

IEEE 383 Standard for Qualifying Electric Cables and Splices for Nuclear Facilities Review

SC-2 October 27, 2014

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Schedule

- NPEC Did Not Approve In July
- Issue Is Changing Safety Related To Class 1E
 - Same Per IEEE 323-2003, But Decided To Form A Committee To Review
 - In Future May Be Changed To Important To Safety But Can Do Next Time
- Preview Again in January
- MEC Already Done
- Ballot Pool End of January

Schedule

- Ballot By March
- Re-ballot As Required
- Hopeful Complete By Mid 2015
- White Paper
 - Look At Central Desktop
 - Will Have Web Meetings if Required
 - Hopeful Complete By 3rd Quarter 2015
- Late 2015 Start Discussions on Revision
- Early 2016 PAR For Revision

Initial NPEC Preview

- Initial Preview Was Done in July 2014
- No Comments Were Reviewed Prior To Meeting
- Issue on Class 1E Change to Safety Related
- Will Not Repeat Previous Presentation Material
- Second Preview Being Done
- Comments From Second Preview Will Be Reviewed
- Changes From MEC Will Be Reviewed

Safety Related to Class 1E

- Safety Related was Change Back To Class 1E
- Aware of Group To Harmonize Terms
- Can Change in Next Revision If Required

NPEC Comments

- Paragraph 6.1.1, 2nd paragraph (p.9) and Paragraph 8, 1st paragraph (p.21) indicate that jacket color is quite important. The reason is not obvious to the non-cable person and some explanation probably should be included so that the reader is not distracted

Response on Jacket Color

- Jacket color may be important in some cases and has to do with what is added to color the insulation or jacket. As an example, for a LSZH material the added non-flame retardant binder in the color chips may be enough to make a cable fail the test. This is known in the cable industry. IEEE 383 is not a tutorial document so explanatory text on every requirement is not appropriate, but after a revision is made a white paper is required by SC-2. In this document we will provide the reason for the addition of all the new requirements.

NPEC Comments

- 6.4.3 - “subcause” probably meant “subclause”
 - Yes this is a typo and will be corrected
- Line 17 on p14 – add space after VW-1
 - Yes this is a typo and will be corrected

Voltage Stress

- It appears that the typical stress voltage for a low voltage cable is around 10 000 V, but the cable will function at 10% of that. I assume that a stress test result showing capability far below the published value is a degraded condition that would disqualify the cable even if it met the system requirement. However, it was not immediately clear to me from this paragraph what the course of action would be in such a case.

Response

- Assume this is in reference to section 6.1.1 on type test samples.
- This section is to help determine what samples are representative.
- For normal service the cable is designed to Industry Standards that determine the normal stress.
- The highest stress level may be qualified for a DBE to qualify lower levels.
- Note a voltage withstand above the operating value is tested at the end. If the cable does not pass it is not qualified.

Flame Test

- Many plants have the 383-1975 that includes the flame test. Since 2002, we have referred out to 1202. Of course I don't know 1202 well enough to say it is equal or better than what was in the original standard, but the problem arises that cable manufacturers don't qualify to 40 year old standards. So it would be helpful to have something that tells me that we consider 1202 to be a worthy replacement for the original flame test requirements in 383. I also wondered about the statement that different colors needed to be considered separately, and whether that would be a burden to plants that have a whole rainbow of colors in use.

Response

- It is generally considered that IEEE 1202 is more severe than the original IEEE 383 tray test.
- Note, many plants specified flame tests that were more severe than the original IEEE 383 tray test.
- The vast majority of plants use black jackets so I do not see testing of colors as a major issue.

MEC

- No copyright Issues Found
- Legal Absolute Language Appears To Same As 2003 Version
- No Trademark or Service Mark Issues
- No Registration Objects
- Normative References Have Dates – This Was Discussed Previously and Decided to Keep
 - Text Is Based on These Revisions and If Change Should Revise IEEE 383

MEC

- Annex B is the same title as clause 10. It is suggested one is changed so they are not the same.
 - Annex B will be changed to Additional Information on Modifications.
- Delete IEEE 100 in Bibliography Since Now Online
- Separate figures to be provide if applicable
 - No separate figures

Vote

- Call For Vote To Move Forward With Editorial Changes As Noted

Questions