

Record of Line-item Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: **North America**

Global Technical Committee: **EHS**

TC Chapter Cochairs: **Sean Larsen (Lam Research), Chris Evanston (Salus Engineering), Bert Planting (ASML)**

Standards Staff: **Kevin Nguyen**

	Scheduled in Background Statement	Actual
Date	7/14/2016	7/14/2016
Location	San Francisco Marriott Marquis, CA	San Francisco Marriott Marquis, CA
Reason for Change of Date and/or Location (if changed)		

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

Document Information

I. Document Number, Title, Lists of Line Items

Document Number 5917		Document Title Line Item Revisions to SEMI S8, Safety Guideline for Ergonomics Engineering of Semiconductor Manufacturing Equipment. Addition of reference to a manual material-handling guide in SEMI-S8, Appendix 2, Lifting, Strength, and Materials Handling
List of Line Items	Line Item 1	Line Item Title Add a Definition for “hand-object coupling point” in the Terminology Section
	Line Item 2	Line Item Title Add a reference to SEMATECH ISMI Manual Material Handling Application Guide
	Line Item 3	Line Item Title Revisions and additions to hand/arm clearances
	Line Item 4	Line Item Title Add a new Related Information section to assist with determining what tasks are within the scope of an assessment to SEMI S8

Line Item 1 Adjudication

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 ¶ 9.7.1.1)

Voting Tally:

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	54	÷	89	=	60.7%	≥60%
Intercommittee Ballot	19					
Voting Interest Reject(s)	0		Total Voters with Rejects			0
Voting Interest Accept(s)	39					

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

III. Rejects

There was no reject

IV. Other Technical Issues

None

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

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APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change.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 ¶ 9.7.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations ¶ 9.7.1.3*)

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

		Accepts		(Accepts + Valid Rejects)				
Approval Rate	=	39	/	39	=	100.0%	≥90%	

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

Note: See *Regulations § 9.7.2* for further information.

☒

Globally Approved (No Ratification Ballot needed):

Line Item 1 meets the Letter Ballot approval conditions for the global technical committee.

☐

Need a Ratification Ballot:

Line Item 1 meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

Line Item 2 Adjudication

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 ¶ 9.7.1.1*)

Voting Tally:

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	54	÷	89	=	60.7%	≥60%
Intercommittee Ballot	19					
Voting Interest Reject(s)	0		Total Voters with Rejects			0
Voting Interest Accept(s)	40					

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

III. Rejects

There was no reject

IV. Other Technical Issues

None

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

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 ¶ 9.7.1.2*)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations ¶ 9.7.1.3*)

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

		Accepts		(Accepts + Valid Rejects)				
Approval Rate	=	40	/	40	=	100.0%	≥90%	

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

Note: See *Regulations § 9.7.2* for further information.

☒

Globally Approved (No Ratification Ballot needed):

Line Item 2 meets the Letter Ballot approval conditions for the global technical committee.

☐

Need a Ratification Ballot:

Line Item 2 meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

Line Item 3 Adjudication

II. Tally

Standards staff to fill in.

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	54	÷	89	=	60.7%	≥60%
Intercommittee Ballot	19					
Voting Interest Reject(s)	2		Total Voters with Rejects		2	
Voting Interest Accept(s)	34					

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: TEL)

Voter Reject 1 (Voter: Lauren Crane/Tokyo Electron)

Negative 1

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.	
		LI3 7.3	
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>Perceived Problem (PP)</p> <p>Negative PP – “Interfere with access” is too subjective for consistent evaluation. For example, if door is spring loaded or gravity ‘fed’ such that it touches active hand, but the active hand can nonetheless achieve the task, is this the foreseen ‘interference’ that should not occur?</p> <p>“Hinged” is too limiting. The concern may be related to doors that are other than hinged, (e.g. a swivel).</p> <p>“Doors” is too limiting. The concern may be relevant to features that are seen as something other than a ‘door’ (e.g., a panel, a cover)</p> <p>Proposed Solution (PS)</p> <p>PS – Change to the effect of “If there are aperture access covers (e.g., panels, doors) that remain attached for the anticipated task, they should not interfere with aperture access such as requiring being held open by a second person when the related task is anticipated to be a one person task.”</p>	
	TF input (optional)		
Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GO TO “Related” subsection
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO “Final” subsection → (A)

Related	Motion and Reason (check one)	<input type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.)			GO TO "Persuasive" subsection		
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)					
		<input type="checkbox"/>	Reason	XXXX				
	Motion by/ 2 nd by	Name (Company)/Name (Company)						
	Discussion							
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.						
<input type="checkbox"/>		[Negative is not related.] < 2/3				GO TO "Persuasive" subsection		
<input type="checkbox"/>		2/3 ≤ [Negative is not related.]				GO TO "Final" subsection → (B)		
Persuasive	Motion and Reason (check one)	<input checked="" type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)					
		<input type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)					
		<input type="checkbox"/>	Reason	XXXX				
	Motion by/ 2 nd by	Paul Schwab (TI)/Lauren Crane (Tokyo Electron)						
	Discussion							
	Result of Vote (check one)	8 Y- 0 N; Motion passed						
		<input checked="" type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection	
		<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input checked="" type="checkbox"/>	N	GO TO "Final" subsection → (E)	
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO "Final" subsection → (C)				
<input type="checkbox"/>		90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection					
Address by Technical Change Option	Technical Change Recommendations							
	Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.							
	Technical Changes	1	FROM: Section/Paragraph XXX					
			TO: Section/Paragraph xxx					
			Justification (If necessary)					
2	FROM: Section/Paragraph XXX							
	TO: Section/Paragraph xxx							

		Justification (if necessary)		
	Motion	Negative is addressed by the technical change(s).		
	Motion by/2 nd 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/2 nd by	Name (Company)/Name (Company)		
	Discussion			
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.		
		90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)	
		[Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)	
Not Significant Finding Option	This option can be used only "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)			
	Use of "Not significant finding option" (check one)		It is mutually agreed upon to term the Negative "not significant".	GO TO "Final" subsection → (D)
			It is mutually agreed upon to term the Negative "significant".	GO TO "Final" subsection → (C)
			Whether or not the Negative is "not significant" is decided by a vote.	
	Motion	The Negative is "not significant".		
	Motion by/2 nd by	Name (Company)/Name (Company)		
	Vote		XX Y-XX N; Motion passed with simple majority	GO TO "Final" subsection → (D)
		XX Y-XX N; Motion failed with simple majority	GO TO "Final" subsection → (C)	
Final	(check if applicable)	(A)	Withdrawn (counted under h in disposition)	
		(B)	Not related (counted under i in disposition)	
		(C)	Related and not persuasive (significant)	
		(D)	Not significant (counted under j in disposition)	
		x (E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS
		(F)	Addressed by technical change (counted under k disposition)	
	(check if applicable)		Comment generated. See Section V-(ii) Comment # X.	

Line Item 4 Adjudication

II. Tally

Standards staff to fill in.

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	54	÷	89	=	60.7%	≥60%
Intercommittee Ballot	19					
Voting Interest Reject(s)	2		Total Voters with Rejects		2	
Voting Interest Accept(s)	38					

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: LAM)

Voter Reject 1 (Voter: Sean Larsen/Lam Research)

Negative 1

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.			
		LI4: Figure RZ-1			
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>The flow chart seems to hugely deprioritize the access requirements in the SESC. With systems getting taller and platforms becoming more common, this is needed for more tasks that have minimal lifting.</p> <p>Suggestion / Justification This is fine for the MMH tasks, but I think another flow chart or more instructions are needed. Rewrite as appropriate.</p>			
TF input (optional)					
Related	Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GO TO "Related" subsection	
		<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection → (A)	
	Motion and Reason (check one)	<input type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.)		GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)		
		<input type="checkbox"/>	Reason	XXXX	
		Motion by/ 2 nd by	Name (Company)/Name (Company)		
Discussion					
	XX Y-XX N; Motion passed/failed.				

	Result of Vote (check one)	<input type="checkbox"/>	[Negative is not related.] < 2/3		GO TO “Persuasive” subsection		
		<input type="checkbox"/>	2/3 ≤ [Negative is not related.]		GO TO “Final” subsection → (B)		
Persuasive	Motion and Reason (check one)	<input checked="" type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)				
		<input type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)				
			Reason	XXXX			
	Motion by/ 2nd by	Paul Schwab (TI)/Sean Larsen (Lam Research)					
	Discussion						
	Result of Vote (check one)	8 Y- 0 N; Motion passed					
		<input checked="" type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO “Address by Technical Change Option” subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input checked="" type="checkbox"/>	N	GO TO “Final” subsection → (E)
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO “Final” subsection → (C)			
		<input type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO “Not Significant Finding Option” subsection			
Address by Technical Change Option	Technical Change Recommendations						
	Original section/paragraph number and at least one full sentence are required in “FROM” and “TO” fields.						
	Technical Changes	1	FROM: Section/Paragraph XXX				
			TO: Section/Paragraph xxx				
			Justification (If necessary)				
		2	FROM: Section/Paragraph XXX				
			TO: Section/Paragraph xxx				
			Justification (If necessary)				
	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.						
	<input type="checkbox"/>	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/2 nd by	Name (Company)/Name (Company)			
	Discussion				
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.			
			90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)	
		[Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)		
Not Significant Finding Option	This option can be used only "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)				
	Use of "Not significant finding option" (check one)		It is mutually agreed upon to term the Negative "not significant".	GO TO "Final" subsection → (D)	
			It is mutually agreed upon to term the Negative "significant".	GO TO "Final" subsection → (C)	
			Whether or not the Negative is "not significant" is decided by a vote.		
	Motion	The Negative is "not significant".			
	Motion by/ 2 nd by	Name (Company)/Name (Company)			
	Vote		XX Y-XX N; Motion passed with simple majority	GO TO "Final" subsection → (D)	
		XX Y-XX N; Motion failed with simple majority	GO TO "Final" subsection → (C)		
Final	(check if applicable)		(A)	Withdrawn (counted under h in disposition)	
			(B)	Not related (counted under i in disposition)	
			(C)	Related and not persuasive (significant)	
			(D)	Not significant (counted under j in disposition)	
		x	(E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS
			(F)	Addressed by technical change (counted under k disposition)	
	(check if applicable)		Comment generated. See Section V-(ii) Comment # X.		

Checks for Entire Document Including All Approved Line Items

VIII. Safety Check

Note: This Safety check applies to the entire Standard or Safety Guideline including all the approved Line Items. See § 15 of the Regulations for further information.

Motion		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)
	x	This is a Safety Document, when all safety-related information is removed, the Document is not technically sound and complete. (Regulations ¶ 8.7.2)
	x	Safety Checklist (Regulations ¶ 15.3) is complete and has been included with the Document throughout the balloting process. (Regulations ¶ 15.1.2)
Motion by/2 nd by		Paul Schwab (TI)/Sean Larsen (Lam Research)
Discussion		None
Vote		6 Y-0N; Motion passed

IX. Intellectual Property (IP) Check

Note: This IP check applies to the entire Standard or Safety Guideline including all the approved Line Items. See § 16 of the Regulations for further information.

x	The TC Chapter meeting chair asked those participating, if they were aware of any potentially material patented technology or copyrighted items* in the Standard or Guideline. (Regulations ¶ 8.8.1)	
	x	No potentially material patented technology or reproduction of copyrighted items is known. GO TO SECTION X.
		Potentially material patented technology or reproduction of copyrighted items is known, but a Letter of Assurance (LOA) or copyright release letter for such items has been obtained or presented to the TC Chapter. GO TO SECTION X.
		Potentially material patented technology or reproduction of copyrighted items is known and use of such materials is technically justified by the TC Chapter, but an LOA or copyright release letter for some of the item(s) has NOT been obtained or presented to the TC Chapter.
	Motion	Ask ISC for special permission to publish.
		Quit activity.
		Wait for LOA for patented technology or release of copyrighted items.
	Motion by/2 nd by Name (Company)/Name (Company)	
	Discussion XXXX	
	Vote XX Y-XX N	
	Final Action	Motion passed
		Motion failed

* Note: Such potentially material patented technology or copyrighted items might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this Letter Ballot.

X. Action for This Document

Motion (Check all applicable items)	<input checked="" type="checkbox"/>	Line item(s) [1] and [3] passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] 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.
	<input checked="" type="checkbox"/>	Line item(s) [3] and [4] failed TC Chapter review and will be returned to the TF for rework.
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] failed TC Chapter review and work will be discontinued.
Motion by/ 2nd by		Paul Schwab (TI)/Bert Planting (ASML)
Discussion		None
Vote		7 Y-0 N
Final Action	<input checked="" type="checkbox"/>	Motion passed
	<input type="checkbox"/>	Motion failed

Standards staff to record the result of the A&R procedural review here:

A&R	<input type="checkbox"/>	Line item(s) [X], [X] and [X] are Approved for publication
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] are Approved pending acceptance of the Ratification Ballot
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] are Not approved
	Reason:	