Minutes of the Meetings held on October 3rd, 4th and 5th, 2012 in San Diego - CA, US

Joint IEC/IEEE revision of IEEE C37.013: IEEE Standard for AC High-Voltage Generator Circuit Breakers Rated on a Symmetrical Current Basis

IEC TC 17 / SC 17A / WG 52 IEEE P62271-37-013

The Working Group met on October 3rd, 4th and 5th, 2012 in San Diego - CA, US.

The chair started the meeting with the introduction of all participants.

The following people attended the meetings: see Annex A

Main Points:

The WG reviewed the comments received from IEEE.
A proposal was made to require that on generator circuit-breakers with alternative operating mechanisms test-duty 1 is performed. The WG rejected this proposal because meeting the requirements laid down in cl. 6.102.7 of the current version of the document fully show the equivalent performance of the generator circuit-breaker with the alternative operating mechanism.
Tolerances for test-duties 5, 6A and 6B were added to Annex A.
The working group agreed to include a case study to show how to select a generator circuit-breaker in case of a power station layout with two generators connected to a common two-winding step-up transformer.
The procedure to select a generator circuit-breaker class G1 or G2 was clarified in clause 8.
Cl. 6.5.2.2 was modified to clarify that there is no limit on the difference between the temperature rise at the terminals of the generator circuit-breaker or other apparatus incorporated in series and closely associated with the generator circuit-breaker, such as disconnectors, and the IPB at a distance of 1 m from the terminals as specified in IEC 62271-1.
Cl. 6.102.10.1.2 was modified to take into account the maximum number of operations.
A new annex has been created to describe the main aspects which should be taken into account in case of application of generator circuit-breakers with three-winding step-up transformers.

The definition of isolated-phase bus has been added to clause 3.
Cl. 7.1 was modified to take into account generator circuit breakers having interrupters with one interrupting medium enclosed in a different insulating fluid.
It has been clarified in cl. 7 and cl. 10 which tests need to be performed in case the generator circuit-breaker is assembled and tested at factory or on site.
The definition of minimum arcing time was introduced in cl. 3.
It was decided to replace the name of classes M1 and M2 with M1000 and M3000 respectively.
It was agreed to create a new annex to take into account the applicability of the tests for the different frequencies in a similar way as in the document IEC 17A_1003ea_DTR cl. 12.3.4.
In cl. 6.106.3. it was clarified that tests performed at 60 Hz are acceptable for 50 Hz, provided the arcing window for 50 Hz is covered.

Next Steps and Agreed Actions:

- Implement required modifications on figures in accordance with comments received from IEC ballot on CD1 (JH)
- Add a section to clause 5 requiring the generator circuit-breaker to be trip-free (BL)
- Check if all the documents listed in cl. 1.2 are referenced in the document. If not they should be moved to bibliography (BL)
- Check if referenced standards should show the year of publication or not (BL)
- Prepare a case study to show how to select a generator circuit-breaker in case of a power station layout with two generators connected to a common two-winding step-up transformer (MP, PN)
- Investigate whether SI units should be followed by US customary units in brackets (BL)
- Give to Mirko Palazzo permission to send CD2 directly to the central office of IEC (AB)
- Create a new annex to take into account the applicability of the tests for the different frequencies in a similar way as in the document IEC 17A_1003ea_DTR cl. 12.3.4 (MP, PN)
- Investigate how to export the data from the “KEMA tool” and send them to BL (HtP)

Future Meetings and Schedule:

The next WG meeting will tentatively take place on March 5th, 6th and 7th, 2013. Location: tbd.

Annex A: List of Attendees

Member/Guest	Last Name	First Name	Affiliation
Member	Billings	Stan	MEPPI
Member	Bufi	Arben	Hitachi HVB
Member	Carmona	Gilbert	Southern California Edison
Member	Chen	Steven	CHENHOUSE N.A.
Member	Chow	Chih	Pepco
Member	Dufournet	Denis	Alstom Grid
Guest	Earl	Jerry	ABB
Member	Fadat	Nicolas	Schneider Electric
Member	Liu	Li	Eaton
Convenor	Long	Bill	Eaton
Member	Matsuki	Masashi	Mitsubishi Electric Corporation
Guest	Mulcahy	Tom	Dominion VA Power
Member	Novak	Pavel	Schneider Electric
Secretary	Palazzo	Mirko	ABB
Member	Patterson	Shawn	Bureau of Reclamation
Member	Ricciuti	Tony	Eaton
Member	Te Paske	L.H.	KEMA
Member	Van de Ligt	Jim	CANA High Voltage Ltd.
Member	Webb	John	ABB
Member	Willieme	Jean-Marc	Alstom Grid
Member	Zehnder	Lukas	ABB
Guest	Hanson	Jeff	Schneider Electric
Guest	Steigerwait	Don	Duke Energy
Guest	Lise	Phan	Pacific Gas and Electric
Guest	Mannarino	Tony	PSE&G