



VOLTAGE TRANSFORMERS & COUPLING CAPACITOR VOLTAGE TRANSFORMER COMPARISON

Voltage Transformer	Coupling Capacitor Voltage Transformer
(1) IEEE defined and “Precision Plus” accuracies achievable. Accuracy depends on turns ratio only	IEEE defined and “Precision Plus” accuracies achievable. Accuracy depends on: (a) Capacitor voltage divider (b) Reactance (c) Turns ratio of intermediate voltage transformer
(2) Accuracy not sensitive to system frequency variation	Accuracy adversely affected by system frequency change
(3) Suitable for line discharge	No line discharge capability
(4) Excellent transient response under system faults	Inferior transient response under system faults
(5) System ferro-resonance is a concern	Ferro-resonance is localized in the secondary circuit
(6) No PLC coupling capability	Suitable for PLC coupling
(7) Capable to be used for station service	Limited thermal burden depending on protective gap settings
(8) Limited ground potential rise during disconnect operation	Ground potential rise depending on capacitance
(9) Tested at lower insulation levels	Tested at higher insulation levels
(10) No impact on station insulation as capacitance is very low.	Because of capacitance, the insulation withstand of station is improved.