

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

Region/Locale: [North America](#)

Global Technical Committee: [EH&S](#)

TC Chapter Cochairs: [Bert Planting \(ASML\)](#), [Chris Evanston \(Salus Engineering\)](#), [Sean Larsen \(Lam Research\)](#)

Standards Staff: [Kevin Nguyen](#)

	Scheduled in Background Statement	Actual
Date	April 6, 2023	April 6, 2023
Location	SEMI HQ, Milpitas, CA	SEMI HQ, Milpitas, CA
Reason for Change of Date and/or Location (if changed)		

Note: See [Regulations ¶ 9.5](#) Exceptions for allowable reason to change.

[Document Information](#)

I. Document Number, Title, Lists of Line Items

Document Number 6940A	Document Title Line Item Revisions to SEMI S2-0821, Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment (Delayed Revisions Related to Mention of SEMI S18 and the Invocation of SEMI S30)
<input type="checkbox"/> Line Item 1	Line Item Title Add Delayed Revision Section X to SEMI S02-0821
<input type="checkbox"/> Line Item 2	Line Item Title Add Delayed Revision Section Y to SEMI S02-0821

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 ¶ 9.6.2.1.1)

Voting Tally:

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	65	÷	104	=	62.5%	≥60%
Intercommittee Ballot	34					
Voting Interest Reject(s)	0		Total Voters with Rejects			0
Voting Interest Accept(s)	50					

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

III. Rejects

None

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APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change.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

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	=	50	/	50	=	100.0%		≥90%

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

Note: See Regulations § 9.6.2 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 ¶ 9.6.2.1.1)

Voting Tally:

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	65	÷	104	=	62.5%	≥60%
Intercommittee Ballot	34					
Voting Interest Reject(s)	1		Total Voters with Rejects		1	
Voting Interest Accept(s)	48					

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

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: AMAT)

Voter Reject 1 (Voter: Palmero, Edwin, AMAT)

Negative 1

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary. In section 23.y,
	Negative Text	*Original complete Negative text (e.g., issue, justification, suggestion) should be copied. SEMI S30 should just be a reference, not a requirement to document with an assessment report.

TF input (optional)	<p>Edwin Palmero, Applied Materials e-mail 21feb23:</p> <p>I will not be able to attend today's TF meeting on short notice. AMAT's response was cumulative from an internal discussion with product safety engineers. Several PSEs raised the comment of a negative vote, due to concerns of complicating the S2 review by mandating an S30 evaluation and report. If additional details are needed, I can compile AMAT detailed responses.</p> <p>es21feb23: Replied the same day:</p> <p>It would be helpful if you could provide the rationale for objecting to inclusion of assessment to SEMI S30 in the overall assessment to SEMI S2.</p> <p>The decision as to whether Applied Materials' Reject vote causes the ballot to fail will be made at the next meeting of the North America Chapter of the EHS Technical Committee and Applied Materials will have the opportunity to present its rationale there. However, it is a traditional courtesy to provide the rationale for a Reject vote to the task force, so the task force can discuss it before that meeting.</p> <p>Therefore, please provide whatever you can for the task force to discuss.</p> <p>tf28feb23:</p> <p>es: Have received nothing further from Applied Materials.</p> <p>This ballot was proposed because the majority of the Energetic Materials TF felt that the guidance in SEMI S30 was both useful and important and, therefore, should be applied to the relevant SME. Incorporating SEMI S30 by reference in SEMI S2 was determined to be the better way (as opposed to copying the information into SEMI S2) to drive the use of the guidance in SEMI S30. The North America Chapter of the EHS Technical Committee agreed to send a Line Item ballot to modify SEMI S2 by incorporating S30 by reference. Approximately 98% (i.e., all except Applied Materials) of the Voting Interests that cast ballots on Document 6940A agreed with the Energetic Materials TF.</p> <p>Incorporating SEMI S30 by reference, including reporting criteria, is a "firmer" way to guide people than is merely remarking as to SEMI S30's existence. The other Line Item on this ballot does add, to SEMI S2, a reference to SEMI S18 that is purely informative. That was done because incorporating a normative invocation of SEMI S18 was felt, by a substantial portion of the EHS TC, to be impractical because SEMI S18 is not structured in a manner conducive to equipment assessment. SEMI S30, however, was written with consideration of equipment assessment and describes how it is to be done.</p> <p>Recommend finding this Related, Not Persuasive: Y: 1 N: 0</p> <p>tf07mar23: As there were three participants, repeated vote: RNP Y: 3 N: 0</p> <p>tf04apr23: Still no rationale received from Submitter. , repeated vote: RNP Y: 4 N: 0</p>			
	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 checked="" 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.)	
			Reason	XXXX
	Motion by/ 2nd 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 type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)			
		<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)			
		<input type="checkbox"/>	Reason	No rationale provided for objecting to inclusion of assessment to SEMI S30 in the overall assessment to SEMI S2.		
	Motion by/ 2nd by	By: Eric Sklar / Safety Guru, LLC Second: Lauren Crane / Lam Research				
	Discussion	None				
	Result of Vote (check one)	Result: 14-Y 1-N Voting Result: Pass - 93.33%				
<input 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 type="checkbox"/>	N GO TO "Final" subsection → (E)	
<input checked="" 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			
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)		
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)		
		<input checked="" type="checkbox"/>	(C)	Related and not persuasive (significant)		
		<input type="checkbox"/>	(D)	Not significant (counted under j in disposition)		
		<input type="checkbox"/>	(E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS	
		<input type="checkbox"/>	(F)	Addressed by technical change (counted under k disposition)		
	(check if applicable)	<input type="checkbox"/>	Comment generated. See Section V-(ii) Comment # X.			

Disposition of Voting Interest Reject 1

Check only when the Document has not been failed.

1	Original number (#) of Negatives	(g)	
0	Number of Negatives withdrawn	(h)	
0	Number of Negatives found not related	(i)	
0	Number of Negatives found not significant	(j)	
0	Number of Negatives addressed by technical change (Negative becomes not significant)	(k)	
Final	<input type="checkbox"/>	$g - (h + i + j + k) = 0$	Reject is Not Valid and is not included in the denominator of § VI. Approval Conditions Check
	<input checked="" type="checkbox"/>	$g - (h + i + j + k) > 0$	Reject is included in the denominator of § VI. Approval Conditions Check
	<input type="checkbox"/>	Reject without a Negative	Not Valid

Note: If all of the Negatives included with a Reject Vote are withdrawn, determined to be not related, or determined to be not significant, the Reject Vote is not valid. (Regulations ¶ 9.4.3.3)

Note: A Negative addressed by a technical change is automatically considered to be not significant. (Regulations ¶ 9.6.1.4.5.2)

V. Comments

V- (i) Voters' Comments

Commenter 1 (Oikawa, Yuta /TEL) - Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.	
	all	
Action	<i>It is understandable that the Task Force thought that SEMI S30 should be included in the design and development of SMEs and conformance to SEMI S30 should be assessed as part of the conformance evaluation to SEMI S2.</i>	
	<i>I would like to ask for an answer about the details of the motive for doing so this time (background, where the request came from, etc.).</i>	
	The TC Chapter agreed to do one of the following actions.	
	*No motion is required in this step.	
		Already addressed by Commenter #, Comment #
	x	No further action was taken by the TC Chapter. Motion: Move to take no further action By: Eric Sklar / Safety Guru, LLC Second: Lauren Crane / Lam Research Result: 15-Y 0-N Voting Result: Pass - 100.00%.Voting Rule: Majority
		Refer to the TF for more consideration.
		New Business
	Editorial Change	

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 ¶ 9.6.2.1.2*)

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	=	48	/	49	=	98.0%		≥90%	

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

Note: See *Regulations § 9.6.2* 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.

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	<input type="checkbox"/>	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (<i>Regulations ¶ 8.7.1</i>)
	<input checked="" type="checkbox"/>	This is a Safety Document, when all safety-related information is removed, the Document is not technically sound and complete. (<i>Regulations ¶ 8.7.2</i>)
	<input checked="" type="checkbox"/>	Safety Checklist (<i>Regulations ¶ 15.3</i>) is complete and has been included with the Document throughout the balloting process. (<i>Regulations ¶ 15.1.2</i>)
Motion by/2 nd by	By: Eric Sklar / Safety Guru, LLC Second: Lauren Crane / Lam Research	
Discussion	None	
Vote	Result: 16-Y 0-N Voting Result: Pass - 100.00%	

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 including all the approved Line Items*. 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 <i>Regulations</i> ¶ 16.3.1.1) to the Standard or Safety Guideline; or, any copyrighted items or trademarks that are used/reproduced (see <i>Regulations</i> ¶ 16.4.1.2) in the Standard or Safety Guideline. (Also see, <i>Regulations</i> § 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	

IX(a2) Assessment of disclosed patented technologies

Disclosed patented technology #1 (<i>Brief description, e.g., patent title and number</i>):		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	
	NO	No further action is needed for patented technology #1		

This table is needed for each disclosed patented technology.

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/ 2 nd 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		
	YES	PROCEED to assess NEXT one, or if this is the last one, GO TO IX(c)

Has the copyright release been received from its owner ?.		NO	MOTION	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/ 2 nd 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

Is there any trademark in the Standard/Safety Guideline?		YES	Is every instance of trademark use technically justified?	YES	GO TO IX(d)
				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 (Check all applicable items)	<input checked="" type="checkbox"/>	Line item(s) [1] and [2] 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 type="checkbox"/>	Line item(s) [X], [X] and [X] 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/ 2 nd by	By: Lauren Crane / Lam Research Second: Lucian Girlea / Nikon Precision Inc.	
Discussion	None	
Vote	16-Y 0-N Voting Result: Pass - 100.00%	
Final Action	<input checked="" type="checkbox"/>	Motion passed
	<input type="checkbox"/>	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.