

May 19, 2003

To: Low Voltage Switchgear Devices and Switchgear Assemblies Subcommittees

Subject: Organization of Low Voltage Switchgear Standards

At the May 2003 meeting I recommended that all Low Voltage Switchgear Equipment Standards be combined in one SC, the present LV Switchgear Devices SC. What the name would be for this revised SC is not important, it could be the LV Switchgear Devices & Assemblies SC, LV Switchgear Products SC, LV Switchgear Equipment SC, or any similar name. What is important is that this would improve the LV switchgear standards process. The purpose of this memo is to provide you with the background and potential improvements for your consideration when evaluating this proposal.

With increased interest and requirements for Third-Party Certification, C37.50 for LV Circuit Breakers and C37.51 for LV Assemblies were issued in the 1970's. It became very apparent that one standard, C37.20, for all assemblies was not adequate or compatible with these requirements. Therefore, the NEMA Power Switchgear Assemblies Technical Committee prepared new proposals for C37.20.1, 20.2, and 20.3. C37.20.1 was prepared by LV representatives and 20.2 by MV representatives and they were approved by the overall NEMA PSA representation for submittal to IEEE for their approval and C37 publication. It became evident early on and has continued to this day, that MV interests have attempted to make 20.1 similar in detailed wording to 20.2. I'm not implying that there has been any malicious intent by MV interests, only that it is the natural progression due to MV's greater representation and belief that the two documents should be very similar. The recent consequence of this has been the addition of LV G&T's to C37.59 and LV Bus in C37.23 being tested to MV procedures rather than LV procedures. Ted has covered these situations very well in the minutes of the SC meetings. I will not go into greater detail here except to say that when LV representatives began to fully understand the ramifications of LV G&T's being in 59, the LV Devices SC has now recommended that LV G&T's be considered for deletion during the next revision of 59.

It also is relevant that IEC Standards are organized in this manner. IEC SC17B and SC17D for LV devices and assemblies are totally independent of MV & HV SC17A and SC17C. They all report in a parallel manner to TC17. This prevents any of the problems we have experienced as indicated above. The WG for 100.1 is primarily concerned with MV & HV requirements similar to IEC Pub. 694. If LV Assemblies stay in the Switchgear Assemblies SC, it will be inevitable that some of these MV common clauses will creep into LV Assemblies. By having LV assemblies in the same SC as the devices, we are assured of proper coordination and the use of appropriate common clauses for LV switchgear devices and assemblies.

I strongly believe that LV and MV equipment standards should not be in a common standard. However, I would not recommend any immediate effort to split C37.23, 81, and 82. It would be logical to remove LV Ducts from 23 during the next revision of 23. The LV Ducts could either be added to 20.1 or have a separate document if justifiable. C37.81 and 82 tend to be generic documents that can be applied to any type of assembly, therefore splitting these documents is not cost effective. However if WG's are ever established to update them, the WG's should have co-chairs from LV & MV to ensure that both interests are properly reflected in the documents.

C37.121 is an unusual situation. What puzzles me is that I cannot remember that our PSA TC ever worked on this document. Maybe we gave it a cursory review, but I have a strong suspicion that this document was an editorial effort by the NEMA staff to combine NEMA Publications 201 and 210 with the HVACC proposal for certification of articulated unit substations. The HVACC proposal was one of the early efforts by the original HVACC committee chaired by J. W. McMillen who was succeeded by Herman Wortman and later by Ron Shores. The preparations of C37.50, 51, 54, 55, etc. were done by the appropriate product WG's. This is also evident by C37.55 being listed out of sequence as the first referenced standard and C37.50, 51, etc. not being listed at all. I wonder why NEMA did not retain this standard with the other certification documents since the forward states that all suggestions for improvements should be sent to NEMA. It appears that NEMA may have forwarded this standard to IEEE in error.

So far as splitting C37.121 is concerned, I personally favor separate standards for secondary (LV) and primary (MV) substations. It is evident that the standard needs updating. Whenever this is initiated, the decision can then be made on which way to go, separate or one document. However, the first question that should be reviewed is, who really has responsibility for this standard?

I encourage both SC's to give my proposal serious consideration. It is something that I have been thinking of for a long time. It is almost a given that the Devices SC will be in favor of the transfer of 20.1. It will be more of a problem for the Assemblies SC due to the long history of LV assemblies being in the Assemblies SC. This I fully understand, but I believe that if the Assemblies SC can put this behind them, they will also agree at the end of the day, that it is the proper thing to do. As many of you know, I will not be attending future meetings, but I will continue to ballot and comment on standards of interest. I look forward to learning of your decision.

Sincerely,

Stan Telander