

Scope of Work – Cast Resin Transformer

Inspection & Cleaning of Transformers and Enclosures

- Carry out a comprehensive visual inspection of transformers, associated equipment, and enclosure structures.
- Remove dust, dirt, debris, and contamination from accessible surfaces to maintain safe operation and improve cooling efficiency.
- Inspect transformer tanks, radiators, bushings, seals, and enclosure integrity for signs of damage, corrosion, oil leaks, or environmental ingress.
- Verify that ventilation systems and access points remain unobstructed and in good condition.

Verification of HV and LV Connections

- Inspect all High Voltage (HV) and Low Voltage (LV) terminations for security, condition, and compliance with manufacturer recommendations.
- Check cable glands, busbar connections, and earthing arrangements for signs of deterioration or mechanical stress.
- Identify any loose, damaged, or discoloured connections that could impact system reliability.
- Confirm that connection points remain suitable for the operational load requirements.

Checks for Signs of Electrical Discharge and Overheating

- Inspect transformers and associated switchgear for evidence of partial discharge, arcing, tracking, or insulation degradation.
- Examine components for hotspots, discolouration, burning, carbon deposits, or unusual odours indicative of overheating.
- Review condition indicators and visible components for early warning signs of equipment failure.
- Record and report any defects requiring further investigation or remedial action.

Inspection of Temperature Monitoring Systems

- Verify the operation and condition of transformer temperature gauges, sensors, alarms, and monitoring devices.
- Check that temperature readings are within expected operating parameters.
- Inspect associated wiring, communication links, and display units for signs of damage or malfunction.
- Confirm alarm and trip settings are correctly configured where applicable, ensuring continued protection of critical assets.

Deliverables

- Detailed inspection report with photographic evidence.
- Summary of findings, observations, and asset condition.
- Prioritised recommendations for corrective actions or further investigation.
- Maintenance records updated to support compliance and asset management requirements.

SAT Testing

- Insulation resistance of windings – 5KV Megger
- HV - Earth 5KV
- LV - Earth 1000V
- HV- LV 5KV
- Resistance of windings - Ductor test low ohms
- Ratio winding test – ratiometer
- Continuity check of all ancillary wiring