Europe Compound Semiconductor Materials Committee
Meeting Summary and Minutes

Technical Committee Meeting
15 April 2015, 10:00am to 11:50am
SEMI Office Berlin, Helmholtzstraße 2-9, House D /3rd Floor, D-10587 Berlin, Germany

Next Committee Meeting
SEMICON Europa Meeting in Dresden, Germany (around October 2015), details to be fixed.

Committee Announcements
5y review TF was disbanded (mission completed)

Table 1 Meeting Attendees

<table>
<thead>
<tr>
<th>Company</th>
<th>Last</th>
<th>First</th>
<th>Company</th>
<th>Last</th>
<th>First</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiCrystal</td>
<td>Weber</td>
<td>Arnd</td>
<td>Munich University</td>
<td>Alt</td>
<td>Hans-Christian</td>
</tr>
<tr>
<td>SemiMap</td>
<td>Jantz</td>
<td>Wolfgang</td>
<td></td>
<td></td>
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</tbody>
</table>

Table 2 Leadership Changes
None

Table 3 Ballot Results (or move to Section 4, Ballot Review)

Passed ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.
Failed ballots and line items were returned to the originating task forces for re-work and re-balloting.

<table>
<thead>
<tr>
<th>Document #</th>
<th>Document Title</th>
<th>Committee Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>5732</td>
<td>TEST METHOD FOR MEASURING THE AI FRACTION IN AlGaAs ON GaAs SUBSTRATES BY HIGH RESOLUTION X-RAY DIFFRACTION</td>
<td>Passed</td>
</tr>
<tr>
<td>5733</td>
<td>TEST METHOD FOR MEASURING CARRIER CONCENTRATIONS IN EPITAXIAL LAYER STRUCTURES BY ECV PROFILING</td>
<td>Passed</td>
</tr>
<tr>
<td>5734</td>
<td>TEST METHOD FOR THE EL2 DEEP DONOR CONCENTRATION IN SEMI-INSULATING (SI) GALLIUM ARSENIDE SINGLE CRYSTALS BY INFRARED ABSORPTION SPECTROSCOPY</td>
<td>Passed</td>
</tr>
</tbody>
</table>

Table 4 Authorized Ballots (or move to Section 7, New Business)

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5795</td>
<td>Cycle 4-2015</td>
<td></td>
<td>Ballot was already authorized at the meeting in Oct 2014 in Freiberg. Alleged copyright questions were also discussed at ERSC meeting and the approval of the unchanged document for ballot is confirmed.</td>
</tr>
</tbody>
</table>

Table 5 Authorized Activities (or move to Section 7, New Business)

<table>
<thead>
<tr>
<th>#</th>
<th>Type</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
</table>
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<table>
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<tr>
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<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(none)</td>
</tr>
</tbody>
</table>

Note: SNARFs and TFOFs are available for review on the SEMI Web site at: http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF

Table 6 New Action Items (or move to Section 8, Action Item Review)

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>All</td>
<td>Report on any possibilities for new standards at next ECS meeting in fall 2015</td>
</tr>
<tr>
<td>2</td>
<td>SEMI Staff</td>
<td>Complete and cross check list of documents maintained by ECS committee</td>
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<tr>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
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1 Welcome, Reminders, and Introductions

Arnd Weber called the meeting to order at 10 am. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

2 Review of Previous Meeting Minutes

The committee reviewed the minutes of the previous meeting.

Motion: Approve the meeting minutes from October 2014
By / 2nd: Arnd Weber/Hans-Christian Alt
Discussion: None
Vote: 3 total / 3 in favor
3 Task Force Review

3.1 5-Year Review TF

H.C: Alt reported that three documents were balloted super clean.
- M46 5733 (ECV profiling): ballot result = super clean.
- M63 5732 (measurement of Al-fraction by XRay method): ballot result = super clean.
- M64 5734 (EL2 concentration by IR absorption): ballot result = super clean.

3.2 SiC TF

Arnd Weber reported the progress for SiC wafer standards. 100mm document (3784E) is published. The 150mm Document 5370 has been published as M55.3

Next steps are a restructuring of M55 with its sub-standards into one document similar to SEMI M1 for silicon. This activity is already assigned at the NA CS committee and will be supported.

3.3 Contactless resistivity TF

Wolfgang Jantz reported on latest status

Ballot was already authorized at the meeting in Oct 2014 in Freiberg. Alleged copyright questions were also discussed at ERSC meeting and the approval of the unchanged document for ballot is confirmed.

Motion: Confirm authorization for ballot of document #5795 for balloting at Cycle 4-2015
By / 2nd: Wolfgang Jantz/Arnd Weber
Discussion: None
Vote: 3 total / 3 in favour

4 Ballot Review

Document - M46 (ECV profiling): technical contents is still valid. Minor improvements (ambiguity, misspelling) and editorial updates regarding referenced documents were applied. were identified.

Tallies
60.3% voting rate (meets 60% minimum voting participation condition)
23 accepts/ 0 rejects (meets 90% approval condition)

In adjudication, 3/3 present members voted to approve the standard for publication

NOTICE: This document met the 90% approval condition set forth in Section 9.6.3 of the Regulations Governing SEMI Standards Committees at the close of balloting.

Rejects/Negatives
No rejects

- M63 (measurement of Al-fraction by XRay method): was reviewed super clean.
Tallies
60.3% voting rate (meets 60% minimum voting participation condition)
23 accepts/ 0 rejects (meets 90% approval condition)

In adjudication, 3/3 present members voted to approve the standard for publication

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Rejects/Negatives
No rejects

Sunset of 5-Year review Task force.

Motion: disband 5y review TF (mission completed)
By / 2nd: H.-C. Alt/Arnd Weber
Discussion: None
Vote: 3 total / 3 in favour

5 Liaison Reports
5.1 North America Compound Semiconductors Materials Committee

No new reports from NA available. The NA CS will meet on May 2015.
No reports at all from Japan available.

6 New Business

Upcoming 5-year reviews dated were discussed. In 2016 M54 and M81 are due for review. Review TFs to be created in Spring 2016.

New action item: SEMI Staff to complete and cross check the list of documents maintained by ECS committee.

All participants are asked to collect any expected or possible new topics for standards from their field and to report at the next meeting in fall 2015.
7 Action Item Review

7.1 New Action Items

Arnd Weber reviewed the new action items. These can be found in the New Action Items table at the beginning of these minutes.

- All ECS members to report standardization possibilities at the next ECS meeting in Fall 2015
- A. Busch to complete and cross-check the list of documents maintained by ECS committee.

8 Next Meeting and Adjournment

The next meeting of Europe’s Compound Semiconductor Materials Committee is scheduled around SEMICON Europe 2015 in Dresden Germany, (6-8th Oct, details to be defined).
The final meeting location and time will be fixed and announced in time.

Respectfully submitted by:

Minutes approved by:

<table>
<thead>
<tr>
<th>Arnd Weber</th>
<th>June 19, 2015</th>
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