

Japan PV and Japan PV Materials Committees Joint Meeting Summary and Minutes

Japan Standards Winter Meetings 2013
December 13, 2013, 13:30-17:30
Conference Room1 JPR Bldg. SEMI Japan Office, Tokyo, Japan

Next Committee Meeting

March 7, 2014, 15:30-17:30 Japan Standard Time
Japan Standards Spring Meetings 2014, SEMI Japan Office, Tokyo, Japan

Committee Announcements (optional)

None

Table 1 Meeting Attendees

PV Committee Co-Chairs: Masaaki Yamamichi (AIST), Hiromu Takatsuka (Mitsubishi Heavy Industries), Kazuhiko Kashima (GlobalWafers Japan), Terry Asakawa (Tokyo Electron)

PV Materials Committee Co-Chairs: Takashi Ishihara (Mitsubishi Electric), Kazuhiko Kashima (GlobalWafers Japan)

SEMI Staff: Hirofumi Kanno

| <i>Company</i> | <i>Last</i> | <i>First</i> | <i>Company</i> | <i>Last</i> | <i>First</i> |
|------------------------|-------------|--------------|---------------------|-------------|--------------|
| Nisshinbo Mechatronics | Ishikawa | Makoto | AIST | Fukuda | Tetsuo |
| AIST | Yamamichi | Masaaki | Mitsubishi Electric | Ishihara | Takashi |
| Fuji Film | Miyake | Kiyoteru | | | |

Table 2 Leadership Changes

None

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

None

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

None

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

None

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

None

Table 7 Previous Meeting Actions Items (or move to Section 8, Action item Review)

None

1 Welcome, Reminders, and Introductions

Masaaki Yamamichi called the meeting to order at 1:30 p.m. – 5:30 p.m. 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: Approval of previous meeting minutes
By / 2nd: Tetsuo Fukuda / AIST, Takashi Ishihara / Mitsubishi Electric
Discussion: None
Vote: 3:0

3 Liaison Reports

3.1 *Europe PV Materials Committee*

Hirofumi Kanno (SEMI) reported for the Europe PV Materials Committee. Of note:

- Committee Leadership
 - Co-Chairs: Hubert Aulich - PV Crystalox Solar and Peter Wagner
- Meeting Information
 - Last meetings: Oct 7, 2013 in SEMICON Europa, Dresden, Germany
 - Next meeting: June 2014 in Intersolar Europe, Munich, Germany
- Ballot Results Summary from October meeting
 - Doc 5565, Line Item Revision to PV42, Test Method for In-Line Measurement of Waviness on PV Silicon Wafers by a Light Sectioning Technique Using Multiple Line Segments – PASSED
 - Doc 5433, New Standard, Test Method for In-line Characterization of PV Silicon Wafers regarding Grain Size – PASSED
 - Doc 5432, New Standard, Test Method for In-line Characterization of PV Silicon Wafers by Using Photoluminescence – PASSED
- Authorized Ballots (October meeting)
 - Early 2014
 - ◇ Doc.5433, Revision to Test Method for In-line Characterization of PV Silicon Wafers regarding Grain Size
 - ◇ Doc.5432, Revision to Test Method for In-line Characterization of PV Silicon Wafers by Using Photoluminescence

Attachment: 01, EU PV Materials Liaison Report 20131022

3.2 *North America PV Materials Committee*

Hirofumi Kanno (SEMI) reported for the North America PV Materials Committee. Of note:

- Meeting Information
 - Last meeting: North America Fall Standards Meetings, SEMI HQ, San Jose, CA on October 30, 2013
- Next meeting: North America Spring Standards Meetings, SEMI HQ, San Jose, CA on April 2, 2013
 - Check www.semi.org/standards for the latest update
- Cycle 1-2014 ballot
 - Doc. 5608: Line-item Revision to SEMI PV13-0813, Test Method for Contactless Excess-Charge-Carrier Recombination Lifetime Measurement in Silicon Wafers, Ingots, and Bricks Using an Eddy-Current Sensor

- ◇ To add literature citations for methods to determine Fe concentrations based on PV13 measurement results

- **Attachment:** 02_NA Liaison Report PV Materials 20131112

3.3 China PV Committee

Hirofumi Kanno (SEMI) reported for the China PV Committee. Of note:

- Leadership
 - Co-Chairs: Guangchun Zhang (Canadiansolar) and Jun Liu (China Electronics Standardization Institute)
- New TFOF
 - Crystalline Silicon Solar Cell Task Force
 - ◇ Task Force Leader: Dengyuan Song – Yingli
- New SNARF
 - Doc. 5659: New Standard: Test Method for C-Si Solar Cell Color (new SNARF)
- Meeting Information
 - Last meeting: Wednesday, October 23, 2013, Wuxi, China
 - Next meeting: Thursday, March 20th, 2014, Shanghai, China

Attachment: 03, China Photovoltaic Committee Liaison Report20131023

3.4 Taiwan PV Committee

SEMI Staff has not received the liaison report. SEMI Staff will confirm it with Taiwan Committee or SEMI Staff in Taiwan.

3.5 SEMI Staff Report

Hirofumi Kanno (SEMI) gave the SEMI Staff Report. Of note:

- Global SEMI Events
- Global Standards Meetings Schedule
- Ballot Critical Dates
- Publication Update
- ISC A&R SC Summary
- Preparation for SEMICON Japan 2013
- Contact Information

Attachment: 04, SEMI Staff Report 2013 Dec._R0.0

4 Subcommittee & Task Force Reports under Japan PV Committee

None

5 Subcommittee & Task Force Reports under Japan PV Materials Committee

5.1 Japan PV Materials Task Force (Fukuda-san/ Ishihara-san)

Mr. Tetsuo Fukuda (AIST) reported that the Task Force reviewed Japanese version of Draft Document 5532, New Standard: Test Method for Measurement of Cracks in PV Silicon Wafers in PV Modules by Laser Scanning.

6 Old Business

None

7 New Business

None

8 Action Item Review

None

9 Next Meeting and Adjournment

The next meeting of the Japan PV and PV Materials committee is scheduled for March 7, 15:30-17:30 at Conference Room2, JPR Bldg.7, SEMI Japan Office in Tokyo, Japan.

Respectfully submitted by:
 Hirofumi Kanno
 Manager
 SEMI Japan
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 Email: hkanno@semi.org

Minutes approved by:

PV Committee Co-Chairs:

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|--|-----------------|
| Masaaki Yamamichi (AIST) | <Date approved> |
| Hironu Takatsuka (Mitsubishi Heavy Industries) | <Date approved> |
| Kazuhiko Kashima (GlobalWafers Japan) | <Date approved> |
| Terry Asakawa (Tokyo Electron) | <Date approved> |

PV Materials Committee Co-Chairs:

| | |
|--|-----------------|
| Takashi Ishihara (Mitsubishi Electric) | <Date approved> |
| Kazuhiko Kashima (GlobalWafers Japan) | <Date approved> |

Table 8 Index of Available Attachments #1

| # | Title | # | Title |
|----|---|----|---|
| 01 | EU PV Materials Liaison Report 20131022 | 02 | NA Liaison Report PV Materials 20131112 |
| 03 | China Photovoltaic Committee Liaison Report20131125 | 04 | SEMI Staff Report 2013 Dec._R0.0 |

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact [SEMI Staff Name] at the contact information above.