

Press Release

Reliable stator core fault detection in rotating electrical machines

Together with its new **Stator Core Measurement Upgrade Option**, OMICRON's CPC 100 multi-functional electrical testing device can now perform reliable electromagnetic imperfection testing – also known as stray flux measurements – on the stator cores in rotating electrical machines. The test is performed to detect interlamination imperfections that can eventually cause overheating and damage of stator cores in motors and generators.

A complete offline testing solution

Using OMICRON's measurement solution, the stator core is energized with a small percentage of nominal flux and the stray flux on the surface is measured along the slots. The solution's measurement sensor automatically moves along a rail mounted on the inside of the stator core, which scans the surface below for possible defects. The solution's intuitive software enables users to generate on-site reports with a single mouse click.

Lamination shorts can damage the stator core

The stator core is made of thinly-stacked laminated steel segments, insulated from each other by a layer of varnish to minimize losses. If lamination shorts occur, a loop current can cause local hot spots, which can result in a partial melt down and expensive damage in the machine.

Reliable fault detection

Since faults cause imperfections in the magnetic circuit of the stator core, they can be easily detected by a measured increase of stray flux or a change in the phase. Faults can also be detected by comparing the measurement results of different stator core areas.

Regular verification

Stator core measurements should be performed on a regular basis to evaluate the insulation integrity between the stator core layers of a machine during factory


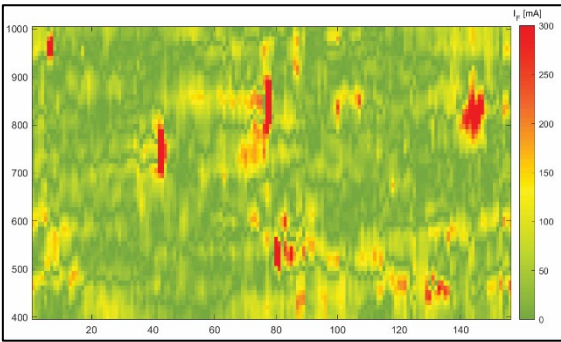
acceptance testing and commissioning, as well as after the machine has been put into service. The test results are compared with previous test results to verify stator condition.

OMICRON CPC 100 + Stator Core Measurement Upgrade Option

- > Semi-automatic scanning of the stator core
- > Measurement and excitation in one solution
- > Frequency-variable injection from 15 to 400 Hz
- > User-friendly work flow using Primary Test Manager (PTM) software
- > Automated reporting including results, graphs and heat map
- > Easily extendable excitation cable to meet specific measurement requirements
- > Multi-functional CPC 100 meets additional testing needs

More information is available at: [omicronenergy.com/stator-core-testing](https://www.omicronenergy.com/stator-core-testing)

Images

	
<p>During bigger maintenance shutdowns, the electro-magnetic imperfection test is performed off line with OMICRON's <i>CPC 100</i> multi-functional testing device and the <i>Stator Core Measurement Upgrade Option</i>.</p>	<p>Automated reporting including results, graphs and heat map – The solution's intuitive software enables users to generate on-site reports with a single mouse click.</p>

Company profile

OMICRON is an international company serving the electrical power industry with innovative testing and diagnostic solutions. The application of OMICRON products allows users to assess the condition of the primary and secondary equipment on their systems with complete confidence. Services offered in the areas of consulting, commissioning, testing, diagnosis and training make the product range complete.

Customers in more than 160 countries rely on the company's ability to supply leading edge technology of excellent quality. Service centers on all continents provide a broad base of knowledge and extraordinary customer support. All of this together with our strong network of sales partners is what has made our company a market leader in the electrical power industry.

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