Following is a report of the activities of IEC 17B MT15, Maintenance of 60947-2 Report of meeting held 14<sup>th</sup> and 15<sup>th</sup> December 2004 in the Africa room. Dutch Standardisation Institute (NEN), Vlinderweg 6, 2623 AX Delft, Netherlands.

Respectfully submitted by,

Shaun P. Slattery

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
TECHNICAL COMMITTEE No 17B: L0W-VOLTAGE SWITCHGEAR AND CONTROLGEAR
SUB-COMMITTEE No 17B: L0W-VOLTAGE SWITCHGEAR AND CONTROLGEAR
MAINTENANCE TEAM M15: CIRCUIT-BREAKERS

### Report of IEC 17B MT15 Activities Presented to the LVSD Subcommittee May 11, 2005

By Shaun P. Slattery

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) TECHNICAL COMMITTEE No 17B: L0W-VOLTAGE SWITCHGEAR AND CONTROLGEAR SUB-COMMITTEE No 17B: LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR **MAINTENANCE TEAM M15: CIRCUIT-BREAKERS** 

Report of meeting held 14<sup>th</sup> and 15<sup>th</sup> December 2004 in the Africa room. Dutch Standardisation Institute (NEN), Vlinderweg 6, 2623 AX Delft, Netherlands.

The business of the meeting was conducted in accordance with document SC17B/MT15(Convenor)13/04 which forms the basis of this report.

#### 1. Welcome.

Mr Tamme ROODBERGEN Director of NEN welcomed SC/17B MT15 to Delft and wished them a successful meeting, he then handed over to Mrs Ria van ANTWERPEN (NEN) to look after MT15 during their stay with NEN.

#### 2. Apologies.

Apologies were received from:

Ray UPTON (UK) Convenor for which P D GALBRAITH (UK) was deputising, Tudor BAIATU (CH), Michael HAHN (DE) for which Karl HIERITH (DE) was deputising, Volker KREUZIGER (DE) and Alberto SIANA (IT).

#### 3. Persons present.

Paul D GALBRAITH (UK) Deputising for the Convenor, Marcel DELAPLACE (FR) Secretary SC/17B, Lucio AZZOLA (IT), Stefano BISELLO (IT), Bernie DIMARCO (US), Karl HIERITH (DE) Deputising for Michael HAHN (DE), Isaac KRUGER (ZA), Jean-Pierre NEREAU (FR), Philip M PIQUERA (US), Roel RITSMA (NL), Hans WEICHERT (CH) and Shinji YAMAGATA (JP).

#### 4. Membership.

The Convenor advised the meeting that IEC Central Office now require the membership details to be administered via their National Committees. He therefore requested any changes to membership details to be forwarded direct to Central office via National Committees. ACTION members.

#### 5. Agenda

The agenda was adopted with some editorial changes and the following items added:

4e) Clause 8.3.3.2 Test of dielectric properties.

17B-MT15 Delft (Azzola)

4f) Annex H

17B-MT15 (Weichert) 02-04

17B-MT15 (Nereau) 03-04

4g) Clause 8.3.3.1 Test of tripping limits and characteristics

17B-MT15 (Nereau) 02-04

#### 6. Device Profiles.

MT15 reviewed the Device Profiles Task Force (DPTF) report of meeting document SC17B/MT15 DPTF (Upton) 01/04 and recorded the following comments:

**Present;** Members would like to know which organisations and National Committees the members of the DPTF represent.

IEC TS 61915; It was noted that this will be an International Standard and not a Technical Specification.

It was also noted that the work of the DPTF would follow the same route as any other standard including parallel voting at CDV and FDIS stages.

Strategy for the Work; It was noted that the new date for the meeting in Germany is now 25th January 2005.

17B Review Team; It was noted that it is not yet decided who will be members of this team.

Meetings; For budgeting purposes, it was envisaged that the DPTF would meet four times in 2005.

#### 7. SC17B.

MT15 reviewed a number of documents and recorded the following comments:

- a) 17B/MT15 (Convenor) 10/04 Notes on the advisory Group meeting in New York.
  - 3b) Digital input/output, 3c) Electronic functions in controlgear and 3e) Technical Specification for Fire-pumps. Text highlighted in red was noted without any comments.
  - 3h) Reliability, there were no volunteers for nominating experts to an Advisory Group task force.
- b) 17B/MT15 (Convenor) 11/04 Notes on the WG1 meeting in New York.

This report was noted without any comments.

c) 17B meeting in Seoul - Minutes 17B/1395/RM.

It was noted that in addition to the Secretary only JP, ZA and US had MT15 members present.

It was further noted that at the last minute the Convenor of MT15 was unable to attend due to personal reasons. This meant that there was no representative in attendance from the UK. Mr Philip M Piqueira (US) deputising for Mr Ray Upton kindly presented the MT15 report to the SC17B meeting.

 d) Symbols for time-delay CBR- subject raised in Seoul. See two documents:- Graphic symbols – 17B(Seoul SC3) and Graphic symbols v3C 1224 INF.

A certain amount of confusion prevails over these documents and it was agreed for the Convenor of MT15 to write to the Convenor of SC3 for clarification. **ACTION Convenor.** 

#### 8. Amendment 1 IEC 60947-2:2003

Document 17B/1396/CC was reviewed and MT15 decisions recorded on document MD04196 mod Delft.doc.

With reference to FR 3 (24) relating to B.8.2.4.5 the Convenor tabled document Browne\_RCD\_blinding.doc. As further evidence from ZA and NL is to be considered it was decided to withdraw these tests and review the situation at a later date.

Document 17B/1357/CD was reviewed and MT15 decisions recorded on document MD04088E mod Delft

**DECISION** To progress to the CDV stage by February 2005 for review at the meeting scheduled for September 2005. If successful then progress to the FDIS stage in January 2006 with the publication date of the second amendment for 2009.

#### 9. Future work

a) 3 and 4 pole testing - to consider 17B/MT15 (Convenor) 12/04

**DECISION** To postpone this work for the time being. All members to re-consider this matter for discussion at a later date.

b) Annex A - to consider 17B/MT15 (Convenor) 14/04

**DECISION** To amend the text of A.6.3 Tests for verification of back-up protection 9<sup>th</sup> paragraph and add editorial changes to the CDV as follows:

During each operation

- a) if the associated SCPD is a circuit-breaker (C<sub>2</sub>):
- either both C<sub>1</sub> and C<sub>2</sub> shall trip at both test currents, no further tests then being required.

This is the general case and provides back-up protection only.

 or C<sub>1</sub> shall trip and C<sub>2</sub> shall be in the closed position at the end of each operation, at both test currents, no further tests then being required.

The contacts of  $C_2$  are allowed to separate momentarily during each operation. In this case restoration of **Deleted:** This requires that t supply is provided, in addition to back-up protection (see note 1 to figure A.4). The duration of **contact Deleted:** interruption of supply separation of  $C_2$ , if any, shall be recorded during these tests.

- or C<sub>1</sub> shall trip at the lowest test current, and both C<sub>1</sub> and C<sub>2</sub> shall trip at the highest test current.

The contacts of  $C_2$  are allowed to separate momentarily at the lowest test current. Additional tests shall-b **Deleted:** This requires that t made at intermediate currents to determine the lowest current at which both  $C_1$  and  $C_2$  trip, up to which current restoration of supply is provided. The duration of contact separation of  $C_2$ , if any, shall be record **Deleted:** interruption of supply during these tests.

c) Definition of current limiting - to consider 17B/MT15 (Convenor) 15/04

**DECISION** No change. UL 489 requires additional tests if the manufacturer declares circuit-breakers to be current-limiting then they must publish the threshold current curves and verify accordingly. There is no

requirement in the IEC standard but manufacturers do provide this information. With reference to different frequencies 8.3.2.2.3 Frequency of the test circuit for a.c. is covered by a manufacturers declaration.

d) Table 10 - to consider 17B/MT15 (USA)01-04A and US Table 10 (10) A

**DECISION** To postpone any decisions until the next meeting. All members were requested to forward their comments to Mr Bernie Di Marco (US) on Form 8c.

e) Clause 8.3.3.2 Test of dielectric properties - to consider 17B/MT15 Delft (AZZOLA)

**DECISION** To postpone any decisions until this matter has been further investigated with SC17B MT11.

Possible new text in 60947-2 clause 8.3.3.2 ii) with reference to 8.3.3.4.1, item 3 c), of IEC 60947-1: for the purposes of this standard circuits incorporating solid state devices connected between phases of the ma Deleted: to circuit shall be disconnected for the test:

f) Annex H - to consider 17B-MT15 (Weichert) 02-04 and 17B-MT15 (Nereau) 03-04

**DECISION** To postpone any decision at this meeting on 17B-MT15 (Weichert) 02-04 and to monitor IEC 61439 and IEC 60364.

To accept both proposals of 17B-MT15 (Nereau) 03-04 for inclusion in the CDV.

g) CI 8.3.3.1 Test of tripping limits and characteristics - to consider 17B/MT15 (Nereau) 02-04

DECISION To accept all proposals of 17B-MT15 (Nereau) 02-04 for inclusion in the CDV.

#### 10. Future Date of next meeting.

Monday, Tuesday and Wednesday 26<sup>th</sup>, 27<sup>th</sup> and 28<sup>th</sup> September 2005 in Berlin, Germany.

Report prepared by P D Galbraith.

10<sup>th</sup> January 2005