Japan TC Chapter of Liquid Chemicals Global Technical Committee
Meeting Summary and Minutes

Japan Standards Winter 2014 Meetings in conjunction with SEMICON Japan 2014
Wednesday, December 3, 2014, 3:10 p.m. – 5:10 p.m.
Tokyo Big Sight Conference Tower, Tokyo

Next Committee Meeting
To be decided

Committee Announcements (optional)
None

Table 1 Meeting Attendees
Co-Chairs: Hiroshi Tomita (Toshiba), Hiroyuki Araki (Dainippon Screen Manufacturing)
SEMI Staff: Chie Yanagisawa (SEMI Japan)
Attendee: 11 + SEMI: 1

<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>Advance Electric Company</td>
<td>Sasao</td>
<td>Kimihito</td>
<td>SCREEN Semiconductor Solutions</td>
<td>Araki</td>
<td>Hiroyuki</td>
</tr>
<tr>
<td>Nihon Entegris</td>
<td>Naga</td>
<td>Takuya</td>
<td>Araki</td>
<td>Araki</td>
<td>Hiroyuki</td>
</tr>
<tr>
<td>Nihon Gore</td>
<td>Hira</td>
<td>Eri</td>
<td>Spectris</td>
<td>Kato</td>
<td>Kazutoshi</td>
</tr>
<tr>
<td>Nihon Pall</td>
<td>Tsuz</td>
<td>Shuichi</td>
<td>Swagelok</td>
<td>Ishida</td>
<td>Noritsugu</td>
</tr>
<tr>
<td>Nippon Pillar Packing</td>
<td>Fuj</td>
<td>Makoto</td>
<td>Toshiba</td>
<td>Tomita</td>
<td>Hiroshi</td>
</tr>
<tr>
<td>Organo</td>
<td>Sugawara</td>
<td>Hiroshi</td>
<td>SEMI Japan</td>
<td>Yanagisawa</td>
<td>Chie</td>
</tr>
</tbody>
</table>

*Alphabetical order by company name

Table 2 Leadership Changes

<table>
<thead>
<tr>
<th>Group</th>
<th>Previous Leader</th>
<th>New Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Chemicals ESD Study Group</td>
<td>Keiichi Yamakawa / NihonGore Takuya Nagafuchi / Nihon Entegris</td>
<td>The study group was discharged.</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>20141203-1</td>
<td>Kimihito Sasao (Advance Electric Company)</td>
<td>To communicate and discuss with the document author, Shigeru Ohsugi (CKD), on the action which status, revision, reapproval, withdraw or inactive, Diaphragm Valve task force should propose for SEMI F108-0310 by the next meeting of Japan TC Chapter of Liquid Chemicals Global Technical Committee.</td>
</tr>
</tbody>
</table>
Table 7 Previous Meeting Actions Items (or move to Section 8, Action item Review)

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>20140630-1</td>
<td>SEMI Staff</td>
<td>To request the LOA for Doc. 5421A to the patent holder =&gt; CLOSE</td>
</tr>
</tbody>
</table>

1 Welcome, Reminders, and Introductions
Hiroshi Tomita (Toshiba), the co-chair, called the meeting to order at 3:10 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.

<table>
<thead>
<tr>
<th>Motion:</th>
<th>To approve the minutes of the previous meeting with deleting the claim numbers of the published application at &quot;4 Ballot Review&quot; section</th>
</tr>
</thead>
<tbody>
<tr>
<td>By / 2nd:</td>
<td>Hiroyuki Araki (SCREEN Semiconductor Solutions) / Takuya Nagafuchi (NihonEntegris)</td>
</tr>
<tr>
<td>Discussion:</td>
<td>None</td>
</tr>
<tr>
<td>Vote:</td>
<td>9 in favor and 0 opposed. Motion passed.</td>
</tr>
</tbody>
</table>

3 Liaison Reports
3.1 Europe Gases and Liquid Chemicals TC Chapter
Chie Yanagisawa (SEMI Japan) reported as attached.

Attachment: 01_141022_GLC_Europe_LiaisonReport

3.2 North America Liquid Chemicals TC Chapter
Chie Yanagisawa (SEMI Japan) reported as attached. Of note:

- New Activities
  - Line item revision to SEMI C69-0611, Test Method for the Determination of Surface Areas of Polymer Pellets
  - New Standard: Test Method for Testing PFA Materials Used In Liquid Chemical Distribution Systems

- Upcoming Ballot
  - 5621B: New Standard: Test Method for Determining the Quality of Ion Exchanged Resin Used in Polish Applications of Ultrapure Water System
  - 5809: Line item revision to SEMI C69-0611, Test Method for the Determination of Surface Areas of Polymer Pellets
  - 5642A: Revision to SEMI C35-0708, Specifications and Guideline for Nitric Acid with title change to: Specification and Guide for Nitric Acid
  - Revision to Specifications and Guidelines for Hydrochloric Acid with title change to: Specification and Guide for Hydrochloric Acid

Attachment: 02_NA LChem Report NOV 2014 MT
3.3 SEMI Staff Report

Chie Yanagisawa (SEMI Japan) gave the SEMI Staff Report. Of note:

- Global SEMI Events
- Global Standards Meetings Schedule
- Ballot Critical Dates
- New Regulations and Procedure guide
- Publication Update
- Contact Information

Attachment: 03_SEMI Staff Report 2014 December_R0.3

4 Ballot Review

None

5 Subcommittee & Task Force Reports

5.1 Diaphragm Valve Task Force

Kimihiito Sasao (Advance Electric Company), co-leader, reported for the task force that there had been no activity.

5.2 Welding Fitting Task Force

Kimihiito Sasao (Advance Electric Company), co-leader, reported for the task force that there had been no activity.

5.3 Liquid Filter Task Force

Takuya Nagafuchi (Nihon Entegris), the co-leader, reported that the task force had been waiting for the LOA for Document 5421A. He also made a statement that the task force meeting would not be held for a while because there was no issue to discuss.

5.4 Liquid-borne Particle Counter Task Force

Kaoru Kondo (Rion), co-leader, reported for the task force that there had been no activity.

5.5 Ultrapure Liquid Evaluation Study Group

Kaoru Kondo (Rion), co-leader, reported that the task force had been considering to standardize the particle measurement at POP in future and would ask a cooperation by Interfacial Nano Electrochemistry for seeking the solution to the issues concerned to analyzing metals and liquated silica in IPA.

5.6 Liquid Chemicals ESD Study Group

Hiroshi Tomita (Toshiba), co-chair, stated that the study group had found it difficult to standardize the evaluation method of electrostatic charge generated with flow of liquid chemical or ultrapure water in di-electric component. So the proposal to discharge Liquid Chemicals ESD Study Group was made as following.

<table>
<thead>
<tr>
<th>Motion:</th>
<th>To approve the discharge of Liquid Chemicals ESD Study Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>By / 2nd:</td>
<td>Hiroyuki Araki (SCREEN Semiconductor Solutions) / Takuya Nagafuchi (Nihon Entegris)</td>
</tr>
<tr>
<td>Discussion:</td>
<td>None</td>
</tr>
<tr>
<td>Vote:</td>
<td>9 in favor and 0 opposed. Motion passed.</td>
</tr>
</tbody>
</table>

6 Old Business

None
7 New Business


Kimihito Sasao, co-leader of Diaphragm Valve task force, mentioned that the task force could not have discussion on the action for SEMI F108 and he would communicate and discuss with Shigeru Ohsugi, co-leader, on the action for SEMI F108. He also referred SEMI F108 was not practically utilized recently. The task force would propose an action for this document to be approved at the next meeting of Japan TC Chapter of Liquid Chemicals Global Technical Committee.

Action Item #1: Kimihito Sasao (Advance Electric Company) to communicate and discuss with the document author and the co-leader, Shigeru Ohsugi (CKD), on the action which status, revision, reapproval, withdraw or inactive, Diaphragm Valve task force should propose for SEMI F108-0310 by the next meeting of Japan TC Chapter of Liquid Chemicals Global Technical Committee.

8 Action Item Review

8.1 Open Action Items
None

8.2 New Action Items

Chie Yanagisawa (SEMI Japan) reviewed the new action item. This can be found in the New Action Items table at the beginning of these minutes.

9 Next Meeting and Adjournment

The next meeting of the Japan TC Chapter of Liquid Chemicals Global Technical Committee is to be decided.

Having no further business, a motion was made by Hiroshi Tomita, co-chair, to adjourn the Japan Liquid Chemicals TC Chapter meeting at SEMI Japan office. The meeting unanimously adjourned at 5:10 p.m.
Table 8 Index of Available Attachments #1

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>#</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>141022_GLC_Europe_LiaisonReport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>NA LChem Report NOV 2014 MT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>SEMI Staff Report 2014 December_R0.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#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.