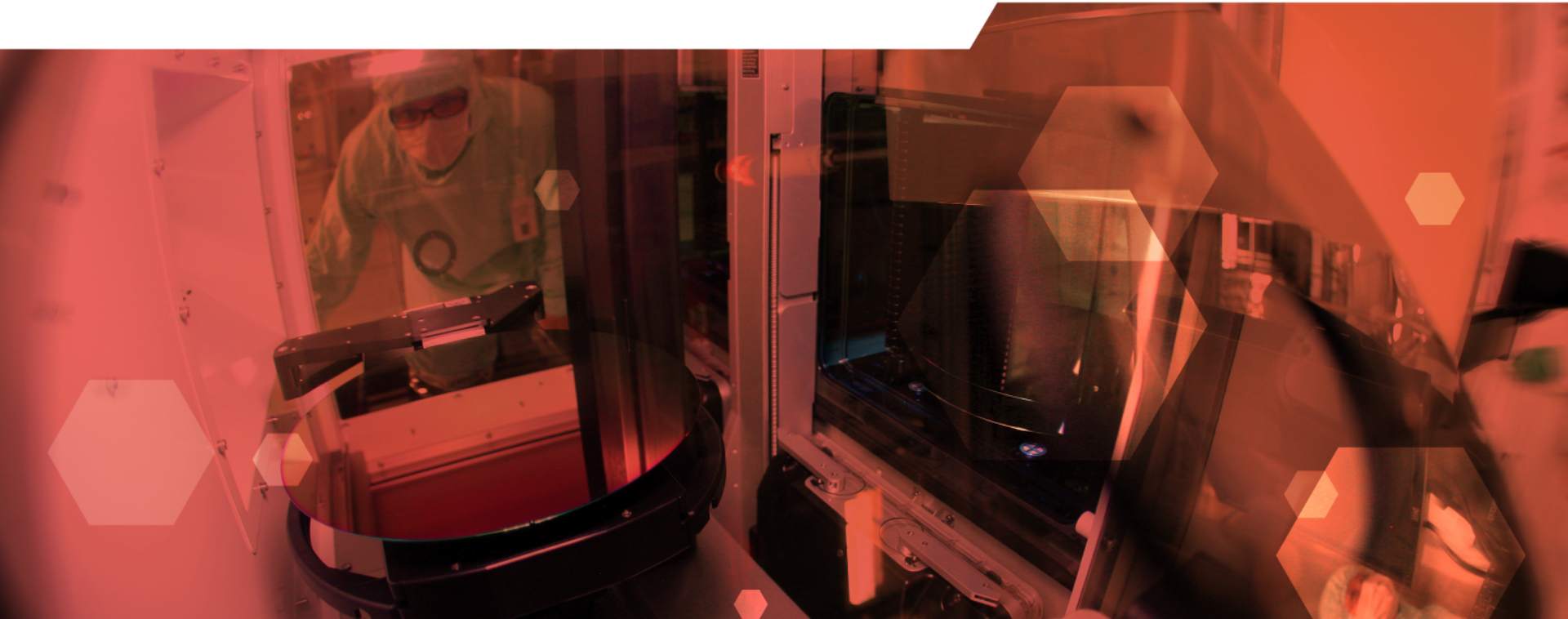
semi | Standards

S23 Global Task Force

EH&S Japan Technical Committee Chapter Meeting

May 26th 2022: Virtual

Co-leaders: Lauren Crane (Lam Research), George Hoshi (TEL)



TF Meeting March 29, 2022 9-10am (JPT)

1. Quick review of the editorial change made by the last EHS Committee Chapter meeting
2. Planning the "splitting" of the current S23 into a guide and a test method.

Meeting note:

- The plan from that meeting is to pursue splitting S23 into a Guide (S23) and a new S23 test method.
- There is also an S23 related idea for something like an Energy Efficiency Ranking Method (something like US Energy Star) being proposed by Benjamin Gross of AMAT – but I do not think that belongs in the S23 GTF at this time, and I am encouraging Benjamin to form a separate task force. Although Benjamin's idea sort of depends on S23 as a measurement tool, it is not fundamentally an S23 issue. I currently think it looks too much like a commercial concern and might not be appropriate for SEMI Standards. In any case I think there will be a lot of debate about how to form the breakpoints for the various star levels. Attached are Benjamin's slides.
- Carlo Luijten found an error in S23 which Eric believes can be changed by Committee action. He understands it to be a "Type 2" editorial change, which requires Committee action. Attached is a PCR for the change. If this can be address in the Japan TC Chapter meeting, that would be great. I have copied in Mashiro-san to see if there is some action the Japan TC Chapter must take or can take for this issue (for example, perhaps both TC Chapters have to approve because we are a Global Task Force?).

I have also attached a background email exchange on the issue.

Appendix

TF Report
S23 – Energy Efficiency

March 31, 2022

TF Co-Leaders – Lauren Crane (Lam Research), George Hoshi (TEL)

Outline

- Near Term History
- Meeting Summary
- Committee Actions
- Near Term Plans

Near Term History

- Editorial action was taken at last NA TC Chapter meeting to correct a table in S23.
- That action passed review and the revised S23 is available (S23-1021E)

In the Meeting This Week

- We have had in our parking lot as a ‘next consideration’ Eric’s proposal to split S23 (a Guide) into a Test Method and Guide.
- Eric gave a high level presentation of the splitting scheme.

  (the copy embedded here might not match what he actually presented – I invite Eric to submit a more recent version if there is one which Kevin can replace here)
- Eric has created already created document that provides a side by side view of text to be in each document – i.e. much of the split work is already complete.
- The main goal is provide for greater commonality (supplier to supplier) among S23 testing information – as a guide “comply with S23” has little meaning.
- The main discussion was how do the split - particularly Mashiro-san mentioned the regs allow a mixed document (e.g., Guide and Test Method).
- We took a straw poll and confirmed the TF had a will to take a splitting action, but pending confirmation of the reg allowance, not clear on how to split.

Sense of TF (vote once for your favorite choice)

1. Split into two documents (guide and test method)- in favor 6
2. Look more into one combo document- in favor 4
3. Leave it as is - in favor 2

“Appendix 3 TableA3-1 (6) of PM Use only a single Subtype of Standard except in very unusual circumstances. If the Document is comprised of two Subtypes (e.g., Specification and Guide for ...), the text shall clearly identify those parts that are of each Subtype.”

Committee Actions

- After reviewing the regs regarding mixed documents, and the documents that have are mixed, it does not seem appropriate to me to pursue a mixed document.
- Document subordination (e.g., having S23.1) implies one document is subordinate to another, and I do not think that is a useful way to characterize the foreseen guide from the foreseen test method.
- In light of this I intend to pursue leading TF to split the document into two separate S-type documents – S23 Guide and a new S-document as the test method.
- [pause to see if there is objection or recommendation for a formal committee motion, etc…]

Near Term Plans

- After I am better settled into my new day job (likely late April), set routine TF meetings to pursue the split with a goal of reviewing a proposed ballot in TF at West and balloting after West.

SEMI Publication Change Request (PCR) Form

Submitted By:	Eric Sklar
Company:	Safety Guru, LLC
Address:	816 North Main Street Lanesborough, MA 01237
Telephone:	408-836-9265
Email:	sklar@safetyguru.com
Date:	02 April 2022

Document Number: S23

Document Title:

Guide For Energy, Utilities, and Materials Use Efficiency of Semiconductor Manufacturing Equipment

Are you a Standards Program Member?	Yes ✓ No ☐

Details	*Proposed Change and Reasons*
Location of Change: Page(s) _____ ☐ Section(s) _____ ☐ Figure(s) _____ ☐ Table(s) _____ ☐ Note(s) _____ ☐ Other _____ Check the following type(s) of changes that apply: ☑ Correct nontechnical information (This is a NOTE in an RI and, by virtue of its placement as such, not part of the normative content of the Safety Guideline.) ☐ Correct existing Supplementary Materials ☐ Reduce ambiguity ☑ Eliminate an obvious technical content inconsistency. (This is "technical" in this context, as it addresses the technology of cooling.) ☐ Correct or add missing punctuation ☑ Add/delete/correct Notes or footnotes ☐ Outdated title in Referenced Standards and Documents section ☐ Other (describe in Justification)	From: NOTE 63: The coefficient of performance (CoP) is defined as the ratio of heat removed to energy required. Based on the values above, the CoP for removing heat by refrigeration is: $cooling\ tower\ system\ CoP = \frac{1\ kJ\ of\ heat\ removed}{0.18588\ kJ\ of\ electrical\ energy} = 5.38\ [dimensionless]$ (R2-22) To: NOTE 63: The coefficient of performance (CoP) is defined as the ratio of heat removed to energy required. Based on the values above, the CoP for removing heat by refrigeration is: $\sim\sim cooling\ tower\ system \sim\sim$ $refrigeration\ CoP = \frac{1\ kJ\ of\ heat\ removed}{0.18588\ kJ\ of\ electrical\ energy} = 5.38\ [dimensionless]$ (R2-22) Justification: This appears to be the result of a document preparation error, most likely failure to edit the equation when it was copied from NOTE 62, in which it is the calculation for cooling towers. Furthermore, the text above the equation clearly states "refrigeration" in the place that NOTE 62 states "the cooling tower system". Lastly, §R2-3.4, in which NOTE 63 appears, is "Removing Heat Using Refrigeration". (§R2-3.3, in which NOTE 62 appears, is "Removing Heat Using a Cooling Tower".)

1) **Corrections to only the errors listed above (referred to as Type 2 editorial changes) can be recommended by submission of this form.**
2) **Other more minor editorial change recommendations (referred to as Type 1 editorial changes), such as misspellings, are submitted using the Publication Improvement Proposal (PIP) form.**
3) **Technical changes that do not qualify as editorial changes are submitted using the Standard New Activity Report Form (SNARF) and will need to follow normal Letter Ballot procedures.**

Received by:

Standards Staff _____ Date: _____

Please return this form to SEMI, Standards Staff, 673 S. Milpitas Blvd., Milpitas, CA 95035; https://www.semi.org/en/semi-standards-staff-contacts