

Study Group C37.011 Draft Meeting Minutes

Pittsburgh, PA

October 11, 2016

Chair: Denis Dufournet

Vice-Chair: Joanne Hu

Secretary: Carl Schuetz

Denis described the purpose of the study group (SG). The present guide was issued in 2011; it needs to be revised before end of 2021. Request for PAR after Fall meeting of 2017. A first draft is prepared in advance of the PAR.

Main purpose of the revision: align with changes in C37.04, C37.09, and C37.06.1.

Content of C37.04b is transferred to C37.04 (ratings) and C37.011 (non-normative content) so that no information is lost.

Main Changes

Main revisions to the guide include TRV in systems with series caps, issues related to testing, changes to SLF calculation, arc-circuit interaction, update with IEEE C37.06.1, guidance on simulations.

Anne asked if number 6 on the Main Changes table on inrush current in capacitors in parallel to series reactor should be covered in this document. It was acknowledged that since it is related to series reactors and involves TRV it would be appropriate to include it this document.

New work related to IEEE C37.06.1

The SG needs to explain the calculation of TRV for TLF test duties in IEEE C37.06.1. A full explanation will be prepared by Denis and sent to SG members for comments.

Discussion of Draft D0.2

Draft D0.2 was prepared by Carl using the IEEE template. It was circulated to SG members before the meeting.

A review of changes made to draft D0.2 was presented.

The following items in bold were identified for correction or content addition

Page vii revision of 5.2.2 on short line fault

an addition of 5.5.2 to cover TRV in systems with series capacitor banks

Page 67 TRV on systems with series capacitor banks

Line 450 the word “standard” should be changed to “guide”.

Line 461 check the title of C37.06.1 to ensure it is recorded accurately.

Line 2029 Clause 5.5 insert the word “circuit” before breaker and add “where” capability “may” be exceeded

Line 1832 Review wording as it refers to guide. The guide mentioned is an IEC document and the reference should be to this document.

Clause 5.4.1 on TLF will be revised to take into account content removal from C37.010 and placement into this document (Action Helmut).

A question was asked if there are any CB with opening resistors. Anne stated the 1100 kV circuit breakers use opening resistors. Denis confirmed this and added there are several manufacturers that have built such circuit breakers in Japan.

Sushil requested a section on the application of TRV test data to a multi-break interrupter and guidance on how to perform testing on the multi-break interrupter. A draft will be prepared with possible addition to clause 6 on testing Issues (Action: Sushil).

Sushil also requested a section that addresses the advantages and disadvantages of an accurate CB model with stray capacitances. It could be included in a clause on TRV simulations (Action Joanne).

A request was made to include an example TRV calculation for series capacitor banks. Hua volunteered to contribute this example.

Victor volunteered capacitance data for several circuit breaker voltage ranges for use.

A request was made to clarify Fig. 7 and the time axis. **Add [us] onto the time axis of Figure 7.**

An updated draft will be circulated to the SG (Action: Denis).

The new input will be discussed during the next meeting in Charlotte in April 2017.

Study Group Revision of C37.011 – Application Guide for TRV for HV Circuit-breakers
Attendance Meeting in Pittsburgh, October 11th 2016

Name	Affiliation	Member/Guest
Denis Dufournet	Consultant (GE Grid Solutions)	Chair
Carl Schuetz	ATC	Secretary
Roy Alexander	RwA Engineering	M
Mauricio Aristizabal	ABB	M
Anne Bosma	ABB Power Technologies	M
Helmut Heiermeier	ABB	M
Victor Hermosillo	Grid Solutions	M
Hua Y. Liu	Southern California Edison	M
Sushil Shinde	ABB	M
Kirk Smith	Retired	M
Xi Zhu	GE	M
Samala Santosh Reddy	Powell Industries	G
David Caserly	Trench Limited	G
Alexander Hoever	Siemens	G
Anthony Ricciuti	Eaton	G
Oscar Montano	Salt River Project	G
Steven Brown	Allen & Hoshall Inc	G
Anton Poeltl	ABB	G
Joe Kausek	First Energy	G
Anthony Ricci	First Energy	G