

Approaches to Electrical Equipment Maintenance:

Depending on the process, operating environment or age of equipment, companies may adopt one or more of the following maintenance strategies:

Reactive Maintenance:

- → Repair work conducted after a failure or breakdown, often completed as an emergency.
- →The most costly of all maintenance strategies.

Preventive Maintenance:

- →Routinely performed maintenance, regardless of the condition of the equipment. > May be unnecessary, based upon the equipment's condition.
- →Specified list of inspections, cleaning, testing and part replacement.
- →Less expensive than reactive maintenance, but more costly than predictive maintenance.

Predictive Maintenance or Periodic Diagnosis:

- →Scheduled based on diagnostic evaluations. > Factors such as equipment age, environmental stresses, criticality of equipment, utilization, etc. affect decisions concerning maintenance schedule.
- → Provides significant reduction in equipment-related incidents.
- **→**Least expensive maintenance strategy.

An efficient maintenance strategy will identify the type and amount of maintenance to be performed as well as the frequency for maintenance activities to be carried out on each piece of electrical distribution equipment.

What is Predictive Maintenance?

Predictive maintenance technologies enable companies to perform an effective amount of maintenance at an appropriate or practical time. Often referred to as condition-based maintenance, predictive maintenance tools monitor the condition of in-service equipment, either continuously (online) or at periodic intervals. Disruptions to facility operations can be reduced, since many predictive maintenance technologies are performed on in-service equipment. Having regular access to the current state of the equipment provides valuable information to determine when maintenance should be performed. From a cost-effective standpoint, it should take place before the equipment loses optimum performance.

Conditions that can be monitored in electrical equipment include:

- **→**Transformer >Temperature, SF6, insulation breakdown.
- → Tap Changer > Operating time.
- →Circuit Breaker >Opening, closing time, available magnitudes of I2t energy.
- →Switchgear >Temperature of connections, insulation condition.
- → Motor >Starting time, number of operations, power, insulation breakdown.
- → Cable Connections > Insulation breakdown.

PowerConsultancy is fully geared to assist you in overcoming problems of any nature that you may encounter with your power systems.

On-Load Tap-Changer.

Up to 50% of catastrophic transformer failures are related to damaged On-Load Tap-Changers.

51%-On-Load Tap-Changer.

17%-Windings.

14%-Bushings.

09%-Connections.

06%-Other.

03%-Mechanical.

PowerConsultancy has the ability and expertise to service and repair all makes of On-Load Tap-Changers.

We can perform a condition assessment of your OLTCs to determine what's wrong or what can be done to increase its reliability and residual life. This process can help to prevent its premature failure and resultant damages.

To keep your OLTCs operating properly, PowerConsultancy can make extensive condition evaluations, diagnose faults and carry out necessary repairs or adjustments.

All our technicians were formerly in the employment of reputed On-Load Tap-Changer manufacturers. This will ensure that your assets will be handled by people who've extensive exposure to the product.



