IEEE-CPMT TC-1 Committee on Electrical Contacts
Meeting Minutes
Tuesday October 13, 2015
5:00PM
Omni San Diego, San Diego CA, USA

Chair: Gerry Witter
Vice-Chair: Bob Malucci
Secretary: John J. Shea

Attendees:
Holm Conference Attendees

Opening: G. Witter
TC-1 of IEEE-CPMT meeting was called to order by Chairman.

1. 2014 Minutes approved
2. 2015 Conference Update - Z.K. Chen
    a. 138 registrants 131 attended (52 US, 22 Germany, 19 China (14 attended), Japan, 10 France. 62 Papers. No issues.
3. Intensive course Report - Paul G. Slade
    a. Reported on planning succession for course. Several new lecturers will be teach parts of the intensive course next year in Clearwater FL.
4. Publicity Report- John J. Shea
    a. Discussed website URL update and access to previous web pages. For most recent conference use new URL www.ieee-holm.org going forward. Old conferences remain archived and available. For example, use www.ieee-holm.org/h2014 for the 2014 conference website. Insert desired year. Email any potential new author suggestions to John J. Shea (Webmaster). I will then invite that person to submit a paper to conference. Email any photos taken at conference for publication on website. Email any suggestions for website improvements or awards nominations or conference related announcements.
5. International Conference Report- John McBride
    a. Introduced International Conference taking place in June 2016, Edinburgh, Scotland.
6. CPMT Transactions – Ron Coutu
    a. Ron Coutu (Associate Editor CPMT), announced special edition of CPMT journal. A curated special section, about 10-12 papers is planned for CPMT journal. Potential authors will be invited. However, authors will need at least 50% new information and new title along with journal quality completeness. John McBride discussed journal publications. Academics are under increasing pressure to publish. Special edition of Holm. Paul Slade comments that check box in old Holm review forms had option to check if author wants paper to be considered for CPMT. Difference now is previous conference papers were not archived and now conference papers archived online thus requiring at least a 50% new material.
7. Technical Updates
    a. European RoHS – Volker Behrens
        Europe has three different regulations:

i. End of Life Vehicles - no changes in regard to electrical contacts.
ii. RoHS 2 (recast 2011) exemption 8b exemptions expire in 2016/2018 unless extended.
iii. Reach (2007) Cd in SVHV list (obligation to inform customers), Cd forbidden in braze alloys and solders.

b. North American RoHS – Henry Czajkowski
   i. Cd still in use in North America. 50-60% used in North America. Military has exemptions to RoHS. Harmonization of contactor standards (UL508). Now harmonized standard used which is a combination of UL and IEC standards. No harmonization of circuit breaker standards. Internet of Things (IoT) in new electrical products being introduced by manufacturers.

c. High Frequency Connectors – Roland Timsit
   i. Reports >20GHz speeds in use now and growing demand for high power HF connectors for data centers. Multi-pin high power connectors, mainly proprietary, is also a growth area. Transient voltage suppression from power surges in data centers is a focus area. Electromagnetic pulse (EMP) protection requirements is becoming of more interest due to potential attack on power/data systems.

d. MEMS and Micro Contacts – Ron Coutu
   i. Automated test equipment (ATE) and cell phones are major application areas. Lot of MEMS papers this year (two sessions). 30 journal papers reviewed this year. Reliability of MEMS switches still limits commercial viability.

e. Circuit Breakers – Xin Zhou
   i. DC breakers for PV systems up to 1500Vdc are of interest . Need breakers and switches to handle DC from growing data center and energy storage applications. Photovoltaic (PV) tax incentive expires in 2016. Breaker intelligence increasing (electronic trip units, revenue grade metering, cyber security). Arc fault 1699B arc fault for PV applications has limited product acceptance due to calibration requirements. IEC Arc Fault Circuit Interrupter (AFCI) standard being introduced.

f. Connectors – Brett Rickett
   i. Customers are demanding connectors with higher power in existing form factors for more demanding environments. Connector demands from increased abuse. Application areas include automobile electronics and wearable electronics. Need RoHS compliant products since don't know where product will end up. Conflict mineral issues, purchase components not known where materials came from. Global products need to comply with toughest standard. Environmental concerns becoming more of an issue. Boric acid ban may be an issue for plating.

g. Relays - Gerry Witter
   i. Higher voltage relays are in demand but limited knowledge disseminated by developers keeping designs proprietary.

Respectively submitted, John J. Shea 10/13/2015