

ELECTRICAL MACHINES TESTING

POWER TRANSFORMER testing:

Dissipation factor/ Power Factor/ Tan Delta and Capacitance of windings and bushings with frequency sweep and voltage sweep “tip-up”.
Winding Resistance.
Turn Ratio.
Exciting current.
Short circuit impedance.
Demagnetization.
Dielectric frequency response analysis/DFRA/frequency dielectric spectroscopy/FDS.
Frequency Response Analysis/ SFRA.
Current transformers analysis.
Insulation Resistance / Polarized Index.
Partial discharge analysis on-line and off-line.

MOTOR / ALTERNATOR testing:

Dissipation factor/ Power Factor/Tan Delta and Capacitance of windings with voltage sweep “tip-up”.
Insulation Resistance / Polarized Index / Polarization Depolarization Current Analysis/EDA.
Dielectric frequency response analysis / DFRA /frequency dielectric spectroscopy /FDS.
Partial discharge analysis on-line and off-line.
Detection, pinpoint, and document of flash-arc corona and arcing partial discharge with camera UV.
Dielectric withstand test / Hi-pot.
Winding Resistance.
Impulse winding test.
Frequency Response Analysis/ SFRA.
Electromagnetic imperfection testing / CID.
Pole drop testing.
Insulation Resistance / Polarized Index.

SURGE ARRESTER testing:

Watt losses and total current.

INSTRUMENT TRANSFORMERS:

CURRENT TRANSFORMER testing:

Dissipation factor/ Power Factor/ Tan Delta and Capacitance of windings with frequency sweep and voltage sweep “tip-up”.
Dielectric frequency response analysis / DFRA /frequency dielectric spectroscopy / FDS.
Partial discharge analysis.
Polarity check.
Ratio and phase accuracy.
Winding resistance.
Excitation characteristics (knee points).
Composite error (ALF, ALFi, FS, FS_i, V_b).
Burden impedance.
Transient CT classes and parameters (TPS, TPX, TPY and TPZ type CTs).
Transient dimensioning factor (K_{td}).
Burden.
Remanence and residual magnetism.

VOLTAGE TRANSFORMER testing:

Dissipation factor/ Power Factor/ Tan Delta and Capacitance of windings with frequency sweep and voltage sweep “tip-up”.
Dielectric frequency response analysis / DFRA /frequency dielectric spectroscopy / FDS.
Partial discharge analysis.
Ratio and phase accuracy.
Polarity check.
Winding resistance.
Burden.

CIRCUIT BREAKER testing:

Operation timing and contacts synchronism.
Motion / Contact travel: over-travel, total travel, rebound, damping time, contact wipe, ...
Coil current.
Static contact resistance.
Insulation resistance.
The SF₆ gas quality: volume percentage, moisture concentration, SO₂ concentration, HF concentration, H₂S concentration and CO concentration.