

9/11/02

IEC Activities

This is a report of IEC 17B/WG5 activities since the Spring meeting.

The WG met in Edinburgh, UK on July 9-11 and will meet in the Florida on Feb. 18-20, 2003.

The topics covered at the Edinburgh meeting are discussed in the following letter for the US rep, Phil Piqueira.

IEC Activietie6/winword6/c.

g

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July 18, 2002

Mr. Ken Gettman
National Electrical Manufacturers Association
1300 North 17th Street
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Rosslyn, VA 22209

Re: IEC 17B/WG5 Meeting Trip Report (July 9-11, 2002)-Edinburgh, UK

Please find attached a copy of our trip report for the IEC 17B/WG5 meeting which took place in Edinburgh, U.K. on July 9-11, 2002.

I have attached those documents which are relevant to the issues discussed (EDINBURGHN (01)-(03)). However, if there are any other documents which are referenced but not included, please don't hesitate to contact me.

Philip M. Piqueira

cc: Cutler-Hammer

C. Kimblin

NEMA

B. Dutton
N. Hewlett

Siemens-Atlanta

B. DiMarco
J. Young

Square D-Cedar Rapids

G. Gregory

Square D-Lexington

J. Pauley

Underwriters Laboratories

P. Notarian

REPORT OF INTERNATIONAL MEETING

DATE: July 18, 2002

DELEGATES: B. DiMarco
P. Piqueira

REPORT OF MEETING: IEC 17B Working Group 5

DATE AND PLACE: Edinburgh, Scotland, U.K.
July 9-11, 2002

COUNTRIES/DELEGATES ATTENDING:

FRANCE: H. Wolff, Chairman WG5
J. Nereau, Schneider
M. Delaplace, Secretary 17B

GERMANY: B. Adam, Siemens
H. Tebbe, Klockner Moeller

ITALY: M. Bossi, Bticino-Italy
A. Sciani, Nuova Magrini Galileo
L. Azzola, ABB Sace

SOUTH AFRICA: V. Cohen, CBI
I. Kruger, CBI

SPAIN : J. Garcia, AFME

SWITZERLAND : H. Weichert, Rockwell Automation
T. Baiatu, ABB/CMC

UNITED KINGDOM P. Galbreath, Merlin-Gerin
R. Upton, MEM

U.S.A: B. DiMarco, Siemens
P. Piqueira, GE

Guests : M. Hahn, Siemens-Germany
S. Tomasina, Bticino-Italy (Electronic Expert) (7/9, 7/10-AM)

IMPACT STATEMENT

WG5 consists of experts from various countries which have the assigned responsibility from sub-committee 17B for the development of low voltage standards covering industrial molded case and power circuit breakers defined by separate UL, NEMA, and ANSI domestic standards.

RATIONALIZATION FOR PARTICIPATION

The development of any new standard or related appendix involving the above mentioned product lines could greatly affect future domestic designs and marketing decisions. Active participation is required to insure that present USA application and safety requirements are not jeopardized.

OVERVIEW OF MEETING

The meeting was essentially conducted in line with the chairman's agenda, 17B/WG5(Chairman)08/02, which is attached as EDINBURGH (01).

General

- The chairman introduced the three new members : Mr. Isaac Krueger, CBI (South Africa) ; Mr. Luigio Azzola, ABB (Italy) ; and Mr. Michael Hahn, Siemens (Germany). Mr. Hahn, at the present time is an observer.

1) 3rd amendment of IEC 60947-2

- There were two negative comments received-Japan and Italy. The Italian comments would essentially require a re-write of the EMC requirements. The Italian expert, Mr. Tomasina, explained that the document needs to be rearranged in order to make it more usable but that their recommendations are editorial and not technical. An overview of their proposal is attached as EDINBURGH (02). The Italian proposal is to place all of the general requirements for EMC in Annex J and test requirements for specific devices would be included as follows : Annex B for CBR's, Annex F for CB's, and Annex M for MRCD's.
- It was agreed that WG5 should not delay the distribution of the FDIS. It should address technical errors and significant editorial corrections. Any comments associated with the re-formatting would be relegated to the maintenance team.
- Consequently, a review of the Italian comments was started but after a lengthy discussion it was clear that the Italian comments were too complex and technical to be reviewed during the CDV stage. Consequently, it was agreed to review the Italian proposal during the maintenance cycle of the document. However some minor corrections will be made such as expanding the frequency range during the test for radiated radio-frequency electromagnetic fields and slight modifications to Table J.1.
- The French also submitted a fairly extensive proposal addressed to Annex M as part of their comments to 17B/1177/CDV. Their primary rationalization for the proposal deals with reducing the number of short circuit tests by allowing some of the tests in the main document to cover the short circuit tests in Annex M. There was significant concern expressed by the majority of WG5 that, while in support of the principle of the French proposal, it also was too complex and technical to be added to the CDV. However, a compromise proposal by the USA delegates to incorporate the concept in a simple fashion was readily agreed to. Consequently, the following clause will be added immediately after the title in M.8.14 *Since an MRCD is not a switching device, where it has been tested with a given SCPD according to M.8.14.2 and M.8.14.4, tests with other SCPD's of a lower peak current and lower $i2t$ are considered also to be covered*
- The actions agreed to by WG5 are attached in EDINBURGH (03).
- The FDIS will be circulated as the complete new 3rd edition of IEC 947-2, probably at the end of February, 2003. The FDIS changes will be identified with a vertical line and only those changes can be commented on. It will probably be published in June, 2003.

2) Constuction Breaks

- Viv Cohen, South Africa, has raised the issue of the interpretation of Clause 7.1.5 of IEC 947-2 with respect to whether a change in the flexible leads ("pig-tail") construction is considered a construction break.
- Jean-Pierre Nereau, France, argued that a change in the pig-tail construction is not a construction break because the thermal behavior and current rating of the trip unit depends, in large part, on the bi-metal but also on the construction of the current-carrying parts, such as the pig-tails.
- All of the members of WG5 agreed that the present wording of IEC 947-2 supports the French argument. However, for clarification, Clause 7.1.5 b) will be modified by adding, "... including flexible connections,..."
- Although UL 489 indicates that a change in the pig-tail construction constitutes a construction break, the USA delegates agree with the WG5 proposal as being technically logical.

3) EMC

- This issue was raised by the EMC maintenance team concerning the possible difference in results which may exist between 3-phase radio-frequency tests and single-phase tests.
- The USA argued that the 3-phase set-up is much more complicated than the 1-phase set-up and this added complexity inherently makes replication of 3-phase test results extremely difficult. This was supported by the French, U.K. , and South African delegates.
- Consequently, WG5 agreed to standardize on 1-phase radio frequency immunity tests

4) Next Amendment of IEC 947-1

- Among the documents which have been issued by WG1 were IEC 17B/1189/DC dealing with dielectric tests and IEC 17B/1190/DC dealing with a humidity test after power frequency. The comments are due by July 26, 2002.
- The U.K. commented on IEC 17B/that they did not understand why there was a need for such an additional test.

ACTION : Review this issue with the USA TAG. The U.K. comment is valid-why is there a need for such an additional test ?

- Bernt Adam, Germany, proposed that Clause 8.2.5 of IEC 947-1 be modified to add, "In the case of multiple contacts only one pair of contacts has to be fixed together" (Clause 8.3.3.9 of IEC 947-2 refers to Clause 8.2.5 of IEC 947-1). France expressed some concern that this may not reflect how the test is probably being done.
- It was agreed to discuss this further at the next meeting.

ACTION : Does the USA Tag agree with the German proposal ?

5) SC 17B Advisory Group

- No significant issues to report on

6) Liaison with SC23E/WG1 & WG2

- These liaison reports, dealing with the SC23E/WG1 and WG2 meetings held in Palermo, Italy in April, 2002, were delivered by Viv Cohen and Paul Galbraith.
- SC 23E/WG1 : No significant issues of importance to WG5
- SC 23E/WG2 :The issues continue to focus on the controversy associated with voltage-dependent devices versus voltage-independent devices.

7) IEC Meetings in Beijing

- The IEC General Meeting will take place in Beijing, China, on October 21-November 1, 2002.
- IEC SC17B will meet on October 29, 2002 and IEC SC17BD will meet on October 31, November 1, 2002.
- Mr. Wolff may not be able to attend the IEC 17B Advisory Group Meeting in Beijing but will be represented by Mr. Upton.

8) Future Work of WG5

- Among the items which have been left for the maintenance cycle are the following :
 - In the second amendment of IEC 60947-2 - see C/m23/01, item 2f):

- F.4.2.1, Note - alternative test on electronic controls
 - L.3, Note - CBIs for equipment and circuit protection
- In 17B/1177/CDV:
 - 7.2.3.5 - verification of solid insulation
 - B.8.3 - withstand of d.c. voltages due to insulation measurements
 - M.8.4.2 - withstand of d.c. voltages due to insulation measurements
 - M.8.11, Note 2 - additional tests for MRCDs having more than one output rating
- Italian comments on Annex J which were not dealt with on IEC 17B/1177/CDV
- French comments on Annex M which were not dealt with on IEC 17B/1177/CDV

9) Other matters

- A technical report has been issued by TC 32 which extols the benefits of fuses over circuit breakers. This came as a surprise to WG5 and will be brought to the attention of the advisory group at its meeting in October. It is expected that this will generate an appeal to Central Office by SC 17B.

10) Next meetings

- February 18-20, 2002 : Florida
- June 10-12, 2003 : Spain

P.M. Piqueira

B. DiMarco