

# Japan PV Committee & Japan PV Materials Committee Joint Meeting Summary and Minutes

PV Japan 2012  
December 5, 2012, 15:00 p.m. -17:30 p.m.  
Makuhari Messe, Chiba, Japan

## Next Committee Meeting

April 12, 2013, 13:30 p.m. – 15:00 p.m. Japan Standards Time  
Japan Standards Spring Meetings 2013, Tokyo, Japan

## Committee Announcements (optional)

### Table 1 Meeting Attendees

**PV Committee Co-Chairs:** Takashi Ishihara (Mitsubishi Electric), Kazuhiko Kashima (Covalent Silicon), Tetsuo Fukuda (AIST)

**PV Materials Committee Co-Chairs:** Hiromu Takatsuka (Mitsubishi Heavy Industries), Kazuhiko Kashima (Covalent Materials), Masaaki Yamamichi (AIST), Terry Asakawa (TEL)

**SEMI Staff:** Hirofumi Kanno

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
Dainippon Screen	Cho	Ryuji	Nisshinbo Mechatronics	Ishikawa	Makoto
SCAS	Watanabe	Satoru	AIST	Yamamichi	Masaaki
AIST	Fukuda	Tetsuo	Mitsubishi Electric	Ishihara	Takashi

### Table 2 Leadership Changes

None

### Table 3 Task Force Changes

None

### Table 4 Ballot Results

None

### Table 5 Authorized Ballots

None

### Table 6 Authorized Activities

None

### Table 7 New Action Items

None

### Table 8 Previous Meeting Actions Items

None

## 1 Welcome, Reminders, and Introductions

Masaaki Yamamichi called the meeting to order at 15:00 p.m. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

**Attachment:** 1, 2\_Required Elements Reg\_20100302\_E+J

## 2 Review of Previous Meeting Minutes

The committee reviewed the minutes of the previous meeting.

**Motion:** Approve the minutes of the previous JA PV Committee & JA PV Materials Committee joint meeting held in September 12.

**By / 2<sup>nd</sup>:** Takashi Ishihara (Mitsubishi Electric), Ryuji Cho (Dainippon Screen)

**Discussion:** None

**Vote:** 5:0

**Attachment:** 2, Meeting Minutes of JA PV\_PVM committee091212

**Motion:** Approve the minutes of the previous JA PV Materials meeting held in November 14.

**By / 2<sup>nd</sup>:** Takashi Ishihara (Mitsubishi Electric), Makoto Ishikawa (Nisshinbo Mechatronics)

**Discussion:** None

**Vote:** 5:0

**Attachment:** 3, PVM Meeting mins121114\_r1

## 3 Liaison Reports

### 3.1 North America PV Materials Committee

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

- Leadership Changes: No changes
- Committee Structure
- Meeting Information
  - Last meeting: NA Fall Standards Meetings at SEMI HQ, San Jose, CA in Oct 30-31, 2012
  - Next meeting: NA Spring Standards Meetings at SEMI HQ, San Jose, CA in April 2-3, 2013
- Ballot Results Summary
  - Document 4675B, New Standard: Test Method for the Measurement of Elemental Impurity Concentrations in Silicon Feedstock for Silicon Solar Cells By Bulk Digestion, Inductively Coupled-Plasma Mass Spectrometry
    - ✧ Failed and will be reballoted in cycle 1-2013
  - Document 5438, New Standard: Test Method for the Measurement of Oxygen Concentration in PV Silicon Materials for Silicon Solar Cells by Inert Gas Fusion Infrared Detection Method
    - ✧ Approved, pending reviewing by the ISC Audits & Reviews Sub committee
  - Doc. 5436, Auxiliary Information on Round Robin Report for SEMI PV10 Test Method for Instrumental Neutron Activation Analysis (INAA) of Silicon
    - ✧ Approved, pending reviewing by the ISC Audits & Reviews Sub Committee
- New SNARFs
  - PV Analytical Test Methods TF

- ✧ Doc. 5501: Auxiliary document to include interlaboratory study for document 5438 - Test Method For The Measurement Of Oxygen Concentration In PV Silicon Materials For Silicon Solar Cells By Inert Gas Fusion Infrared Detection Method
  - Interested lab participants, contact Patrick Schnabel at Evans Analytical (pschnabel@eaglabs.com)
- PV Silicon Materials TF
  - ✧ Doc. 5502: Line item Revision to SEMI PV39: Test Method For In-line Measurement Of Cracks In PV Silicon Wafers By Dark Field Infrared Imaging
- Ballot for Cycle 1, 2013
  - Doc. 4675C, New Standard: Test Method for the Measurement of Elemental Impurity Concentrations in Silicon Feedstock by Bulk Digestion, Inductively-Coupled-Plasma Mass Spectrometry
    - ✧ To be reviewed at NA Spring 2013 meeting
  - Doc. 5439, Revision to SEMI PV13-1110, Test Method for Contactless Excess-Charge-Carrier Recombination Lifetime Measurement in Silicon Wafers, Ingots, and Bricks Using an Eddy-Current Sensor
    - ✧ To be reviewed at NA Spring 2013 meeting
  - Doc. 5502, Line item Revision to SEMI PV39, Test Method For In-line Measurement Of Cracks In PV Silicon Wafers By Dark Field Infrared Imaging
    - ✧ To be reviewed at EU PVFMM 2013
  - Doc. 5531, Line item Revision to SEMI PV40, Test Method for In-Line Measurement of Saw Marks on PV Silicon Wafers by a Light Sectioning Technique Using Multiple Line Segments
    - ✧ To be reviewed at EU PVFMM 2013
- Task Force Activities: for the details, see the attachment.
- Staff Contact Information: Kevin Nguyen at knguyen@semi.org

**Attachment:** 4, NA Liaison Report PV Materials 20121116

### 3.2 Europe PV Materials Committee

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

- Leadership Changes: No changes
- Committee Structure
- Meeting Information:
  - Previous Meeting: October 8-12, 2012, at SEMICON Europa, Dresden, Germany
  - Next Meeting: March 13, 2013 at PB FMM in Berlin, Germany
- Major Activities
  - Doc 5333 (Test Method for In-Line Measurement of Waviness of PV Silicon Wafers by a Light Sectioning Technique Using Multiple Line Segments) ballot approved as balloted at SCEU12, pending successful A&R procedural review
  - 2 SNARF approved at SCEU12
    - ✧ Line item revision to PV40, Test Method for In-Line Measurement of Saw Marks on PV Silicon Wafers by a Light Sectioning Technique Using Multiple Line Segments
    - ✧ New Standard: Specification

- Staff Contact Information: Yann Guillou at [yguillou@semi.org](mailto:yguillou@semi.org)

**Attachment:** 5, ERSC Liaison Report Nov 2012(1)

### 3.3 *Taiwan PV Committee*

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

- Committee Structure
- Meeting Information
  - Previous Meeting: October 5, 2012 at ITRI
  - Next Meeting: December 21, 2012 at ITRI
- Task Force Activities: For the details. Please see the attachment.

**Attachment:** 6, Taiwan Liaison Report Dec 2012

### 3.4 *China PV Committee*

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

- Co-Chairs
- Committee Structure
- Meeting Information
  - Last Meeting: China Winter Standards Meeting 2012, Wuxi, Jiangsu, China in November 3, 2012
  - Next meeting: China Spring Standards Meeting 2013, Shanghai, China in March 18, 2013
- Ballot for Cycle1, 2013
  - Doc. 5384, New Standards: Specification for Package protection technology for PV Modules
  - Doc. 5385, New Standards: Test Method for the content of Vinyl Acetate (VA) in Ethylene-Vinyl Acetate (EVA) applied in PV modules—Thermal Gravimetric Analysis (TGA)
  - Doc. 5428, New Standard: Specification for Impurities in Polyethylene Packaging Materials for Polysilicon Feedstock
  - Doc. 5382, New Standard: Specification for Quasi-monocrystalline Silicon Wafers used in Photovoltaic Solar Cells
- Staff Contact Information: Kris Shen ([kshen@semi.org](mailto:kshen@semi.org))/ China

**Attachment:** 7, China Photovoltaic Committee Liaison Report 20121126

### 3.5 *SEMI Staff Report*

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

- SEMI Global 2012-2013 Calendar of Events
- SEMICON Japan 2012
- 2012 Critical Dates for SEMI Standards Ballots
- Regulation SC
- A&R SC

- SEMI Standards Publication
- New Standards Ballot and Membership Systems
- New Ballot Formatting Templates
- Style Manual and Compilation of Terms

**Attachment:** 8, SEMI Staff Report 2012 December R0.2

#### **4 Subcommittee & Task Force Reports (under Japan PV Materials Committee)**

##### **4.1 Japan PV Materials Task Force**

Tetsuo Fukuda (AIST) reported for the Japan PV Materials Task Force. This report contained information on the Standardization of the Measurement Methods for Cracks in Multi- and Mono-Crystalline Silicon Cells in Modules.

TF has been in active for the standardization of the measurement of cracks by EL (mono-crystalline cell).

TF has newly started the activity for the standardization of the measurement of cracks by LS (for multi- and mono-crystalline silicon cells), SNARF 5532.

**Attachment:** XX,

#### **5 Old Business**

##### **5.1 Planning for PV Standards Introductory Workshop**

Hirofumi Kanno addressed the committee on this topic. The workshop was successfully held in December 5, 2012 at the PV Japan 2012 Hall in Makuhari Messe, Chiba, Japan. Agenda of the workshop was below.

- Opening Remarks / Masaaki Yamamichi (AIST)
- Overall Concepts of PV SEMI Standards / PV Standards on Materials Naoko Murata (TEL)
- PV Standards on Materials /Takashi Ishihara (Mitsubishi Electric)
- PV Standards on Equipment Automation Takashi Murakami (TEL)
- PV Standards on Test Methods and Measurements / Tetsuo Fukuda (AIST)
- Wrap up & Closing Remarks / Masaaki Yamamichi (AIST)

The registration to attend the workshop had over 60.

#### **6 New Business**

None

#### **7 Action Item Review**

##### **7.1 Open Action Items**

None

##### **7.2 New Action Items**

None

#### **8 Next Meeting and Adjournment**

The next meeting of the Japan PV committee and Japan PV Materials committee joint meeting is scheduled for April 12, 2013 at Japan Standards Spring 2013 Meetings at SEMI Japan Office, Tokyo, Japan.

Respectfully submitted by:  
Hirofumi Kanno  
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SEMI Japan  
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Minutes approved by:

<Name> (<Company>), Co-chair	<Date approved>
<Name> (<Company>), Co-chair	<Date approved>

**Table 9 Index of Available Attachments #1**

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1	2_Required Elements Reg_20100302_E+J	7	China Photovoltaic Committee Liaison Report20121126
2	Meeting Minutes of JA PV_PVM committee091212	8	SEMI Staff Report 2012 December R0.2
3	PVM Meeting mins121114_r1	9	12-1205 PV Mats T Report
4	NA Liaison Report PV Materials 20121116		
5	ERSC Liaison Report Nov 2012(1)		
6	Taiwan Liaison Report Dec 2012		

#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](http://www.semi.org). For additional information or to obtain individual attachments, please contact [SEMI Staff Name] at the contact information above.