NOMENCLATURES

b	-	atmospheric pressure during test in millibar
b_o	-	standard reference atmospheric pressure (1013 millibar)
C_1, C_b	-	test object capacitance
C_2	-	supporting capacitance
C_3	-	additional capacitance connected in the bias circuit for the protection of transformer
C	-	capacitance
C_{cvd}	-	divider capacitance
C_f	-	total capacitive load connected to the impulse voltage terminal
C_l	-	total load capacitance at the power frequency terminal
C_t	-	transformer capacitance
d, D	-	gap spacing
f_e	-	transient frequency
H	-	absolute humidity gm. m^{-3}
H_o	-	Standard reference humidity $gm.m^{-3}$
K_d	-	air density correction factor
K_h	-	humidity correction factor
K-ohms	-	kilo ohms
kV	-	kilo volts
kV_p	-	peak value of voltage in kilo volts
K	-	humidity correction coefficient
L	-	inductance
m, n, w	-	exponent (constant)

pF - pico-farad

R - damping resistance

t - atmospheric temperature (°C) under test conditions

t_o - standard reference atmospheric temperature(°C)

U^- - peak value of negative voltage

U^+ - peak value of positive voltage

ΔU - change/difference in voltage U

U_A - voltage at terminal A

U_B - voltage at terminal B

U - rated system voltage

U_{50} - 50% discharge voltage (critical flashover voltage)

U^*_{50} - 50% discharge voltage of the test object when supporting capacitor C_2 as connected.

U_{50_p} - 50% discharge voltage to be evaluated in the standard atmospheric conditions

U_{50A} - 50% discharge voltage with capacitance C_3

U_{50B} - 50% discharge voltage without capacitance C_3

U^-_{AC} - peak value of AC 50 Hz voltage

U_{SI} - Switching impulse voltage

$(U^+_{SI}+U^-_{AC})_{50}$ - total 50% discharge voltage

$(U_{SI})_{50}$ - 50% switching impulse discharge voltage

ΔU_A - difference in voltage U_A

ΔU_B - difference in voltage U_B

ΔU_{AC}	-	distortion of the power frequency voltage
ΔU_{SI}	-	pre-existing AC voltage on impulse terminal
u^{-}_{AC}	-	instantaneous value of AC voltage
U^{+}_{I}	-	positive impulse voltage
α	-	$U^{-}/(U^{+}+U^{-})$ $\left[\text{also} = U^{-}_{AC}/U^{+}_{SI} + U^{-}_{AC}\right]$
σ	-	standard deviation sigma
δ	-	relative air density
σ_o	-	true value of standard deviation
μs	-	micro seconds
μF	-	micro farads
mS	-	Milliseconds
T_{cr}	-	time-to-crest (μs)
$T_{cr-crit}$	-	critical time-to-crest
Δt, Δt_{cr}	-	difference in time to peaks

ABBREVIATION

LI	-	Lightning impulse
SI	-	Switching impulse
BIL	-	Basic impulse level
IEC	-	International Electrotechnical Commission
IEEE	-	The Institute of Electrical and Electronics Engineers, Inc.