U.S. National Committee of the International Electro technical Commission,

A Committee of the American National Standards Institute

Technical Advisory Group for IEC TC 14

**TAG Administrator:**

***National Electrical Manufacturers Association***

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PLACE OF MEETING: Savannah Marriott Riverfront

100 General McIntosh Boulevard

Savannah, Georgia 31401

Room: Savannah E

DATE AND TIME: **Wednesday March 26th, 2014**

7:00-8:30AM

PRESIDING OFFICER: P. Hopkinson, Technical Advisor

SECRETARY: Steve Griffith, NEMA

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| Members Present:  Raj Ahuja SPX Transformer Solutions, Inc.  Robert Ballard ABB Inc  Jeffrey Britton Phenix Technologies, Inc.  Eric Davis Burns & McDonnell  Larry Dix Quality Switch  Sheldon Kennedy Niagara Transformer  Mario Locarno Doble Engineering Co.  Richard Marek DuPont  Emilo Morales-Cruz Qualitrol  Mahesh Sampat EMS INT. CONSUL. INC. |
| Others present: |
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Jerry Allen Metglas

Kevin Biggie Weidmann Electrical Technology

Jodi Haasz IEEE

Mike Inman MGM Transformer

Paul Jarman National Grid

John John Virginia Transformer Corp.

Axel Kramer Maschinenfabrik Reinhausen

Charles Patrick McShane Cargill, Inc.

Hasse Nordman ABB Oy, Transformers

Jonathan Reimer AltaLink

Jeremy Sewell Quality Switch

Abe Shahrodi Trans. For Engineering, LLC

Radoslaw Szewczyk Dupont Poland Sp. z o.o.

Matthew Weisensee PacifiCorp

Shirasaka Yukiyasu Hitachi Ltd.

Kipp Yule Bechtel Power Corp.

1. CALL TO ORDER

The meeting was called to order; meeting guidelines were reviewed and attendance

recorded. By show of hands it was determined that 12 members were present.

1. APPROVAL OF THE AGENDA

The presiding officer approved the agenda.

1. APPROVAL OF THE PREVIOUS MINUTES

Mr. Marek made a motion to approve the minutes from the Oct 2013 meeting in St. Louis. Mr. Sampat seconded the motion. The minutes were approved.

1. REVIEW AND UPDATE OF USNC ROSTERS FOR TC14

The roster was reviewed.

1. OPENING REMARKS

Mr. Hopkinson remarked that there has been a noted increase in TAG membership. He also noted that the next TC14 plenary meeting will be held in Tokyo, Japan later this year (November 10th- 11th) in conjunction with the IEC general meetings.

1. UPDATE ON TC14 STANDARDS ACTIVITIES
   1. IEC 60076-7 Ed 1.0 (2005-12-15): Power transformers - Part 7: Loading guide for oil-immersed power transformers (Loading Guide)

It was reported that a CD is expected to be released by the next TC14 plenary meeting.

* 1. IEC 60076-10 Ed. 2.0 - Power transformers - Part 10: Determination of sound levels

The CDV just closed on this. There was one negative vote. Work is now proceeding on the FDIS for this document. A comment was made that while the sound levels from TR1 are not included in this document, that perhaps they can be considered at the time of its next revision.

It was noted that one of the decisions coming out of the TC14 plenary meeting in Milwaukee was to have CIGRE A2 consider providing a guide to transformer & reactor noise levels. This would provide a basis for understanding what ranges are typical, what is a low noise transformer, and what noise levels are achievable. It is expected that some type of report will be made available at the CIGRE meetings occurring in August 2014.

* 1. IEC 60076-10-1Ed. 1.0: Power transformers - Part 10-1: Determination of sound levels - Application guide

It was reported that the CD just closed on this.

* 1. IEC 60076-11 Ed. 1.0 Power transformers - Part 11: Dry-type transformers

At the TC14 plenary meeting it was agreed to consider the revision of this document.

14/779/DC was issued on this. Comments are due **by 3/28/14**, following an RR and CD will be issued to start the project. Mr. Ballard provided a brief summary of the comments he submitted.

* 1. IEC 60076-15 Ed 1.0 - Power transformers - Part 15: Gas-filled power transformers

It was reported that a CDV will be issued next month.

* 1. IEC 60076-16 Ed. 1.0 - Power transformers - Part 16: Transformers for wind turbines applications.

It was reported that joint working group meetings are proceeding with the IEEE WG for Wind Turbine Generator Transformers. Progress is slower than originally expected. The next meetings will occur June 23rd-24th in Germany. A point was made that during these upcoming meetings there may be smaller break-out groups that can give more focus to certain select sections of the document.

* 1. IEC 60076-20 Power Transformers Part 20: Energy Efficiency

Mr. Sampat reported that a CD just closed on this. He reported that the TAG supported the document and he briefed the TAG on the comments he submitted. He then reported on a conversation that both Phil Hopkinson and he had with the DOE on this document. The DOE had stated they would like the US TAG to reject the document for a number of reasons. The attached document goes into the reasons in more detail



Mr. Sampat remarked that he is not sure if the DOE is satisfied as a result of that conversation. Mr. Jarman also remarked that he felt the CD was rushed out and may not represent a quality document. He also noted that the CENELEC work that served as a basis for this document has not been approved and finalized yet.

* 1. IEC 60214-1 Ed.2.0 - Tap changers - Part 1: Performance requirements and test methods

Mr. Kraemer reported that the IS is currently at publishing.

* 1. IEC 60214-2 Ed. 1.0 - Tap-changers - Part 2: Application guide

At the TC14 plenary meeting it was noted that after finalizing the revision work on IEC 60214-1, MT60214-1 would then start on revision of IEC 60214-2. This will be a joint project with IEEE

14/777/DC was issued on this. The US TAG supported this proposal. Work will now proceed on this. There is a call for experts to the MT.

* 1. IEC 60076-22-1- Power transformer and reactor fittings-Protective Devices

Mr. Morales reported that work is proceeding on this. The WG met in January where they determined common conditions for this document. The next WG meeting is in the June time frame in Berlin, Germany.

* 1. IEC 60076-22-2- Power transformer and reactor cooling equipment

Mr. Morales reported that work is proceeding on this. The WG met in January where they determined common conditions for this document. The next WG meeting is in the June time frame in Berlin, Germany.

* 1. IEC 60076-22-3- Power transformer and reactor fittings-Accessories and fittings

Mr. Morales reported that work is proceeding on this. The WG met in January where they determined common conditions for this document. The next WG meeting is in the June time frame in Berlin, Germany.

* 1. IEC 61378-3 Ed. 2.0 Converter transformers - Part 3: Application guide

It was reported that the target date for an FDIS is 2014-04.

* 1. IEC 60075-57-1202 Dual Logo IEEE/IEC Standard for “Liquid Immersed Phase Shifting Transformers

Mr. Ahuja reported that a CD is expected next month. A CDV is expected by the end of the year.

* 1. IEC 61378-2 Converter Transformers- Transformers for HVDC Applications and IEEE C57.129-2007 on same subject

14/771/DC was issued. It has been suggested to start a joint IEC/IEEE working

group with the task to try to combine the two documents into a dual logo standard. The US currently has no experts on this MT.

* 1. IEC 60076-4 Power transformers- Part 4: Guide to the lightning impulse and switching impulse testing- Power transformers and reactors

At the TC 14 plenary meeting it was agreed to establish of MT 60076-4 to revise this. A DC will be issued with a subsequent RR.

* 1. IEC 60076-21- Power transformers- Part 21: Standard requirements, terminology, and test code for step-voltage regulators-Joint Revision with IEEE C57.15.

At the TC14 plenary meeting it was agreed to start the revision of this standard in cooperation with IEEE. Craig Colopy is the WG convenor of MT 60076-21 and also the chair of the IEEE working group.

14/783/DC has been issued. Comments are due on the proposal **by 5/9/14**. There is also a call for experts to this MT.

1. OTHER ISSUES
   1. TC14 Liaison to TC112

There was nothing to report

* 1. TC14 Liaison to TC10

There was nothing to report

1. NEW BUSINESS

There was no new business

###### 9. DATE AND PLACE OF THE NEXT MEETING

The next in person meeting is expected to occur during the 2014 IEEE Fall Transformers Conference during the week of October 19th-23rd in the Washington DC metro area. The meeting was adjourned at 8:35AM.

Reported by: Steve Griffith, April 7th, 2014

Reviewed by: CRS, April 8th, 2014