

**MINUTES OF MEETING
BUSHING SUBCOMMITTEE
OF THE
IEEE/PES TRANSFORMER COMMITTEE
DALLAS, TX
MARCH 14, 2007**

8.12 Bushing Subcommittee – Fred Elliott, Chair

8.12.1 Introduction/Attendance

Fred Elliott - Chair opened the meeting at 3:00 PM and welcomed the members and guests. There were 55 attendees with 12 members and 43 guests present.

IEEE patent policy was addressed and no patent conflicts were reported. The Chair informed the participants please review information on Transformers Committee website for details.

8.12.2 Approval of Minutes of Last Meeting

The minutes of last meeting in Montreal, TX were approved as written.

8.12.3 Chairman's Remarks

The chair made the following remarks after attending the Administrative Subcommittee.

- Next meeting will be held in Minneapolis, Minnesota on October 14-18, 2007.
- In future meetings, personal introduction will be re-enforced.
- Is looking for a volunteer to chair the TF – GSU Bushings. Les Recksiedler - the present chair is going to take the lead on DC Bushing Standard.

8.12.4 Working Group (WG) and Task Force (TF) Reports

8.12.4.1 WG - Revision of C57.19.00 - Keith Ellis, Chair

No meeting was scheduled.

8.12.4.2 TF - Revision of C57.19.100 – Tommy Spitzer, Chair

The working group met in Dallas at 3:15 pm on March 13, 2007. After introductions the patent disclosure information was requested and there were no known issues. The chair covered the status of the PAR which has been approved to be completed by 2010. The chair believes he have received the information that the group were tasked with clarifying. There were no additional issues brought up at the meeting. The chair plans to incorporate the changes and get the revised document to the membership before the next meeting. We will try to resolve any issues at the next meeting and have the document ready to ballot.

The meeting was adjourned at 3:45 pm.

8.12.4.3 TF – GSU Bushings – Les Recksiedler, Chair

L. Recksiedler reported as follows:

Task Force – GSU Bushings Standardization
9:30 – 10:45 AM, Tuesday, March 13, 2007
Lincoln East, Dallas, Texas

1. Introduction – Everyone
2. Sign in Lists – Attendance 27
3. Discussion of bushing problem by L Recksiedler
 - 2 defective 15 kV, 16000 Amperes bushings
 - OEM out of business
 - Diameter of replacement bushing and length on IPB side were issues
 - Bushing manufacturer modified to fit
4. Benefits of Standardization
 - More than one supplier
 - Bushing interchangeability
 - Ensure spare fit, fewer spares
 - Fewer types possible
 - Lower overall costs
5. Issues- Managing change
6. Does anyone know if IEC has a standard to address similar issues? IEC 60137 bushing standard is a performance standard and doesn't give dimensions.
7. Discussions overall there appeared to be agreement that a new standard was necessary but realized there were complete issues to be resolved.
 - M. Foster of Boble is informing about bushing replacement tutorial which will include GSU bushings as they realize the need for this
 - The group agreed to work by e-mail between meetings
 - L.Recksiedler to prepares draft of title, scope and purpose for comments by the group
 - Like to have representation from users, bushing manufacturers and transformer manufacturers.
8. Issues
 - Thermal requirements in IPB
 - Existing Standards C57.19.01
 - Large population of existing bushings
 - Consider condenser type only not bulk bushings
 - Interchangeability
 - Fewer type
 - Connection to be a NEMA standard
 - Airside dimensions could be a concern
 - Limited to low voltage high current

8.12.4.4 C57.19.03 – DC Bushing Standard – Fred Elliott, Chair

No meeting was scheduled.

8.12.4.5 IEC Bushing Standards Activity - John Graham of Trench Ltd., UK

John Graham reported through his e-mail as following;

For my contribution to the meeting, there has been little progress with the IEC60137 revision. A final draft was sent to IEC Central Office in December 2006 and is now with the French National committee for translation before circulation as a Final Draft International Standard (FDIS). This should be done in April and the document should be approved and published this year. There is no indication yet how the IEC transformer committee will react and whether we will have to restart work immediately.

8.12.4.6 IEEE 693 Seismic Guide Development Activity - Lonnie Elder of ABB.

Lonnie presented an update on the upcoming shake table testing being conducted to study the interaction between transformers and bushings during seismic events.

An advisory committee has been formed by Dr. Anshell Schiff for input and advice on the testing program.

Lonnie's update and documents from the advisory committee are posted in the Bushing Subcommittee portion of the IEEE Transformers Committee Website.

8.12.5 Old Business

No discussion was reported on the businesses.

8.12.6 New Business

No new business was reported.

8.12.7 Technical Papers

No activity was reported for this mtg.

8.12.8 Adjournment

The meeting adjourned at 4:15 PM.

Minutes submitted respectively by,

Peter D. Zhao

Secretary
Bushing Subcommittee