

POWER TRANSFORMER



Testing of auxiliary and power transformers is a critical aspect of ensuring the reliable and safe operation of electrical systems. Transformers are fundamental components in power distribution and electrical infrastructure, and they play a key role in voltage transformation and distribution. Proper testing helps identify potential issues, ensure efficiency, and extend the service life of these transformers. Here are the key aspects of auxiliary and power transformer testing:

Transformer Turns Ratio Test: This test determines the turns ratio of the transformer, ensuring that it meets design specifications. Any deviation from the specified ratio can indicate issues with the windings or core.



Functional Testing: Functional testing involves assessing the operational functionality of electrical systems and equipment. Technicians test various components, such as switches, circuit breakers, relays, and control systems, to ensure they function as intended.

Safety Testing: Ensuring electrical safety is a top priority. Electrical testing services assess safety measures, such as ground fault protection, overcurrent protection, and emergency shutdown systems to minimize electrical hazards.

Voltage and Current Measurements: Testing includes measuring voltage, current, and resistance levels at different points in the electrical system to verify proper performance and adherence to standards.

Continuity Testing: Continuity testing assesses the electrical path in circuits to ensure there are no interruptions or faults that could disrupt the flow of electricity.

Insulation Resistance Testing: Insulation resistance testing measures the resistance of insulation materials, such as wires and cables, to verify their ability to prevent electrical leakage and shorts.





Circuit Breaker Testing: Circuit breakers are tested for performance, including proper tripping and resetting, to ensure they respond correctly to overloads or faults.

Relay Testing: Relays and protective devices are assessed for accurate operation in protecting electrical systems from faults and overloads.

Power Quality Testing: Power quality testing evaluates the quality of the electrical supply, including voltage regulation, harmonics, and waveform distortions, to ensure stable and reliable power.

Load Testing: Load testing verifies that electrical systems and equipment can handle their rated loads without overheating or malfunctioning.

Verification of Compliance: Testing and commissioning services confirm that electrical systems comply with relevant industry standards, codes, and regulations, including local, national, and international requirements.

Transformer Testing

- ✓ Transformer Turns Ratio Test
- ✓ Insulation Resistance Test
- ✓ Winding Resistance Test
- ✓ Polarity and Phase Relation Test
- ✓ Excitation Current Test
- ✓ Transformer Oil Testing



- ✓ **Dissolved Gas Analysis (DGA)**
- ✓ **Load Tap Changer (LTC) Operation Test**
- ✓ **Sweep Frequency Response Analysis**
- ✓ **Short-Circuit Impedance Test**
- ✓ **No-Load and Load Loss Test**
- ✓ **Inrush Current Test**

