

Europe Compound Semiconductor Materials Committee Meeting Summary and Minutes

Technical Committee Meeting

09 October 2014, 2pm-3:45pm CEST

TU Bergakademie Freiberg, Institut für Experimentelle Physik, Leipziger Straße 23, 09599 Freiberg , Germany

Next Committee Meeting

ERSC-spring Meeting in Berlin, Germany (around April 2014), details to be fixed.

Committee Announcements

The meeting was organized in conjunction with the German society for crystal growth **DGKK** (www.dgkk.de) “DGKK-Arbeitskreis Sitzung” where also an introductory talk about SEMI Standards was given at 12:00 am.

Table 1 Meeting Attendees

Co-Chairs: Arnd Weber (SiCrystal)

SEMI Staff: Andrea Busch (not present)

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
SiCrystal	Weber	Arnd	Munich University	Alt	Hans-Christian
SemiMap	Jantz	Wolfgang	Freiberger Compound Materials	Kretzer	Ulrich

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.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
3784B	SPECIFICATION FOR 100 mm ROUND POLISHED MONO-CRYSTALLINE 4H AND 6H SILICON CARBIDE WAFERS	Passed

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

<i>#</i>	<i>When</i>	<i>SC/TF/WG</i>	<i>Details</i>
5795	Cycle 1 2015	Resistivity TF	Approval for balloting of Document # 5795: New Standard: Test Method for contactless resistivity measurement of semi-insulating semiconductors Editorial checks have to be close before.
5733 5732 5734	Cycle 1-2015	5Y review TF (M46, M63, M64)	Approval for balloting revised Documents M46 (#5733), M63 (#5732), M64 (#5734). Editorial checks of references and document subtype have to be closed before.

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

#	Type	SC/TF/WG	Details
(none)			

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)

Item #	Assigned to	Details
1	A Weber	Update the list of documents maintained by the ECS committee (continued from last meeting)
2	A Weber	Investigate SEMI's rules and preferences for document classification and subtypes
3	H.C: Alt	Prepare and send updated drafts for M46, M63 and M64 (5-Y review) to balloting cycle 1-2015
4	W. Jantz	Prepare and send draft #5795: New Standard: Test Method for contactless resistivity measurement of semi-insulating semiconductors to balloting cycle 1-2015
5	A Weber	Explore TC meeting opportunities at ERSC spring meeting.

1 Welcome, Reminders, and Introductions

Arnd Weber called the meeting to order at 2pm. 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 April 2014

By / 2nd: Arnd Weber/Hans-Christian Alt

Discussion: None

Vote: 4 total /4 in favor

3 Task Force Review

3.1 5-Year Review TF

H.C: Alt reported on the progress in reviewing documents M46 (new doc #5733), M63 (new doc #5732) and M64 (new doc #5734).

The documents have been reviewed by technical experts.

- M46 (ECV profiling): technical contents is still valid. Minor improvements (ambiguity, misspelling) and editorial updates regarding referenced documents were applied.
- M63 (measurement of Al-fraction by XRay method): was reviewed super clean.
- M64 (EL2 concentration by IR absorption): technical contents is still valid. Several improvements (ambiguity) were identified.

Motion: Approval of documents #5732, 5733 & 5734 for balloting in cycle 1-2015

By / 2nd: Wolfgang Jantz/Arnd Weber

Discussion: None

Vote: 4 total / 4 in favor

3.2 SiC TF

Arnd Weber reported the progress for Si C wafer standards. 100mm document (3784B) has finished ballot voting process. Ballot review is planned for this meeting. 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 progress. Feedback from TF members indicates that document has reached completion. Originally planned round robin experiments will be postponed and not be part of the document due to limited capacity and expected significant feedback times > 1 year.

Motion: Approval of Doc # 5795: *Test Method for contactless capacitive resistivity measurement of semi-insulating semiconductors* document for balloting

By / 2nd: Wolfgang Jantz/Arnd Weber

Discussion: None

Vote: 4 total / 4 in favor

3.4 Document Sub-Types

There was a discussion on the assignment of valid subtypes of standard documents.

A review of published documents revealed some uncertainties about the proper classification of documents. E.g. M63 is titled : “GUIDELINE: TEST METHOD FOR MEASURING THE AI FRACTION ... “

Action item:

Arnd Weber to investigate SEMI’s rules and preferences for document classification and subtypes.

The result shall be considered as editorial correction for the documents above, which have been approved for balloting.

4 Ballot Review

4.1 Document # 3784B, Revision to Add New Subordinate Standard: Specification for 100 mm round polished monocrystalline 4H and 6H Silicon Carbide Wafers to SEMI M55, Specification for Polished Monocrystalline Silicon Carbide Wafers

➔ results of this ballot (presented cycle 5, 2014) were reviewed

Tallies

60.6% voting rate (meets 60% minimum voting participation condition)

26 accepts/ 0 rejects (meets 90% approval condition)

In adjudication, 4/4 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

5 Liaison Reports

5.1 North America Compound Semiconductors Materials Committee

Arnd Weber presented this report for the North American Semiconductor Materials Committee (dated April 2014).

6 New Business

none

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.

8 Next Meeting and Adjournment

The next meeting of Europe's Compound Semiconductor Materials Committee is scheduled around April 2015.

for either:

- Preferred in conjunction with ERSC Spring Meeting in Berlin, Germany

Or

- Meeting at Nürnberg, Germany

The final meeting location and time will be fixed and announced in time beginning of 2015.

Action item:

Arnd Weber to explore meeting opportunity at ERSC spring meeting.

Respectfully submitted by:

Andrea Busch

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Minutes approved by:

2014-10-10 Arnd Weber	

Attached documents:

- 5.1: North America Compound Semiconductor Materials TC Liaison Report