

Date 2005-11-23	Document PC57.131 – Draft 1 September 27, 2005
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Com- ment Num	Voting Member	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/ Editorial)	COMMENTS	Proposed change	Observations of Working Group on each comment submitted
1	Traub	3.36		General	The term “reversing change-over selector” does not exist in C57.12.80.	Change this term to “change-over selector” to agree with C57.12.80 and with IEC-214. Also, add <i>Syn</i> : Reversing switch.	<ol style="list-style-type: none"> 1. The term “change-over selector” is already defined in C57.131/D1.0 in 3.5. 2. The term “reversing change-over selector” is found in IEC 60214 in clause 3.8. 3. We are coordinating with Tim Raymond on C57.12.80 terminology 4. Synonym was added to draft for definition in 3.36, Reversing change-over selector <i>Syn</i>: Reversing switch .
2	Traub	3.38		General	The definitions for both “diverter switch” and “selector switch” have <i>Syn</i> : arcing switch	Change the <i>Syn</i> : for selector switch to “arcing tap switch”	The proposed change was made to the draft. (See Comment # 14.)
3	Traub	4.3		General	“This means” in the second sentence does not apply to the operation of the LTC	Change to “In addition, LTCs (OLTCS) shall be fully capable of operation under these conditions”.	The proposed change was made to the draft.
4	Traub	5.2.1	Note 2	General	The word “should” should not be used in a standard	Change last part of Note 2 to: “shall be stated in the test report”.	The proposed change was made to the draft.
5	Traub	5.2.4.1	Paragraph 4	Editorial	Typo in second line	“insulated” should be “insulation”	The proposed change was made to the draft. (See Comment # 15.)
6	Traub	7.2.2	Paragraph 1	General	The term “maximum rated through-current is referred to, but this term is not defined for a DETC.	Change the term to “rated through-current” (see 7.1.1a)	“Maximum rated through-current” is defined for all tap changers in 3.24 of the draft.
7	Traub	7.2.3	Figure 3	Technical	Figure 3 is missing	Add Figure 3 to the document	All of the figures and annex tables will be included in the next version.

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8	Alan Darwin	5.2.1	3 rd paragraph on page 11	Technical	With reference to the sentence “ <i>When the surrounding medium is liquid, temperature rise tests shall be performed at ambient temperature.</i> ” Which ambient temperature is to be used? The laboratory air temperature, or the maximum liquid temperature of say 100 °C, or what? The absolute temperature could have an influence on the loss in the contacts as well as on the cooling performance into the liquid.	Clarify which ambient temperature is to be used. If laboratory air temperature, then state this. If not, then identify the correct liquid ambient temperature to use for the test.	The draft was modified to read, “When the surrounding medium is liquid, temperature rise tests shall be performed at normal room temperature. All temperature rise tests shall be performed in a location where the ambient air temperature is stable and is as free from drafts as possible.”
9	Alan Darwin	7.2.2	3 rd Paragraph on page 24	Technical	With reference to the sentence “ <i>When the surrounding medium is liquid, temperature rise tests shall be performed at ambient temperature.</i> ” Which ambient temperature is to be used? The laboratory air temperature, or the maximum liquid temperature of say 100 °C, or what? The absolute temperature could have an influence on the loss in the contacts as well as on the cooling performance into the liquid.	Clarify which ambient temperature is to be used. If laboratory air temperature, then state this. If not, then identify the correct liquid ambient temperature to use for the test.	The draft was modified to read, “When the surrounding medium is liquid, temperature rise tests shall be performed at normal room temperature. All temperature rise tests shall be performed in a location where the ambient air temperature is stable and is as free from drafts as possible.”
10	Alan Darwin	5.2.3	Figure 1 (p14)	Editorial	Figure 1 is missing	Insert figure 1	All of the figures and annex tables will be included in the next version.
11	Alan Darwin	5.2.6.9	Figure 2 (p20)	Editorial	Figure 2 is missing	Insert figure 2	All of the figures and annex tables will be included in the next version.
12	Alan Darwin	7.2.3	Figure 3 (p25)	Editorial	Figure 3 is missing	Insert figure 3	All of the figures and annex tables will be included in the next version.
13	Alan Darwin	Annex A, A.2	Table A.1 (p19)	Editorial	In the column “Switched current”, two of the entries have E/F+1 instead of E/R+1	Correct to E/R+1	The proposed change was made to the draft.
14	Dohnal Kraemer	3.38	3 rd line	T	The synonym for “selector swith” is “arcing tap switch!	Exchange arcing switch with arcing tap switch	The proposed change was made to the draft. (See Comment # 2.)
15	Dohnal Kraemer	5.2.4.1	4 th para, 2 nd line	E	typing error	Exchange “...gas insulated used...” with “...gas insulation used...”	The proposed change was made to the draft. (See Comment # 5.)

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16	Dohnal Kraemer	5.2.5.1	4 th para, 3 rd line	E	must be read: "The operation of the diverter switch..."	insert of between "operation" and "the diverter switch"	The proposed change was made to the draft.
17	Dohnal Kraemer	7.2.5.3		T	Listing e) from 5.2.6.3 Nature of test (of LTCs) is not applicable to DETCs. Exchange listing e) with that from IEC 60214-1	Exchange the wording in listing e) from "e) Test 5: between diverter switch contacts in their final open position " to "e) Test 5: any distance, that due to the contact configuration will have a higher stress than the ones tested above "	The proposed change was made to the draft.
18	Dohnal Kraemer V. Sankar T.V. Sridhar	Annex B	Table B.3, 23 rd line, 4 th column	T	The switched current is determined by the addition of the two terms	Exchange " $1/2I - E_T/Z$ " with " $1/2 I + E_T / Z$ "	The proposed change was made to the draft.
19	Dohnal Kraemer	Annex C	3 rd definition below the 1 st equation	T	Use the same definition for the coefficient k as in IEC 60214-1, because it is more detailed	Exchange "... of the resistor, the value selected to be between 5 and 10, bearing in mind that the heating phenomena shall remain adiabatic" with "...of the resistor, the value adopted should be below 5. Values between 5 and 10 shall only be used if the heating phenomena remains to be adiabatic."	The draft was modified to read, "...of the resistor, the value adopted should be below 5. Values between 5 and 10 shall only be used if the heating phenomena remain adiabatic."
20	Dohnal Kraemer	Annex F	[B1]	E	Use the actual version of the IEC tap-changer standard	Exchange "IEC 214 (1989), On-load tap-changers" with "IEC 60214-1 (2003), Tap-changers – Part 1: Performance requirements and test methods"	The proposed change was made to the draft.

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21	Phil Hopkinson	7.2.2	1	Technical	Temperature rise limits	Replace temperature rise limit with requirement for successful passing of Functional Life Test, wherein 2 times normal current is passed through contacts for 8 hours on in 130 C oil with 16 hours off. Success is determined by requirement that 30 replications of the test does not result in >25% resistance change and the contacts remain stable.	In discussion at the WG Meeting on 2006-03-20, the decision was made to defer this topic until the TF on Functional Life Tests, De-energized Tap Changers completes its work.
22	Phil Hopkinson					Ment that 30 replications of the test do not result in >25% resistance change, and contacts are stable. Note that this could be an added test beyond the 15 C rise limits or could replace the temperature rise test.	In discussion at the WG Meeting on 2006-03-20, the decision was made to defer this topic until the TF on Functional Life Tests, De-energized Tap Changers completes its work.
23	Les Recksiedler				Separate vessel Oil filled diverter conservator tank	Add a section on the Conservator tank. At laets 12 % volume of diverter vessel. Located separate and at a lower elevation from the main tank conservator so any leakge of oil does not get into the main tank to contaminate it and maks any DBA analysis.	The following was added to the draft: "5.1.3 Liquid-filled compartments for diverter and selector switches. The liquid-filled compartments for diverter and selector switches shall be liquid-tight. Where appropriate, pressure and vacuum withstand values shall be declared by the manufacturer. If the transformer oil is to be supervised by a gas-in-oil analysis and if a conservator is provided for the liquid-filled compartment of the diverter or selector switch, this conservator shall be located at a lower elevation than the main tank conservator to mitigate cross contamination with the main tank."

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24	Les Recksiedl er				Pressure Relief device on spereate vessel oil filled diverter.	Add a section for a Pressure Relief Device to prevent rupture of the oil vessel. Also high enough setting so as to not operate for "normal" operation.	The following was added to the draft: "5.1.4 Safety requirements for protection against increase in pressure." (See the revised draft, PC57.131/D1.1 for the exact text)