

REPORT OF MEETING OF SC17B/WG5
held in Barcelona, 10th – 12th June 2003

Present: Messrs.

Weichert	CH	Azzola	IT
Hahn	DE	Bisello	IT
Walker *	DE	Siani	IT
Garcia	ES	Tomasina *	IT
Xufre **	ES	DiMarco	US
Néreau	FR	Piqueira	US
Wolff	FR	Cohen	ZA
Galley *	FR	Kruger	ZA
Galbraith	GB		
Upton	GB	* EMC experts	** Observer, invited

Chairman: H.W. Wolff

In attendance: M. Delaplace, Secretary SC17B

Apologies for absence: Messrs. Baiatu CH
Kreuziger DE

1) Third edition of IEC 60947-2

WG5 noted the publication of IEC 60947-2 and that all the points set out in C/08/03, item 1 had been taken into account.

HWW also confirmed that in Cenelec, 17B/1269/FDIS had received a 100% acceptance, the relevant dates being as follows:

dor: 01/06/03 doa: 01/09/03 dop: 01/03/04 dow: 01/06/06

2) Transformation of WG5 into MT15

HWW confirmed that with the completion of the work program of WG5 the working group was due to be transformed into a maintenance team (MT15).

The Secretary stated that this transformation was scheduled to take place after the next meeting of the SC17B Advisory Group, due to be held in Prague on the 17th September. The membership of MT15 would remain that of WG5, under the convenorship of Mr. Upton.

It was regretted that Japan had not participated more actively in the work of WG5, and HWW undertook to write – through the Secretary – to the Japanese NC to enlist such active participation in the future work of MT15, bearing in mind Japan's considerable interest in the equipment with which WG5/MT15 is concerned - see C/m23/03, annexed to this report.

3) Future amendments of IEC 60947-2

Following the publication of the 3rd edition of IEC 60947-2 the work of further improving the standard had to continue for which purpose a start had already been made at the last meeting – see items 5 – 11 of C/m09/03. It would therefore be of interest to prepare a CD for a first amendment to the 3rd edition at an early date.

The Secretary agreed with this view, pointing out that

- a CD was to be preferred to a DC which was of limited value and not really favoured by C.O.;
- before circulation of a CD an MCR has to be issued which was a simple straight forward matter, requiring, however, the agreement on suitable dates for CD, CDV, FDIS and publication – see item 5 below.

4) Matters agreed at the last meeting

WG5 briefly reviewed the matters agreed at the last meeting and confirmed the decisions taken thereon, concerning:

- Up-dating of references – see C/m09/03, item 11,b)
Regarding the reference to IEC 60364-4-41 it was agreed to make no change for the time being, 64/1274/CDV having been rejected. It was further agreed to make no change to the CISPR 11 & 22 references.
- Definition of instantaneous tripping – see C/m09/03, item 10, c), i). See also item 5, c) below.
- Annex M – see C/m09/03, item 9 and item 10, b), iii).

5) Specific matters arising from the last meeting

a) ANNEX B - “Dead spots”

WG5 considered C/m13/03 and agreed the proposals in principle. It was further agreed that the test at $10I_{\Delta n}$, used at present, could be omitted.

The utility of the test at 500A was queried, but it was decided to retain it, at least for the time being.

Regarding the query raised in the document concerning instantaneous tripping, it was agreed that it was valid and that the relevant text should be combined with note 2, as follows:

“These values apply only if they exceed $5I_{\Delta n}$ and do not apply if they exceed the instantaneous trip current.”

Arising out of a further query regarding instantaneous tripping it was agreed to add at the end of B.8.1a) the following:

“In the case of CBRs with adjustable instantaneous tripping the instantaneous trip shall be set at maximum, unless otherwise stated.”

Since NCs might query the origin and justification of these proposals, HWW undertook to prepare a short introductory explanation - see C/m22/03, annexed to this report.

b) ANNEX F - Alternative tests for electronic controls

F.4.2.1 – It was agreed to delete the note at the end of the subclause.

It was further agreed to modify the second paragraph of F.3.2 as follows:

Replace “For the high frequency tests (F.4.3 to F.4.7).....” by “For the immunity tests (F.4).....”.

- Single phase tests for radio frequency immunity

With reference to C/m09/03 this was deferred for consideration under item 6.

c) ANNEX L – CBIs for equipment and circuit protection

WG5 considered 17B/WG5(USA)01/03, being a proposal for a new annex O for CBIs suitable for equipment and circuit protection.

The proposals were agreed in principle, but with a substantial number of amendments. In particular the following are to be noted:

- This type of device is to be known as ICB (instead of ITCB);
- The symbol for instantaneous trip setting - li - is to be given in the new definition 2.20 agreed at the last meeting.
- In 0.6.1.1 replace the last paragraph by the text of Note 8 of Table 10, omitting “under the conditions of sample 1”.
- 0.6.1.2 Short-circuit test: to be left “under consideration” for further consideration at the next meeting.

The US experts agreed to update the document and to circulate it to HWW within 10 days for incorporation in the CD (see below).

HWWs note: This revised document has just been received and is annexed to this report.

d) ANNEX M – Connections circuit diagrams

WG5 considered (Néreau)01/03 and approved it with one minor amendment: In M.14.5.1 replace “dashed line” by “note”.

Following the completion of the discussion of all matters under item 5 of the agenda WG5 confirmed that a CD should be prepared and circulated to NCs, preceded by an MCR with the following dates:

CD - July 03 2nd CD - December 03 CDV - December 04 FDIS December 05
Publication - April 06.

6) EMC provisions in IEC 60947-2

i) WG5 noted the addition of following two members of the EMC group of experts:

- Mr. Heinz Walker (convenor of MT13)
Siemens AG, A & D CD CCTS, D-92224 Amberg
'phone: 49 (9621) 80-2543
- Mr. Jim Lagree, Electronic Engineering Manager
Eaton Cutler-Hammer, 170 Industry Drive, Pittsburgh PA 15275, USA
'phone: (412) 494-3074
e-mail: JAMESLLAGREE@eaton.com

WG5 welcomed these additions and HWW said that any contributions of Mr. Lagree would be appreciated even if he could not attend all meetings of the group of EMC experts.

ii) With reference to the Italian proposals for the EMC provisions in IEC 60947-2 there followed a general discussion regarding:

- changes in the lay-out
- technical points requiring attention
- circulation, in due course, of a questionnaire, before issue of a CD
- time scale for this work: would it not be advisable to allow experience with the provisions of the 3rd edition to be gained for a period of, say, two to three years, before introducing the proposed changes ?

Mr. Galbraith tabled the report of the meeting of the group of EMC experts, held in Zurich on the 22nd May. This will require detailed consideration – see below.

Mr. Tomasina then made a presentation of the background and aim of the Italian proposals, highlighting the reasons for the changes to be introduced so as to have a more logical presentation of those EMC requirements in annex J which were truly general, and those which really concerned specific products covered in annexes B, F and M (and also annex N).

After questioning Mr. Tomasina on various points WG5 accepted in principle the Italian proposals. The most important technical points are set out in the Zurich report which were then considered in detail. Numerous changes were made: in particular there was much discussion regarding the performance criteria applicable in specific cases, A or B, as relevant. In this context Mr. Upton undertook to prepare a general reference table.

Mr. Tomasina stressed that several of the figures prepared by him for the Italian proposals required further improvements and he undertook to make revised figures available as quickly as possible.

After having completed the consideration of the Zurich report WG5 discussed the various courses possible for the next step of this work. It was finally agreed to prepare a document on the basis that the Italian proposals were accepted as presented in the annex to the Italian comment IT2 (23) on 17B/1177/CDV, taking into account, however, the results of the above discussion of the Zurich report.

Mr. Galbraith and Mr. Upton undertook to jointly prepare this document, and Mr. Tomasina undertook to transmit the revised figures to them for inclusion in the document which is to be considered at the next meeting.

Arising out of the above discussion it was pointed out that in Table J.1, item 6 (Power frequency magnetic fields), column 2, the reference to "7.3.2" no longer exists. It was agreed that the bracket "(see 7.3.2)" should be deleted. The Secretary will endeavour to do this by means of a corrigendum, allowing one to two months to elapse in case any other errors should come to light.

7) Device networks

- With reference to item 7 of C/m09/03 information was given that the following two experts were willing to assist WG5 in the preparation of an appropriate annex to IEC 60947-2 in the context of TC 61915:
Mr. Hennibel (a member of SC17B/WG3) - FR (Schneider)
Mr. Depecol - IT (ABB)
This annex should be suitable for all systems.
- WG5 noted the circulation of the Profibus document made available by Mr. Hahn.
- The Secretary informed WG5 that at the forthcoming AG meeting a proposal was to be made for an experts from Rockwell to make a presentation to WG2 and WG5 on applying TS 61915 to their specific products, regarding profiles, templates etc. WG5 suggested that Mr. Hennibel and Mr. Depecol be present at such a presentation.

8) Liaison with SC23E

- WG5 noted the report of the last meeting of SC23E/WG2, circulated under the cover of C/m14/03, which was supplemented by Mr. Cohen and Mr. Galbraith. Mr. Cohen gave details of the difficulties encountered in progressing the work on reliability and on classification of RCDs.
- Reference was also made to the comment by Mr. Breuillé (convenor of WG2) at the last ACOS meeting (March 2003), regarding the basic task of SC23E on residual current devices. No action by WG5 was necessary at this stage, except for vigilance on this matter.
- Mr. Cohen confirmed that he was retiring from active membership of WG5 (but not of SC23E/WG1 & WG2) whilst remaining a corresponding member.
It was agreed therefore that Mr. Galbraith should continue as the sole active liaison member, in accordance with the arrangement agreed at Stockholm by WG5 and endorsed by AG and SC17B. This, of course, would not prevent Mr. Cohen from corresponding with the chairman/convenor of WG5/MT15, as in the past.

9) SC17B Advisory Group and amendments to IEC 60947-1

With reference to C/m09/03, item 2, WG5 considered (Upton)01/03, proposals for amending 8.3.3.4.1, item 3 c) of IEC 60947-1, concerning power frequency dielectric tests and ability to withstand temporary overvoltages (document tabled at the meeting).

The first proposal was accepted without change.

The second proposal was also accepted, deleting, however, "in service" at the end of the proposed text.

NC's are to be asked by WG5 members to propose these amendments through their comments on 17B/1275/CDV. Furthermore this will be raised at the next AG & MT11 meetings.

Regarding other points to be raised at the AG meeting it was stressed that the definition of "protective function" had still not been clarified.

Regarding positive contact indication item 5 of C/m09/03 refers and this should also be raised, as well as clear marking of the tripped position, if any.

10) Other matters

i) Guide for fuses

HWW informed WG5 that 32B/424/DTR had been accepted and had been published as IEC 61818TR

ii) Screwless terminals

WG5 considered (Weichert)01/03, tabled at the meeting (and annexed to this report).

WG5 agreed that it would be useful to introduce requirements for screwless terminals into the "947 series" and that this should be raised at the next AG meeting. MT14 would be concerned with this task. Screwless terminals are already covered in amendment 1 of the 3rd edition of IEC 60898 and this would form a basis for this work.

iii) Question from SC17B/WG2

With reference to C/m16/03 concerning the minimum safe time delay required for transfer switches between opening and closing of circuits, without risk of flash-over between sources.

WG5 confirmed the view expressed in the correspondence between Mr. Bret and HWW that this minimum delay should be 200ms, adding that this was applicable to a.c. supplies. For d.c. this would have to be determined separately.

HWW will inform Mr. Bret accordingly.

11) Next meetings

- Next meeting

Tuesday –Thursday, 12th – 14th November, in Zurich, as agreed at the last meeting.
Accommodation and venue data: as circulated under cover of C/m20/03.

- Next but one meeting

20th – 22nd April, in Italy.

12) Conclusion of the meeting

HWW, on behalf of WG5,

- thanked Mr. Garcia and AFME for the excellent organisation of this meeting and for the memorable hospitality extended to the members and their ladies;
- thanked Mr. Bossi, on his retirement from WG5, for his valuable contributions to the work of the WG;
- thanked Mr. Cohen for his most active participation in the work of WG5 over many years, through his many "papers" and vivid as well as interesting discussions.

HWW then confirmed that this was his last meeting as chairman of WG5, although he would continue this function until after the forthcoming meeting of the AG (Prague, 17th September).

Although he would obviously miss his contact with the members as well as the work of WG5, he felt that this was the correct moment for making the change, as explained at the last meeting. In any case he would remain a corresponding member for the time being.

He heartily thanked the members for their support throughout these many years and in particular for their much appreciated gift to himself and the bouquet to his wife.

HWW thereby concluded this meeting, being the 82nd meeting under his chairmanship, begun in 1978.

HWW/S/24.06.03

