The next generation in EL CID technology

Faster
Easier
Better
EL CID Evolution

Faster, Easier, Better...

STATOR CORE FAULT DETECTION
Electromagnetic Core Imperfection Detection (EL CID) Testing is accepted world-wide for reliable and safe detection of stator core inter-laminar faults (CIGRÉ, 2004). Since the May 2007 merger of ADWEL and IRIS Power the EL CID Evolution is now available from Iris Power.

Originally developed by the CEGB in England, the EL CID Evolution is the next generation of this reliable, easy to use, stator core test equipment. EL CID Evolution tests the condition of the stator core in less time and with lower cost than earlier EL CID models.

TEST RESULTS

Graphs of inter-laminar current vs. core length
Minor defects
Large fault signal
Multiple core traces
Single core trace and analysis
NEW AND IMPROVED FEATURES
- **Faster** test scanning (up to 120mm/sec @60Hz)
- **Easier** excitation calculations
- **Simpler** testing with dual Chattocks
- User-friendly LCD display to guide user operation
- Combine step-iron data with main core traces
- Easily identify “hot spots” via colour map display
- Fully compatible with existing data

RAPID TESTING BENEFITS
- EL CID provides a rapid test of the machine, often less than one shift for turbogenerators
- Only one technician is needed for operation, saving skilled resources and cost

**Hours and Personnel to Complete the Test**

- Typical labour reduce from 144-360 man-hours for a major turbogenerator ring flux test to just 8-10 man-hours for EL CID
- Rapidly set up to retest after any repair ensures quick turn around
- Minimize intrusive repairs by instantly verifying results

FEATURES
- Tests are repeatable
- Immediate test results are available for local analysis and email
- Determines if defects are on the surface, under conductors or sub-surface
- Tests with or without windings
- Better detects buried faults
- Partial and retests of core possible, with ability to merge results to obtain a complete picture of the core condition.
- Trending of previous results
- Excellent quality assurance test

SAFETY
- Uses only 120/230V power for excitation and operation
- Double insulation to minimize operator risks
- Low excitation flux level eliminates risk of further inter-lamination insulation damage (as might occur during ring flux heating of an un-cooled core)
EL CID operates at only 4% of normal operating flux, provided by its quickly installed excitation kit. Any imperfections in the core result in fault currents, which are detected by a Chattock sense head coil and analyzed by the EL CID signal-processing unit. Results are digitally stored in the PC for analysis and report generation, and faults can be precisely located in the core. Future results can be compared to past results for trend analysis.

The traditional stator core test method known as Ring-flux or Loop test uses near-full rated operating flux, which is potentially damaging to the uncooled machine and dangerous to operators, requiring large power cables, transformers and generators.

So why not reduce your test outage time and avoid the hazards of the stator core loop test with EL CID?

ENDORSEMENTS FROM EL CID USERS

EDF: “We’ve had the opportunity to test turbo and hydro generator magnetic cores. The ease of operation, the repeatability of results makes EL CID an interesting investigation tool for magnetic core condition monitoring.”

Florida Light and Power: “We have had great success with our Adwel EL CID. It detected a deep seated fault, below the winding, which would have led to a failure of the stator core. This fault was not immediately detected by a high power loop test.”

CIGRÉ Report 257, 2004: “There seems to be general consensus that if an EL CID test is performed and no damage is found, then the core is defect free. EL CID has gained good credibility in its ability to determine and locate the presence of faults and to verify repairs when faults are found.”