

Responses and Review Form for SEMI Draft Document #5969

Line Item Revisions to SEMI S2-0715, Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment (Re: Fire Protection)

Overall Summary

Line Item	Negatives	Comments
1 – Addition of criteria to determine which method of assessing fire risk is to be used.	Lam: Brian Claes: 3 Salus: Chris Evanston: 3 Screen: Ryosuke Imamiya: 2 Applied Materials: Ed Karl: 2	TI: Paul Schwab: 2
2 – Restructuring of portions of Section 14	Screen: Ryosuke Imamiya: 2	None

Line Item 1 – Addition of criteria to determine which method of assessing fire risk is to be used.

Tallies at Close of Voting

Voting Return Data		Acceptance Rate Data	
<i>Voting Interest Returns</i>	55	<i>Voting Interest Accept Votes (VIAccept)</i>	36
<i>Total Voting Interests</i>	87	<i>Interest Reject Votes (IReject)</i>	4
<i>Voting Interest Return %</i>	63.22%	<i>Approval % [VIAccept / (VIAccept + IReject)]</i>	90.00%
<i>Other Returns (Intercommittee, etc.)</i>	15	<i># of Interest Rejects that Need to be not found Valid for</i>	
		<i>Final Approval % >= 90%</i>	0
<i>Total Votes</i>	92		
<i>Total Votes with Comments</i>	1		
<i>Total Reject Votes</i>	4		

Rejects/Negatives

Summary: 10 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>Negs</i>	<i>Disp</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>Negs</i>	<i>Disp</i>
Lam: Brian Claes	Lam	3		SCREEN: Ryosuke Imamiya	SCREEN	2	
Salus: Chris Evanston	Salus	3		Applied Materials: Ed Karl	AMAT	2	

Details:

NOTICE: SEMI Staff must receive copies of ALL withdrawals of negative votes.

Table 0 Merged Negatives

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>			
#	Ref.	<u>Negative including Justification</u>	<u>TF Finding and Reason</u>
Salus 1	14.2.3 Flowchart Figure 1	<p><i>"Does the equipment have outside the primary power enclosure(s), high-voltage (>1000dc or 600Vac) or high-power (5>5kW) electrical components?"</i></p> <p>This should be eliminated as a criteria that triggers a Full S14. Reason (T): This concern will be much more thoroughly be covered under the electrical section that it will be under an S14 because it is an electrical issue. Using it to trigger a full S14 is not value added for the industry.</p>	<p>Select 1) <input type="checkbox"/> Not related <input type="checkbox"/> Not persuasive (assumes related) <input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: One of the goals in creating S14 was to provide a means of identifying and considering fire and smoke concerns with equipment that met the relevant general industry standards but not necessarily the needs of the semiconductor industry. In particular, what is acceptable behavior in general industry might include emission of a large enough particle load to the cleanroom to be unacceptable. Also, there are concerns about electrical equipment being a source of ignition of non-electrical components.</p> <p>TF, 05apr16: Keep second diamond: 6 Remove second diamond: 5</p>
Lam 1 (BC)	LI 1, Part A 14.2.3	<p>NEGATIVE</p> <p>The second decision block ("Does the equipment have....") specifies "YES"/"NO" criteria not directly or proportionately related to likelihood of fire risk warranting an S14 assessment. For instance, electrostatic chucks often operate at greater than 1000 vdc but present negligible risk because of extremely low available fault current. Additionally, there are examples of high-power commodities (e.g., RF generators for plasma processing) that exceed 5 KW that are assessed for fire and energy risks under applicable standards and usually ATL certified.</p> <p>Suggestion / Justification Change to wording to limit the application of this decision block to primary power circuits for the <u>voltage</u> threshold and add an "AND" (not an "OR") that affected components are "not certified by an ATL or not used in accordance with the manufacturer's specifications"</p>	<p>Select 1) <input type="checkbox"/> Not related <input type="checkbox"/> Not persuasive (assumes related) <input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: See Salus 1. It's not clear whether the suggestion is to use the voltage criterion or the power criterion. Adding the proposed "and not certified by and ATL or not used in accordance with the manufacturer's specifications" would be superfluous. Anything meeting either of those criteria would, as a function of the fourth diamond, lead to the use of S14.</p> <p>TF, 05apr16:</p>

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>			
#	Ref.	<u>Negative including Justification</u>	<u>TF Finding and Reason</u>
SCREEN 1	14.2.3 flowchart, second branch	<p>What is a risk difference of outside power enclosures from the inside power enclosures. The fire risk level seems same.</p> <p>I recommend deleting "outside the primary power enclosures".</p>	<p>Select 1) <input type="checkbox"/> Not related <input type="checkbox"/> Not persuasive (assumes related) <input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: Primary power enclosures were excluded to avoid causing all SME to be subject to S14 assessment and because power enclosures, in most cases, include only electrical equipment. TF, 05apr16:</p>
Salus 2	14.2.3 Flowchart Figure 1	<p><i>"Are any of the electrical components/parts/assemblies that operate from or conduct hazardous voltage or hazardous power, not certified by an ATL or not used in accordance with the manufacturer's specifications"</i></p> <p>This should be eliminated as a criteria that triggers a Full S14.</p> <p>Reason (T) This concern will be much more thoroughly be covered under the electrical section that it will be under an S14 because it is an electrical issue. Using it to trigger a full S14 is not value added for the industry.</p>	<p>Select 1) <input type="checkbox"/> Not related <input type="checkbox"/> Not persuasive (assumes related) <input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: See Salus 1. TF, 05apr16:</p>
Lam 2 (BC)	LI 1, Part A 14.2.3	<p>NEGATIVE</p> <p>The <u>hazardous voltage</u> criteria is essentially unrelated to fire risk. The more useful criteria is related to available energy under fault conditions.</p> <p>The <u>hazardous power</u> criteria (240 VA) is an inappropriately low threshold regardless of the ATL/use qualifiers. The 240 VA threshold has been used for decades to demarcate the upper end where no energy risk (e.g., fire) is presumed. There is an extremely large additional headroom above this threshold before a condition justifying an S14 assessment is present. This headroom can vary significantly from one physical application to another and an assessment of fire risk should be left up to the expert assessor.</p> <p>Suggestion / Justification Delete the 4th decision block entirely. I question whether alternative language defining appropriate quantitative technical criteria is both available and agreeable. Alternatively, the Task Force can assemble incident histories that allow study of the relationship between available electrical energy and equipment fires where an S14 assessment would have been essential because other existing methods, standards and certifications, when implemented in equipment design <u>and</u> manufacturing, are not adequate.</p>	<p>Select 1) <input type="checkbox"/> Not related <input type="checkbox"/> Not persuasive (assumes related) <input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: As the submitter points out, 240 VA has been used as level below some fire risks are considered not to exist. The TF felt that makes it appropriate to use as a screening tool to determine how fire risk should be assessed. It's not obvious how the submitter foresees how the document could implement "fire risk should be left up to the expert assessor" without directing thorough assessment. TF, 05apr16:</p>

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#	Ref.	<i>Negative including Justification</i>	<i>TF Finding and Reason</i>
AMAT-2	Line Item 1, Part A Figure 1	<p>Negative</p> <p>The last diamond in the flowchart states if the question to, "Are any of the electrical components/parts/assemblies that operate from or conduct hazardous voltage or hazardous power, not certified by an ATL or not used in accordance with the manufacturer's specifications?" is "Yes", then "SEMI S14 should be used to evaluate the equipment. Provide the SEMI S14 report with, or as part of, the S2 report (Also, see 14.3.1.1.)"</p> <p>Rationale: In a state-of-the-art, complex piece of customized semiconductor manufacturing equipment, it is not always feasible (nor practical) to use 100% ATL certified components/parts/assemblies. The fact that an electrical component/part/assembly with hazardous voltage or hazardous power is not ATL certified, should not be the sole criteria for having the entire semiconductor equipment be evaluated to SEMI S14.</p> <p><u>Proposed Solution:</u></p> <p>Proposal 1: Revise the question to "Are any of the electrical components/parts/assemblies that operate from or conduct hazardous voltage or hazardous power, not compliant with an applicable national or international product safety standard or not used in accordance with the manufacturer's specifications?"</p> <p>Proposal 2: Separate the question of "ATL certification" and allow for the third party to evaluate the non-ATL certified components/parts/assemblies against the appropriate national or international product safety standard."</p> <p>Proposal 3: Instead of requiring the entire semiconductor manufacturing equipment to undergo SEMI S14 because a single component/part/assembly is not ATL certified, revise the flow chart such that a "Yes" response is routed to a different oral box stating, "The portion of the equipment where the non-ATL certified components/parts/assemblies are enclosed should be evaluated to SEMI S14."</p>	<p>Select 1)</p> <p><input type="checkbox"/> Not related</p> <p><input type="checkbox"/> Not persuasive (assumes related)</p> <p><input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason:</p> <p>Sklar, 22mar16: It is not clear that the proposed language would assign the decision of whether the item in question complies with a relevant standard to a quasi-independent party, rather than an equipment supplier. S2 does not require that evaluations be done by quasi-independent parties. Proposal 3 assumes that a component can affect fire risk in only its location. I don't accept that assumption.</p> <p>TF, 05apr16:</p>
Salus 3	14.2.3 Flowchart Figure 1	<p>There is no criteria in this flowchart that triggers a full S14 because the equipment is largely made out of flammable material</p> <p>Reason (T)</p> <p>Equipment that is not made of largely metal or 4910 plastic should be subject to a full S14. Suggest adding a criteria "Is equipment made of greater than 5% of material that neither metal nor 4910 plastic? If yes trigger full S14 - if no S14 need not be used.</p>	<p>Select 1)</p> <p><input type="checkbox"/> Not related</p> <p><input type="checkbox"/> Not persuasive (assumes related)</p> <p><input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason:</p> <p>Sklar, 22mar16: In developing this ballot, the TF discussed whether combustible materials of construction, alone, merited the use of S14. The TF decided that, without a credible ignition source, they do not. (S14 explicitly excludes fires resulting from external sources of ignition.)</p> <p>TF, 05apr16:</p>

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#	Ref.	<u>Negative including Justification</u>	<u>TF Finding and Reason</u>
Lam 3 (BC)	LI 1, Part A 14.3.1.2	<p>NEGATIVE</p> <p>The second bullet (“the decision path...”) seems contradictory to the initial qualifying sentence in the clause. This clause deals with requirements applicable if one declines to conduct an S14 assessment yet the second bullet has language that speaks to the flowchart leading to use of S14 (“the decision path through the flowchart that lead to using SEMI S14, and...”)</p> <p>Suggestion / Justification Revise the test to read: “the decision path through the flowchart that leads to waiving use of SEMI S14” (or something to that effect)</p>	<p>Select 1)</p> <p><input type="checkbox"/> Not related</p> <p><input type="checkbox"/> Not persuasive (assumes related)</p> <p><input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: Submitter is correct. Consider this to be a ballot preparation error, as the header of the bullet list precludes there being a path that led to the use of S14. The key question is: May we treat this as a ballot preparation error and fix it editorially or must we fail the Line Item, fix this, and rebalot?</p> <p>TF, 05apr16: Motion (Holbrook, Larsen) RP because there is a logical fault in the ballot as distributed for consideration.</p> <p>Y: 11 N: 0\</p> <p>Fix & rebalot</p>
AMAT-1	Line Item 1, Part B 14.3.1.2, 2 nd bullet	<p>Negative</p> <p>The second bullet states, “the decision path through the flowchart that lead to using SEMI S14, and”. But this is under Section 14.3.1.2 which is applicable “If SEMI S14 was not used to assess the equipment...”. If the second bullet shows the decision path leading to using SEMI S14, why would this be sufficient justification for not using SEMI S14?</p> <p>Proposed Solution: Revise 2nd bullet to, “the decision path through the flowchart that lead to not using SEMI S14, and”</p>	<p>Select 1)</p> <p><input type="checkbox"/> Not related</p> <p><input type="checkbox"/> Not persuasive (assumes related)</p> <p><input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: See Lam 3</p>
SCREEN 2	Line Item 1, Part B 14.3.1.2 3	<p>If SEMI S14 is not used, I think there would be no summary report.</p> <p>I recommend not use “summary report”.</p>	<p>Select 1)</p> <p><input type="checkbox"/> Not related</p> <p><input type="checkbox"/> Not persuasive (assumes related)</p> <p><input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: Reason for having the described report for cases in which S14 is not used is that, without such a report, there would be no record of the basis for not using S14. That would preclude review of such a decision. Recommend finding this NP.</p> <p>TF, 05apr16:</p>

Table 1 Negatives from < Lam: Brian Claes >

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#	Ref.	Negative <i>including Justification</i>	TF Finding <i>and Reason</i>	Motion <i>and Reason in Committee:</i>	Final
Lam 1 (BC)	LI 1, Part A 14.2.3	<p>NEGATIVE</p> <p>The second decision block (“Does the equipment have...”) specifies “YES”/“NO” criteria not directly or proportionately related to likelihood of fire risk warranting an S14 assessment. For instance, electrostatic chucks often operate at greater than 1000 vdc but present negligible risk because of extremely low available fault current. Additionally, there are examples of high-power commodities (e.g., RF generators for plasma processing) that exceed 5 KW that are assessed for fire and energy risks under applicable standards and usually ATL certified.</p> <p><i>Suggestion / Justification</i> Change to wording to limit the application of this decision block to primary power circuits for the <u>voltage</u> threshold and add an “AND” (not an “OR”) that affected components are “not certified by an ATL or not used in accordance with the manufacturer’s specifications”</p>			
Lam 2 (BC)	LI 1, Part A 14.2.3	<p>NEGATIVE</p> <p>The hazardous <u>voltage</u> criteria is essentially unrelated to fire risk. The more useful criteria is related to available energy under fault conditions. The hazardous <u>power</u> criteria (240 VA) is an inappropriately low threshold regardless of the ATL/use qualifiers. The 240 VA threshold has been used for decades to demarcate the upper end where <u>no</u> energy risk (e.g., fire) is presumed. There is an extremely large additional headroom above this threshold before a condition justifying an S14 assessment is present. This headroom can vary significantly from one physical application to another and an assessment of fire risk should be left up to the expert assessor.</p> <p><i>Suggestion / Justification</i> Delete the 4th decision block entirely. I question whether alternative language defining appropriate quantitative technical criteria is both available and agreeable. Alternatively, the Task Force can assemble incident histories that allow study of the relationship between available electrical energy and equipment fires where an S14 assessment would have been essential because other existing methods, standards and certifications, when implemented in equipment design <u>and</u> manufacturing, are not adequate.</p>			

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#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason in Committee:</u>	Final
Lam 3 (BC)	LI 1, Part A 14.3.1.2	<p>NEGATIVE</p> <p>The second bullet (“the decision path...”) seems contradictory to the initial qualifying sentence in the clause. This clause deals with requirements applicable if one declines to conduct an S14 assessment yet the second bullet has language that speaks to the flowchart leading to use of S14 (“the decision path through the flowchart that lead to using SEMI S14, and....”</p> <p>Suggestion / Justification Revise the test to read: “the decision path through the flowchart that leads to waiving use of SEMI S14” (or something to that effect)</p>	<p>(Select 1)</p> <p><input type="checkbox"/> Not related</p> <p><input type="checkbox"/> Not persuasive (assumes related)</p> <p><input checked="" type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: Submitter is correct. Consider this to be a ballot preparation error, as the header of the bullet list precludes there being a path that led to the use of S14</p> <p>TF, 05apr16: Motion (Holbrook, Larsen) RP because there is a logical fault in the ballot as distributed for consideration.</p> <p>Y: 11 N: 0 Fix & rebalot</p>	<p>Withdrawn by Subm. (Date: __)</p> <p>Move to find this negative: (select 1)</p> <p><input type="checkbox"/> Not related (requires reason, follow)</p> <p><input type="checkbox"/> Committee new business</p> <p><input type="checkbox"/> Assigned to: _____</p> <p><input type="checkbox"/> Not persuasive (requires reason)</p> <p><input checked="" type="checkbox"/> Related & persuasive (ballot fails)</p> <p>Reason: By/2nd: Sklar/PLanting Disc: Vote: #-#-#. 10-0 Motion passed failed</p> <p>Significance finding/method: (select 1)</p> <p><input type="checkbox"/> Not significant by agreement</p> <p><input type="checkbox"/> Not significant by motion</p> <p><input type="checkbox"/> Significant by % of NP vote (>10%)</p> <p><input type="checkbox"/> Significant by agreement</p> <p><input type="checkbox"/> Significant by motion</p> <p>By/2nd: Disc: Vote: #-#-#. Motion passed failed</p>	

Final disposition of this reject:
 Valid (includes at least one significant negative)
 Not Valid (all negatives withdrawn, found not related, or found not significant)

Table 2 Negatives from < Salus: Chris Evanston >

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>				
#	Ref.	<i>Negative including Justification</i>		
Salus 1	14.2.3 Flowchart Figure 1	<p><i>"Does the equipment have outside the primary power enclosure(s), high-voltage (>1000dc or 600Vac) or high-power (5>5kW) electrical components?"</i></p> <p>This should be eliminated as a criteria that triggers a Full S14.</p> <p>Reason (T): This concern will be much more thoroughly be covered under the electrical section that it will be under an S14 because it is an electrical issue. Using it to trigger a full S14 is not value added for the industry.</p>		
SCREEN 1	Line Item 1, Part A 14.2.3 The flowchart in Figure 1, second branch	<p>What is a risk difference of outside power enclosures from the inside power enclosures. The fire risk level seems same.</p> <p>I recommend deleting "outside the primary power enclosures".</p>		
Salus 2	14.2.3 Flowchart Figure 1	<p><i>"Are any of the electrical components/parts/assemblies that operate from or conduct hazardous voltage or hazardous power, not certified by an ATL or not used in accordance with the manufacturer's specifications"</i></p> <p>This should be eliminated as a criteria that triggers a Full S14.</p> <p>Reason (T) This concern will be much more thoroughly be covered under the electrical section that it will be under an S14 because it is an electrical issue. Using it to trigger a full S14 is not value added for the industry.</p>		
Salus 3	14.2.3 Flowchart Figure 1	<p>There is no criteria in this flowchart that triggers a full S14 because the equipment is largely made out of flammable material</p> <p>Reason (T) Equipment that is not made of largely metal or 4910 plastic should be subject to a full S14. Suggest adding a criteria "Is equipment made of greater than 5% of material that neither metal nor 4910 plastic? If yes trigger full S14 - if no S14 need not be used.</p>		
Final disposition of this reject:				
<input type="checkbox"/> Valid (includes at least one significant negative)				
<input type="checkbox"/> Not Valid (all negatives withdrawn, found not related, or found not significant)				

Table 3 Negatives from < SCREEN: Ryosuke Imamiya >

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
SCREEN 1	Line Item 1, Part A 14.2.3 The flowchart in Figure 1, second branch	What is a risk difference of outside power enclosures from the inside power enclosures. The fire risk level seems same. I recommend deleting "outside the primary power enclosures".			
SCREEN 1	Line Item 1, Part B 14.3.1.2 3	If SEMI S14 is not used, I think there would be no summary report. I recommend not use "summary report".			
Final disposition of this reject: ___Valid (includes at least one significant negative) ___Not Valid (all negatives withdrawn, found not related, or found not significant)					

Table 4 Negatives from < AMAT: Ed Karl >

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
AMAT-1	Line Item 1, Part B 14.3.1.2, 2 nd bullet	Negative The second bullet states, "the decision path through the flowchart that lead to using SEMI S14, and". But this is under Section 14.3.1.2 which is applicable "If SEMI S14 was not used to assess the equipment...". If the second bullet shows the decision path leading to using SEMI S14, why would this be sufficient justification for not using SEMI S14? Proposed Solution: Revise 2 nd bullet to, "the decision path through the flowchart that lead to not using SEMI S14, and"			

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>							
#	Ref.	Negative <i>including Justification</i>	TF Finding and Reason	Motion and Reason in Committee:			
AMAT-2	Line Item 1, Part A Figure 1	<p>Negative</p> <p>The last diamond in the flowchart states if the question to, "Are any of the electrical components/parts/assemblies that operate from or conduct hazardous voltage or hazardous power, not certified by an ATL or not used in accordance with the manufacturer's specifications?" is "Yes", then "SEMI S14 should be used to evaluate the equipment. Provide the SEMI S14 report with, or as part of, the S2 report (Also, see 14.3.1.1.)"</p> <p>Rationale: In a state-of-the-art, complex piece of customized semiconductor manufacturing equipment, it is not always feasible (nor practical) to use 100% ATL certified components/parts/assemblies. The fact that an electrical component/part/assembly with hazardous voltage or hazardous power is not ATL certified, should not be the sole criteria for having the entire semiconductor equipment be evaluated to SEMI S14.</p> <p><u>Proposed Solution:</u></p> <p>Proposal 1: Revise the question to "Are any of the electrical components/parts/assemblies that operate from or conduct hazardous voltage or hazardous power, not compliant with an applicable national or international product safety standard or not used in accordance with the manufacturer's specifications?"</p> <p>Proposal 2: Separate the question of "ATL certification" and allow for the third party to evaluate the non-ATL certified components/parts/assemblies against the appropriate national or international product safety standard."</p> <p>Proposal 3: Instead of requiring the entire semiconductor manufacturing equipment to undergo SEMI S14 because a single component/part/assembly is not ATL certified, revise the flow chart such that a "Yes" response is routed to a different oral box stating, "The portion of the equipment where the non-ATL certified components/parts/assemblies are enclosed should be evaluated to SEMI S14."</p>					
<p>Final disposition of this reject:</p> <p><u>Valid (includes at least one significant negative)</u></p> <p><u>Not Valid (all negatives withdrawn, found not related, or found not significant)</u></p>							

Comments


Summary: 2 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
TI: Paul Schwab	TI	2			

Details:

NOTICE: Items from “Reject” votes that are clearly marked by the voter as comments can be reviewed here.

#	Ref.	Comment	TF Response	Committee Action:
TI-1		<p>Consider adding on board heating elements or tool construction to this flow chart. I saw the tool construction appendix and didn't know if that was part of the decision making process on determining if S14 is necessary or not..</p> <p>TF, 05apr16:</p>	<p>Sklar, 22mar16: On-board heating elements are captured by the third diamond. I don't know to what "tool construction" pertains.</p>	<p>(Select one)</p> <p><input type="checkbox"/> No further action</p> <p><input checked="" type="checkbox"/> Refer to TF for further review</p> <p><input type="checkbox"/> New Business</p> <p><input type="checkbox"/> Editorial Change: # __ in ECs below</p> <p><input type="checkbox"/> Other:</p> <p>(Select one)</p> <p><input type="checkbox"/> Committee agrees (no motion nec.)</p> <p><input type="checkbox"/> Motion to act as indicated above:</p> <p><i>By 2nd.</i></p> <p><i>Disc.</i></p> <p><i>Vote: #-#-#. Motion passed failed</i></p>

#	Ref.	Comment	TF Response	Committee Action:
TI-2		<p>Chart contains terminology of 100°C which is 212°F and then states flammable or combustible material. Why would it be a concern for flammable when IFC/OSHA classify flammables in the following manner:</p> <p>Flammable liquid: any liquid having a flash point below 100°F (37.8°C), except any mixture having components with flashpoints of 100°F (37.8°C) or higher, the total of which make up 99 percent or more of the total volume of the mixture. Flammable liquids shall be known as Class I liquids. Class I liquids are divided into three classes as follows:</p> <ol style="list-style-type: none"> 1. Class IA shall include liquids having flash points below 73°F (22.8°C) and having a boiling point below 100°F (37.8°C). 2. Class IB shall include liquids having flash points below 73°F (22.8°C) and having a boiling point at or above 100°F (37.8°C). 3. Class IC shall include liquids having flash points at or above 73°F (22.8°C) and below 100°F (37.8°C). <p>Flammable gas: Any material which is a gas at 20 °C (68 °F) or less and 101.3 kPa (14.7 psia) of pressure (a material which has a boiling point of 20 °C (68 °F) or less at 101.3 kPa (14.7 psia)) (5969_Texas_Inst_comments.docx)</p>  <p>5969_Texas_Inst_comments.docx</p>	<p>Sklar, 22mar16: Flammable and combustible fluids that are consumable are addressed in the first diamond. The third diamond addresses any such fluids that are not consumable. Furthermore, it addresses combustible solids, which are not addressed in the preceding diamonds. TF, 05apr16:</p>	<p>(Select one) <input type="checkbox"/> No further action <input checked="" type="checkbox"/> Refer to TF for further review <input type="checkbox"/> New Business <input type="checkbox"/> Editorial Change: # ___ in ECs below <input type="checkbox"/> Other: (Select one) <input type="checkbox"/> Committee agrees (no motion nec.) <input type="checkbox"/> Motion to act as indicated above: By/ 2nd: Disc: Vote: #-#-#. Motion passed failed</p>

Line Item 1 – Summary of Editorial Changes

NOTICE: TF leaders have the option of addressing editorial changes prior to addressing negatives, if they believe that their editorial changes will render some or all of the submitted negatives non-persuasive.

NOTICE: It is only necessary to approve each editorial change separately if someone objects to one or more of the suggested changes.

#	Ref.	Before	After	Object? (Y/N)	Motion to Approve: (if necessary)
					By/2nd: Disc: Vote: #-#-#. Motion passed failed
					By/2nd: Disc: Vote: #-#-#. Motion passed failed

Move to approve **all** editorial changes as shown above:

By/2nd:

Disc:

Vote: #-#-#. **Motion passed failed**

Line Item 1 – Forwarding Motions

<i>Documents Passing Review</i>	<i>Documents Failing Review</i>
<p>Safety Check Move to find that this document: <input type="checkbox"/> Is NOT a safety document: when all safety-related information is removed, the document is still technically sound and complete. <input type="checkbox"/> IS a safety document: when all safety-related information is removed, the document is not technically sound and complete. <input type="checkbox"/> The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process. <i>By/2nd:</i> <i>Disc:</i> Vote: #-#-#. Motion passed failed</p> <p>Intellectual Property Check The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline. (Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.) <input type="checkbox"/> No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed) <input type="checkbox"/> Patented or copyrighted material is known to exist in the Standard or Guideline but release for such material has been obtained or presented to the committee. (no motion needed) <input type="checkbox"/> Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to: <input type="checkbox"/> Ask the ISC for special permission to publish the standard without release <input type="checkbox"/> Quit the activity <input type="checkbox"/> Wait for the release of the patented or copyrighted material. <i>By/2nd:</i> <i>Disc:</i> Vote: #-#-#. Motion passed failed</p> <p>Final Action Move to: <input type="checkbox"/> Pass this document as balloted and forward to the A&R for procedural review. <input type="checkbox"/> Pass this document with editorial changes and forward to the A&R for procedural review. <i>By/2nd:</i> <i>Disc:</i> Vote: #-#-#. Motion passed failed</p>	<p>Followup Activity Authorization Move to: <input checked="" type="checkbox"/> Return ballot to the originating task force for rework <input checked="" type="checkbox"/> and authorize a follow-up ballot <input type="checkbox"/> Transfer ballot to the (name) task force for rework <input type="checkbox"/> and authorize a follow-up ballot <input type="checkbox"/> Discontinue work on ballot.</p> <p><i>By/2nd:</i> Sklar/PLanting <i>Disc:</i> Vote: #-#-#. 10-0 Motion passed failed</p>

Line Item 2 – Restructuring of portions of Section 14.

Tallies at Close of Voting

Voting Return Data		Acceptance Rate Data	
<i>Voting Interest Returns</i>	55	<i>Voting Interest Accept Votes (VIAccept)</i>	38
<i>Total Voting Interests</i>	87	<i>Interest Reject Votes (IReject)</i>	1
<i>Voting Interest Return %</i>	63.22%	<i>Approval % [VIAccept / (VIAccept + IReject)]</i>	97.44%
<i>Other Returns (Intercommittee, etc.)</i>	15	<i># of Interest Rejects that Need to be not found Valid for</i>	
		<i>Final Approval % >= 90%</i>	0
<i>Total Votes</i>	92		
<i>Total Votes with Comments</i>	0		
<i>Total Reject Votes</i>	1		

Rejects/Negatives

Summary: 2 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>Negs</i>	<i>Disp</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>Negs</i>	<i>Disp</i>
SCREEN: Ryosuke Imamiya	SCREEN2						

Details:

NOTICE: SEMI Staff must receive copies of ALL withdrawals of negative votes.

Table 5 Negatives from < SCREEN: Ryosuke Imamiya >

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>					
<i>#</i>	<i>Ref.</i>	<i>Negative including Justification</i>	<i>TF Finding and Reason</i>	<i>Motion and Reason in Committee:</i>	<i>Final</i>

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant

#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason</u> in Committee:	Final
GREEN 1	Line Item 2, Part A	Please explain what is licensed. Add examples of the licenses.	<p>(Select 1) <input type="checkbox"/> Not related <input checked="" type="checkbox"/> Not persuasive (assumes related) <input type="checkbox"/> Related & persuasive</p> <p>Reason: Sklar, 22mar16: This does not appear to be an objection to the restructuring. Recommend finding this NP. I suggest considering adding a NOTE to provide the requested information. TF, 05apr16: RNP: (Karl, Planting) Not an objection to the restructuring, so the use of "licensed" is not being changed. Y: 12 N: 0 Recommend editorial change.</p>	<p>___ Withdrawn by Subm. (Date: ___) Move to find this negative: (select 1) <input type="checkbox"/> Not related (requires reason, follow) <input type="checkbox"/> Committee new business <input type="checkbox"/> Assigned to: _____ <input checked="" type="checkbox"/> Not persuasive (requires reason) <input type="checkbox"/> Related & persuasive (ballot fails) Reason: Not an objection to the restructuring, so the use of "licensed" is not being changed.</p> <p>By/2nd: Sklar/Planting Disc: Vote: #-#-#. 9-0 Motion passed Significance finding/method: (select 1) <input type="checkbox"/> Not significant by agreement <input type="checkbox"/> Not significant by motion <input type="checkbox"/> Significant by % of NP vote (>10%) <input type="checkbox"/> Significant by agreement <input type="checkbox"/> Significant by motion</p> <p>By/2nd: Disc:</p>	

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>					
#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason in Committee:</u>	Final
SC RE EN 2	Line Item 2, Part B	The requirements should be in the front of the sentence,	(Select 1) <input type="checkbox"/> Not related <input type="checkbox"/> Not persuasive (assumes related) <input checked="" type="checkbox"/> Related & persuasive Reason: Sklar, 22mar16: This appears to be an editorial suggestion on how the first sentence should be structured, rather than an objection to moving this paragraph. (There is no change proposed to the sentence structure.) I recommend finding this NP. TF, 05apr16: RNP (Karl, Holbrook): Paragraph is proposed to be moved, not changed. Negative is request for an editorial change. Y: 9 N: 0	Withdrawn by Subm. (Date: ___) Move to find this negative: (select 1) <input type="checkbox"/> Not related (requires reason, follow) <input type="checkbox"/> Committee new business <input type="checkbox"/> Assigned to: _____ <input checked="" type="checkbox"/> Not persuasive (requires reason) <input checked="" type="checkbox"/> Related & persuasive (ballot fails) Reason: Paragraph is proposed to be moved, not changed. Negative is request for an editorial change. By/2nd: Sklar/Karl Disc: Vote: #-#-#. 8-0 Motion passed Significance finding/method: (select 1) <input type="checkbox"/> Not significant by agreement <input type="checkbox"/> Not significant by motion <input type="checkbox"/> Significant by % of NP vote (>10%) <input type="checkbox"/> Significant by agreement <input type="checkbox"/> Significant by motion By/2nd: Disc: Vote: #-#-#. Motion passed failed	
	14.5.1.1 2	exemptions should not in the front. I recommend starting from the requirements. Shutdown or failure of a fire detection or suppression system should prevent additional processing			
Final disposition of this reject: <input type="checkbox"/> Valid (includes at least one significant negative) <input type="checkbox"/> Not Valid (all negatives withdrawn, found not related, or found not significant)					

Line Item 2 – Summary of Editorial Changes

NOTICE: TF leaders have the option of addressing editorial changes prior to addressing negatives, if they believe that their editorial changes will render some or all of the submitted negatives non-persuasive.

NOTICE: It is only necessary to approve each editorial change separately if someone objects to one or more of the suggested changes.

#	Ref.	Before	After	Object? (Y/N)	Motion to Approve: (if necessary)
					By/2nd: Disc: Vote: #-#-#. Motion passed failed
					By/2nd: Disc: Vote: #-#-#. Motion passed failed

Move to approve **all** editorial changes as shown above:

By/2nd:

Disc:

Vote: #-#-#. **Motion passed failed**

Line Item 2 – Forwarding Motions

<i>Documents Passing Review</i>	<i>Documents Failing Review</i>
<p>Safety Check Move to find that this document: <input type="checkbox"/> Is NOT a safety document: when all safety-related information is removed, the document is still technically sound and complete. <input checked="" type="checkbox"/> IS a safety document: when all safety-related information is removed, the document is not technically sound and complete. <input checked="" type="checkbox"/> The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process. <i>By/2nd:</i> Sklar/PLanting <i>Disc:</i> Vote: #-#-#. 8-0 Motion passed failed</p> <p>Intellectual Property Check The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline. (Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.) <input checked="" type="checkbox"/> No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed) <input type="checkbox"/> Patented or copyrighted material is known to exist in the Standard or Guideline but release for such material has been obtained or presented to the committee. (no motion needed) <input type="checkbox"/> Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to: <input type="checkbox"/> Ask the ISC for special permission to publish the standard without release <input type="checkbox"/> Quit the activity <input type="checkbox"/> Wait for the release of the patented or copyrighted material. <i>By/2nd:</i> <i>Disc:</i> Vote: #-#-#. Motion passed failed</p>	<p>Followup Activity Authorization Move to: <input type="checkbox"/> Return ballot to the originating task force for rework <input type="checkbox"/> and authorize a follow-up ballot <input type="checkbox"/> Transfer ballot to the (name) task force for rework <input type="checkbox"/> and authorize a follow-up ballot <input type="checkbox"/> Discontinue work on ballot. <i>By/2nd:</i> <i>Disc:</i> Vote: #-#-#. Motion passed failed</p>

Final Action

Move to:

Pass this document as balloted and forward to the A&R for procedural review.

Pass this document with editorial changes and forward to the A&R for procedural review.

By/2nd: Sklar/PLanting

Disc:

Vote: #-#-#. 8-0 **Motion passed**