

## REPORT OF INTERNATIONAL MEETING

DATE: March 11, 2003

DELEGATES: B. DiMarco  
P. Piqueira

REPORT OF MEETING: IEC 17B Working Group 5

DATE AND PLACE: Clearwater Beach, FL  
February 18-20, 2003

### COUNTRIES/DELEGATES ATTENDING:

FRANCE: H. Wolff, Chairman WG5  
J. Nereau, Schneider

GERMANY: B. Adam, Siemens  
M. Hahn, Siemens

ITALY: M. Bossi, Bticino-Italy

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

SWITZERLAND : H. Weichert, Rockwell Automation

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

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

Apologies : M. Delaplace, Secretary 17B  
A. Sciani, Nuova Magrini Galileo  
V. Kreuziger, Moeller  
J. Garcia, AFME  
T. Baiatu, ABB/CMC

Guests : S. Bisello, Bticino-Italy

### 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)01/03, which is attached as CLEARWATER (01).

### General

- The new delegate from Germany replacing Mr. Tebbe is Mr. Volker Kreuziger from Moeller.
- Mr. Adam from Germany will be retiring after this meeting.
- At the end of the meeting, Mr. Wolff indicated that he will be retiring from IEC activities after the next meeting in Barcelona. He has been active in the IEC for over 50 years.
- The secretariat for IEC/WG5 is held by the United Kingdom and the next convenor will, in all likelihood, be Ray Upton. This decision will be made by the British National Committee before the next meeting. Mr. Upton announced, however, that he would be retiring within the next 18 months—this could affect the British National Committee decision.

#### 1) FDIS for the 3<sup>rd</sup> amendment of IEC 60947-2

- IEC 17B/1269 /FDIS, the 3rd amendment of IEC 60947-2, has been circulated with the vote due on March 29, 2003. The entire text of IEC 60947-2 is part of this document.

**ACTION : The USA Tag should review IEC 17B/1269/FDIS and establish the USA position before March 29, 2003**

#### 2) Beijing SC17B meetings (AG, MT11 & SC17B)

- IEC 17B/WG5 was represented at the meetings in Beijing by Ray Upton. Among the issues discussed were the following :
  - WG1 : The power frequency test after humidity treatment will be cancelled
  - WG5 : WG5's complaint concerning the commercial aspects of the fuse brochure was forwarded to Central Office and, as a result, the document has been rescinded
- Mr. Upton's Report is attached as CLEARWATER (02)

#### 3) Beijing SC23E meetings (WG2 & SC23E)

- This report was presented by Mr. Cohen. The subject of classification and, in particular, voltage-dependent vs. voltage-independent devices continues to generate lengthy discussions.

#### 4) Liaison with SC23E/WG1 & WG2

- A significant controversy took place following the Beijing meeting between Paul Galbreath and Viv Cohen with respect to the liaison information which was conveyed to IEC 17B/WG5 concerning the IEC 23E/WG1 meeting.
- The new reporting procedure will require that the summary reports as issued by Paul Galbreath and Viv Cohen be sent to Herbert Wolff before being distributed to WG5. In addition, the complete minutes from both IEC 17B and IEC 23E minutes will be appended to the reports.

#### 5) Positive contact indication (case of multiple contacts)

- This issue concerns the welding of the main contacts as it relates to establishing the effectiveness of the indication of the position of the main contacts.
- The German proposal deals with Clause 8.3.3.9 of IEC 60947-2 which refers to Clause 8.2.5 of IEC 60947-1. MT 12 has also been discussing this issue and has agreed that the least number of contact tips necessary to hold the contact system closed, e.g. welded, would be sufficient to verify the contact indication.
- Suitable wording to be added to the proposed future CD. WG5 agreed that the MT12 approach was reasonable and would monitor this issue through MT12

## 6) Rated short-circuit making current ( $I_{cm}$ )

- Mr. Adam raised an issue which was submitted to him by LOVAG dealing with the verification

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of  $I_{cm}$ . Mr. Adam responded to LOVAG that the short-circuit making capacity has to be tested within the test sequences and that separate test is not necessary. WG5 agreed with this response, therefore no changes to the standard are required.

## 7) Device networks

- As a result of a future report of IEC 61915. WG5 discussed the need to prepare an appropriate annex for IEC 60947-2 on device networks and how to provide the necessary expertise to do this work. The Germans suggested that a review of the Profibus summary document would be an appropriate place to start and will distribute it to the working group.

**ACTION : Discuss the philosophy of this issue with the USA TAG. Is there a problem with Profibus from the USA perspective ? Are there USA experts who could be "volunteered" for this work ?**

## 8) EMC provisions in IEC 60947-2

- In IEC 17B/1177 /CDV the Italians submitted extensive comments concerning EMC requirements which were tabled due to their complexity. Now that Amendment 3 has been completed, these are being considered.
- WG5 will request from Mr. Tomasini (Italy), initially, that he summarize these comments concerning whether they are essential, non-essential or editorial in nature. He will present this information to WG5 at the next meeting. An EMC task force will review this work to determine the extent, if any, that Annex B, J, and F should be modified as a result of the Italian proposals.
- At the present time, the WG5 EMC task force consists of Mr. Tomasini (Italy) and Mr. Galle (France). The chairman has requested additional representation from Germany and the USA.

**ACTION : Can the USA volunteer an EMC expert to assist in the development of this document ?**

## 9) Improvements to annex M

- Several French Proposals discussed in IEC 17B/1177/CDV were postponed until the maintenance cycle. These were :
- FR(10)-it was agreed to add a definition for rated residual short time withstand current (Clause M.4.3.5)
- FR(14)-It was agreed to add "rated residual short time withstand current" to to the text of M.7.2.2
- FR(16)-There, apparently, is no difference between the test in M.8.3.4.3 and the test in M.8.3.4.4. It was agreed that the test in M.8.3.4.3 is intended to cover the case where a residual fault current and the application of the supply from the voltage source to the MRCD current occurs simultaneously" . Consequently, it was agreed that the 2<sup>nd</sup> paragraph should be modified.
- FR(27)-M.8.14.2.5 :This comment was not understood and was withdrawn by the French.
- FR(28)-M.8.14.3 : WG5 agreed to add the following before the first sentence : "*This test is not necessary if the peak let through current and the let through energy of the associated SCPD are lower than the peak current and let through energy corresponding to the rated short time withstand current  $I_{cw}$* "

- FR(31)-M.8.14.5 : WG5 agreed to add the following before the first sentence : *“This test is not necessary if the peak let through current and the let through energy of the associated SCPD are lower than the peak current and let through energy corresponding to the rated residual short time withstand current  $I_{\Delta w}$ ”*
- FR(32)-Withdrawn
- FR(33)-The residual short time withstand current test is accepted

- FR(35)-This will be tabled until the meeting in Barcelona in order for the French to verify exactly how the figures should be modified and will submit a new proposal.

#### 10) Other items for future work

- F.4.2.1, Note - alternative test for electronic controls (left under consideration in the 2<sup>nd</sup> amendment). The French delegate will prepare a proposal for the next meeting.
- L.3, Note - CBIs for equipment and circuit protection (left under consideration in the 2<sup>nd</sup> amendment)

**ACTION : The USA delegates will prepare a proposal for the next meeting**

- 7.2.3.5 - verification of solid insulation (left under consideration in 17B/1177/CDV). This is presently being reviewed by WG1 and WG5 will wait for that work to be completed
- B.8.3 & M.8.4.2 - withstand of d.c. voltages due to insulation measurements (left under consideration in 17B/1177/CDV)
- M.8.11, Note 2 - additional tests for MRCs having more than one output rating (left under consideration in 17B/1177/CDV). WG5 has agreed on the following wording : Two tests shall be made : a) highest rated current rating and b) at the highest corresponding voltage.
- (Cohen)03/01 – This issue deals with the lack of a consistent definition of instantaneous tripping - within 0,2sec. WG5 agreed that a definition (Clause 2.20) should be added indicating that an instantaneous trip does not exceed .2 seconds
- IT proposals for annexes J, B, F & M not considered for the FDIS
- FR comments for annex M not considered for the FDIS
- Points 4 & 5 of C/m09/02-Clause M.8. does not line up with Annex B ; subclause M.8.2 does not exist in either annex B or is there any reference in that annex to 7.1
- 17B(Convenor)/MT13/3 – WG5 agreed that tests for radio frequency immunity should be single phase and that they should be done with 2 poles in series. This will be referred to the WG5 EMC experts for their verification—they will also be asked if it is acceptable to eliminate the three-phase tests in all cases
- (Adam)01/02 - Test for effectiveness of contact indication. This has already been covered (MT12 will resolve it)
- "Dead spots" –This item is discussed in IEC 23E/487/FDIS (IEC 1008) and IEC 23E/508/FDIS (IEC 1009). It was agreed that tables, based on the 23E documents, will be prepared for the next meeting with the intent of replacing tables B.1 and B.2 with the new tables, recognizing that they need to be modified before inclusion into IEC 60947-2.
- Amendments to IEC 60755-These are proposals being developed by 23E which need to be monitored by WG5.

#### 11) Other Matters

- 17B/WG5(Secretary) was reviewed. This summarizes the normative references listed in 17B/1269/FDIS—WG5 confirmed that the latest revision of the referenced documents, with the exception of CISPER 11 and 22, had been used in the FDIS. The EMC experts will confirm if latest revisions to CISPER 11 and 22 were used in the document.

12) **Next meetings**

- June 10-12, 2003 : Barcelona, Spain
- November 12-14, 2003 : Zurich, Switzerland

P.M. Piqueira

B. DiMarco