Table 4 - Dielectric Insulation levels for all windings of Class II, and Class I when partial discharge testing is required, power transformers, voltages in kV

Maximum system voltage (kV rms)	Nominal system[a] voltage (kV rms)	Applied voltage test[g] (kV rms)			Induced voltage test[b,c] (phase to ground) (kV rms)		Winding line-end BIL[d] (kV crest)				Neutral BIL[e,g] (kV Crest)	
		Delta and fully Insulated wye	Grounded wye	Impedance grounded wye or grounded wye with higher BIL	Enhanced 7200 cycles	One hour	Mini-mum	Alternates			Grounded wye	Impedance grounded wye or grounded wye with higher BIL
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13
Class I power transformes with partial discharge testing												
1.5	1.2	10	10	10	1.3	1.1	**30**				45	45
3.5	2.5	15	15	15	2.6	2.3	**45**				60	60
6.9	5	19	19	19	5.2	4.6	**60**				75	75
11	8.7	26	26	26	9	7.9	**75**				95	95
17	15	34	34	34	16	14	**110**				110	110
26	25	50	34	40	26	23	**150**				110	125
36	34.5	70	34	50	36	32	**200**				110	150
48	46	95	34	70	48	42	200	**250**			110	200
73	69	140	34	95	72	63	250	**350**			110	250
121	115	173	34	95	120	105	350	**450**	550		110	250
Class II power transformers												
<=17	<=15	34	34	34	16	14	**110**				110	110
26	25	50	34	40	26	23	**150**				110	125
36	34.5	70	34	50	36	32	**200**				110	150
48	46	95	34	70	48	42	200	**250**			110	200
73	69	140	34	95	72	63	250	**350**			110	250
121	115	173	34	95	120	105	350	**450**	550		110	250
145	138	207	34	95	145	125	450	**550**	650		110	250
169	161	242	34	140	170	145	550	**650**	750	825	110	350
242	230	345	34	140	240	210	650	**750**	**825**	**900**	110	350
362	345	518	34	140	360	315	900	1050	1175		110	350
550	500	N/A	34	140	550[f]	475[f]	1425	1550	1675		110	350
765	735	N/A	34	140	880[f]	750[f]	1950[f]	2050			110	350
800	765	N/A	34	140	885[f]	795[f]	1950[f]	2050			110	350

[a]For nominal system voltage greater than maximum system voltage, use the next higher voltage class for applied test levels.

[b]Induced voltage tests shall be conduced at 1.58 x nominal system voltage for one hour and 1.8 x nominal system voltage for enhanced 7200 cycle test.

[c]Column 6 and Column 7 provide phse-to-ground test levels that would normall be applicable to wye windings. When the test voltage level is to be measured phase-to-phase (as is normally the case with delta windings), the levels in Column 6 and Column 7 must be multiplied by 1.732 to obtain the required phase-to-phase induced-voltage test level.

[d]Bold typeface BILs are the most commonly used standard levels

[e]Y-Y connected transformers using comm on solidly grounded neutral mayuse neujtral BIL selected in accordance with the l-voltage winding rating.

[f]For 500 kV to 765 kV nominal system voltages, induced voltage test levels do n ot follow rules in footnote b, and 1950 kV BIL is not a standard IEEE level.

[g]If user specifies a different BIL for the neutral than indicated above, the applied test voltage shall also be specified.