

Electrical Condition Management

For extended life time of the equipment



Electrical condition management performed both online during operation and offline during outages extends the life time of the equipment and guarantees its performance.

The condition of the electrical isolation system is the most important factor as to the life time of equipment. The condition of the conductors is essential (cracks, loose connections or too high contact resistance) for the core.

With proper measuring techniques, defaults can be predicted. Measurements are performed on-line during operation or off-line during outages.

On-line measurements for generators

- Partial discharge measurement to determine condition of the insulation system of stator winding
- Shaft voltage analysis to determine condition of rotor winding and excitation system
- Grounding shaft voltage and current analysis to determine harmful leakage currents
- Rotor winding impedance vs rotation speed to determine condition of rotor winding

Condition monitoring for electrical motors

For high performance

The condition monitoring of electric motors, at power plants and industrial facilities, guarantees their performance in all conditions. Our condition monitoring concept covers several highly specialised monitoring methods starting from critical analysis, planning of condition management programme, commissioning measurement, condition audits, condition management outage test during operation.

Our concepts enable the execution of different condition monitoring action from routine check-ups to advanced special measurements both mechanical and electrical and failure analysis.

Condition monitoring for transformers

For lower risks and longer life

- We perform both mechanical and electrical condition monitoring of transformers for detecting and follow-up of failures and predicting the consequences and results.
- Our condition monitoring covers electrical wiring, core, coil and conductor, the solid paper isolation and isolation oils.
- The oil and paper isolation analysis are reliable and non-costly methods for condition monitoring of isolation, optimisation of maintenance and defect identification.

The regular condition monitoring analysis and optimised maintenance decrease the transformer failures and the risks for operation outages and increase the life cycle of transformers.

Key Benefits:

- Longer life of the equipment
- Guaranteed performance of the equipment
- Reduction of failures
- Lower risks for operation outages

For further information:

Svante Johansson, tel. +358 10 454 2729,
svante.johansson@fortum.com