GO TO "Persuasive" subsection</td>
</tr>
<tr>
<td></td>
<td colspan="3">Negative is not related and assigned to TF. (Needs ≥2/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td colspan="3">Negative is not related and placed on agenda of current TC Chapter meeting as new business. (Needs ≥2/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td>Reason</td>
<td colspan="2">XXXX</td>
</tr>
<tr>
<td>Motion by/ 2nd by</td>
<td colspan="4">Name (Company)/Name (Company)</td>
</tr>
<tr>
<td>Discussion</td>
<td colspan="4"></td>
</tr>
<tr>
<td>Result of Vote (check one)</td>
<td colspan="4">XX Y-XX N; Motion passed/failed.
<table>
<tr><td></td><td>[Negative is not related.] <2/3</td><td>GO TO "Persuasive" subsection</td></tr>
<tr><td></td><td>2/3 ≤ [Negative is not related] and assigned to TF.</td><td rowspan="2">GO TO "Final" subsection → (B)</td></tr>
<tr><td></td><td>2/3 ≤ [Negative is not related] and placed on agenda of current TC Chapter meeting as new business.</td></tr>
</table>
</td>
</tr>
<tr>
<td rowspan="3">Persuasive</td>
<td rowspan="3">Motion and Reason (check one)</td>
<td>x</td>
<td colspan="3">Negative is related and persuasive. (Needs >1/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td colspan="3">Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td>Reason</td>
<td colspan="2">XXXX</td>
</tr>
</table>

Motion by/ 2nd by	Kurt Haller (KLA)/Fritz Passek (Siltronic)					
Discussion	None					
Result of Vote (check one)	8 **Y** - 0 **N**; Motion passed					
	x	[Negative is related and persuasive.] > 1/3	**Is a technical change recommended? (check one)**	x	**Y**	**GO TO "Address by Technical Change Option" subsection**
		[Negative is related and not persuasive.] < 2/3			**N**	**GO TO "Final" subsection → (E)**
		2/3 ≤ [Negative is related and not persuasive.] < 90%	**GO TO "Final" subsection → (C)**			

Technical Change Recommendations
Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.

Address by Technical Change Option

Technical Changes — 1

FROM: Section/Paragraph XXX

3.7.4   For these reasons, it is recommended: a) deposition processes and calibration procedures be carried out in a clean environment meeting, ISO 14644-1 or better; b) reference wafers be handled in such a way as to avoid contamination between deposition and calibration.

TO: Section/Paragraph xxx

3.7.4   For these reasons, it is recommended: a) deposition processes and calibration procedures be carried out in a clean environment meeting, ISO 14644-1 Class 4 or better; b) reference wafers be handled in such a way as to avoid contamination between deposition and calibration.

Justification (If necessary)
Balloted doc. 6519 inadvertently deleted "Class 4" since the original text implied ISO standard 14644-1 is a Class 4 cleanroom or better.

Motion	Negative is addressed by the technical change(s).		
Motion by/2nd by	Name (Company)/Name (Company)		
Discussion			
Result of Vote (check one)	XX **Y**-XX **N**; Motion passed/failed.		
		2/3 ≤ [Negative is addressed by the technical change(s).]	**GO TO "Incorporation of the Technical Change" subsection**
		[Negative is not addressed by the technical change(s).] < 2/3	**GO TO "Final" subsection → (E)**

Incorporation of the Technical Change

Motion	To incorporate the technical change(s).		
Motion by/2nd by	Kurt Haller (KLA)/Fritz Passek (Siltronic)		
Discussion	None		
Result of Vote (check one)	8 **Y**-0 **N**; Motion passed.		
	X	90% ≤ [Agree to incorporate.]	**GO TO "Final" subsection → (F)**
		[Disagree to incorporate.] >10%	**GO TO "Final" subsection → (E)**

Fi...	**(check one)**		**(B)**	Not related
			(C)	Related and not persuasive

		(E)	Related and persuasive and not addressed by technical change	**DOCUMENT FAILS**
	x	**(F)**	Addressed by technical change	
(check if applicable)		Comment generated. See Section V-(ii) Comment # X.		

V. Comments

V- (i) Voters' Comments

None

V-(ii) Comments Created by Handling Negative

None

VI. Editorial Changes Other than Those Voted on in § V

Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.

None

VII. Approval Conditions Check

VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations* ¶ 9.6.2.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.6.2.1.3)

Note: If both approval conditions are not satisfied, the Document fails.

		Accepts		**(Accepts + Valid Rejects)**				
Approval Rate	=	**45**	/	**45**	=	**100.0%**		**≥90%**

VII. – (ii) Approval Level (check one)

Note: See *Regulations* § 9.6.2 for further information.

		Globally Approved (No Ratification Ballot needed): The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.
	x	**Need a Ratification Ballot:** The Letter Ballot meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

VIII. Safety Check

Note: See *Regulations* § 15 for further information.

Motion	x	**This is not a Safety Document**, when all safety-related information is removed, the Document is still technically sound and complete. (*Regulations* ¶ 8.7.1)
		This is a Safety Document, when all safety-related information is removed, the Document is not technically sound and complete. (*Regulations* ¶ 8.7.2)
		Safety Checklist (*Regulations* ¶ 15.3) is complete and has been included with the Document throughout the balloting process. (*Regulations* ¶ 15.1.2)
Motion by/2nd by		Kurt Haller (KLA)/Ron Sinton (Sinton Instruments)
Discussion		None
Vote		9 **Y**-0 **N**; Motion passed

IX. Intellectual Property (IP) Check

Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. Regardless of the coverage, this IP check applies to the entire Standard or Safety Guideline*. See *Regulations* § 16 for further information.

x	The TC Chapter meeting chair asked those participating, if they were aware of any patented technology that might be relevant (see *Regulations* ¶ 16.3.1.1) to the Standard or Safety Guideline; or, any copyrighted items or trademarks that are used/reproduced (see *Regulations* ¶ 16.4.1.2) in the Standard or Safety Guideline. (Also see, *Regulations* § 8.8)				
	x	The question is NOT answered in affirmative (No potentially material patented technology or use/reproduction of copyrighted items/trademarks is known.)	**GO TO SECTION X.**		
		The question is answered in affirmative	Is any of the known IPs a patented technology?	**Yes, at least one of them is a patented technology**	**GO TO IX (a) "Patented Technology" subsection**
				No	**GO TO IX (b) "Copyright items" subsection**

IX(a) Patented Technologies subsection
IX(a1) Total numbers of Patented Technologies to be dealt with

# **Fill number**	**(l)** Known Patented Technology that might be relevant to the Standard/Safety Guideline	**#** **Fill number**	**(m)** Number of patented technologies first became known to the TC Chapter on or after the day of the issuance of this Letter Ballot	**Postpone assessment of such patented technologies to be performed at the next scheduled TC Chapter meeting.**
		# **Fill number**	**(n)** Number of patented technologies first became known to the TC Chapter before the day of the issuance of this Letter Ballot	**GO TO IX (a2)**

IX(a2) Assessment of disclosed patented technologies

Disclosed patented technology #1 (*Brief description, e.g., patent title and number*):			**Date of Assessment (If different from the date of Letter Ballot adjudication)** MM/DD/YYYY		
Is disclosed patented technology #1 found to be "might be material" to the Standard/Safety Guideline?		YES (It is a PMPT)	Is the use of this PMPT technically justified?	**YES**	**PROCEED to assess NEXT one, or** **if this is the last one, GO TO IX(a3)**
				NO	**The Document is failed and returned to the TF**
		NO	No further action is needed for patented technology #1		

This table is needed for each disclosed patented technology.

6

IX(a3) LOA status check of PMPT of which inclusion assessed to be justified

LOA Status of PMPT #1						
Has an LOA for this patented technology been received from every owner ?		YES		PROCEED to check NEXT one, or if this is the last one, GO TO IX(b)		
		NO	MOTION		Ask ISC for special permission to publish.	
					Quit activity.	The Document is failed and returned to the TF
					Wait for LOA	PROCEED to check NEXT one, or if this is the last one, GO TO IX(b1)
			Motion by/ 2nd by		Name (Company)/Name (Company)	
			Discussion		XXXX	
			Vote		XX Y-XX N; Motion passed (or failed)	

This table is needed for each PMPT of which inclusion assessed to be justified.

IX(b1) Total numbers of copyrighted items to be dealt with

# Fill number	(o) Known copyrighted items that are used or reproduced to the Standard/Safety Guideline	o > 0 There is at least one known copy righted items that might be relevant to the Standard/Safety Guideline	GO TO IX (b2)
		o = 0 There is no disclosed copyrighted item	GO TO IX (c)

IX(b2) Assessment of disclosed copyrighted items

Disclosed copyrighted item #1 (*Brief description of its use in the Document*):						
Is disclosed copyrighted item #1 used or reproduced in the Standard/Safety Guideline?		YES	Is the use/reproduction of this copyrighted item technically justified?		YES	PROCEED to assess NEXT one, or if this is the last one, GO TO IX(b3)
					NO	The Document is failed and returned to the TF
		NO	No further action is needed for copyrighted item #1			

This table is needed for each disclosed copyrighted item.

IX(b3) Copyright release status check of copyrighted item of which inclusion assessed to be justified

Copyright release Status of copyrighted item #1					
Has the copyright release been received from its owner ?.		YES		PROCEED to assess NEXT one, or if this is the last one, GO TO IX(c)	
		NO	M		Ask ISC for special permission to publish.

					Quit activity.	**The Document is failed and returned to the TF**
					Wait for copyright release letter	**PROCEED to check NEXT one, or if this is the last one, GO TO IX(c)**
			Motion by/ 2nd by			Name (Company)/Name (Company)
			Discussion			XXXX
			Vote			XX **Y**-XX **N**; Motion passed (or failed)

This table is needed for each copyrighted item of which use/reproduction assessed to be justified.

IX(c) Assessment of disclosed (identified) trademark

					YES	**GO TO IX(d)**
Is there any trademark in the Standard/Safety Guideline?		YES	Is every instance of trademark use technically justified?		NO	**The Document is failed and returned to the TF**
	NO	**GO TO IX(d)**				

IX(d) IP check completion condition check

The co-chair checks if any Patented Technologies first become known to the TC Chapter on or after the day of the issuance of this Letter Ballot? i.e., m>0 in IX(a1)		YES	**Sections IX(a2) and IX(a3) shall be completed and recorded for such patented technologies at next scheduled meeting of the TC Chapter. Until then, the TC Chapter shall NOT go to X** (making motion to pass/fail this Document) **(see *Regulations* ¶ 16.4.1.2) Until then this Letter Ballot Review is on hold.**
		NO	**GO TO X**

X. Action for This Document

Motion		This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
		This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
	x	This Document passed TC Chapter review with technical changes and with or without editorial changes and will be forwarded to the ISC A&R SC for procedural review. A Ratification Ballot will be issued to verify the technical changes.
		This Document failed TC Chapter review and will be returned to the TF for rework.
		This Document failed TC Chapter review and work will be discontinued.
Motion by/ 2nd by		Kurt Haller (KLA)/Fritz Passek (Siltronic)
Discussion		None
Vote		8 **Y**-0 **N**
Final Action	x	Motion passed
		Motion failed

Note: If the use of PMPT or copyrighted item is justified by the TC Chapter, LOA or release form must be received before publication can proceed.