GRIP ®

GENERATOR SERVICES

To keep outage windows at a minimum, our generator service group is turn-key and field based, providing stator and rotor inspections and most repairs at the plant site. Some common repairs include:

- Stator re-wedging
- Rotor retaining ring removal / replacement
- Stator core repairs
- End winding repairs
- Rotor and Stator Rewind

GRIP® 1, 2, 3, ON-LINE, AND IN-SITU TESTING PROGRAMS

The GRIP® inspections are built around outage durations for typical turbine inspections; thus the generator never becomes the critical path of the outage unless an outage is planned specifically to address major maintenance on the generator

GRIP® 1:

This rotor-in inspection program is designed to fit in a 1-2 day turbine outage window.

- Visual and Borescope inspection of stator windings, rotor windings, associated blocking (as accessible), stator core step iron, and fingerplates
- Perform tests of Resistance Temperature Detectors (RTDs), stator windings, and rotor windings
- Stator Winding Tests: Insulation Resistance, Polarization Index and Copper Resistance
- Rotor Winding Tests: Insulation Resistance, Polarization Index, Copper Resistance and AC Impedance
- Exciter Inspection: Visual inspection and Insulation Resistance testing performed on many brands of generators.

GRIP® 2:

This rotor-in inspection program is designed to fit in a 3-4 day turbine outage window.

- All of the GRIP®1 tests and assessments, plus:
- Stator winding evaluations: Core Tightness Examination, Doble Power
- Factor and Tip-Up, corona Examination (as accessible), High Potential (DC Step Voltage, DC Ramp, etc.) and End Winding Stability examination (optional)

GRIP® 3:

This rotor-out inspection program is designed to fit in a major inspection turbine outage window.

- All of the GRIP®1 and GRIP®2 tests and assessments, plus:
- Additional Stator Winding Examinations: El CID core test, and Wedge Tightness Mapping
- Additional Rotor Winding Examination: Retaining Ring NDE Inspection (based on OEM requirements)

IN SITU-GRIP®:

This rotor-in inspection program is designed to fit in a major inspection turbine outage window.

- **Powered by the 3angles ARGIS** Advanced Robotic Generator Inspection System
- All of the GRIP®1 and GRIP®2 tests and assessments, plus:
- Additional Stator Winding Examinations: El CID core test, Wedge Tightness Mapping, and Borescopic Visual Inspection
- Additional Rotor Winding Examination: Borescopic Visual. Retaining Ring NDE Inspection (based on OEM requirements)

ONLINE-GRIP® 3:

This on-line inspection program is designed to fit those generators kitted with partial discharge couplers and a flux probe.

- Perform on-line partial discharge data acquisition utilizing an IRIS Power TGA-B™ PD analyzer
- Perform on-line rotor flux data acquisition utilizing an IRIS Power RFAII-R™ analyzerments)

BENEFITS

- Reveals pending faults in windings of the stator, rotor, and exciter
- Reveals aging and associated deterioration of all major generator components – stator windings, stator core iron, rotor, and exciter
- Establishes a baseline for evaluating future inspections and input for establishing planned major maintenance activities
- Written and digital documentation of critical generator components for planning future maintenance
- Essential documentation to establish a trend report to monitor future deterioration

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