

GENERATOR TECHNICAL SERVICES
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**Power Generation** 



Generator Technical Services is a full service generator company. We offer customers a "onestop" solution for generator disassembly, testing, inspection, repairs, and reassembly.

As a non-OEM, GTS provides our customers with a personal, cost-effective alternative to the complexity of our counterparts. The size of our company ensures increased accountability, and our manpower and flexibility allow us to mobilize to your site in a matter of days.

GTS services all brand generators including hydro generators.

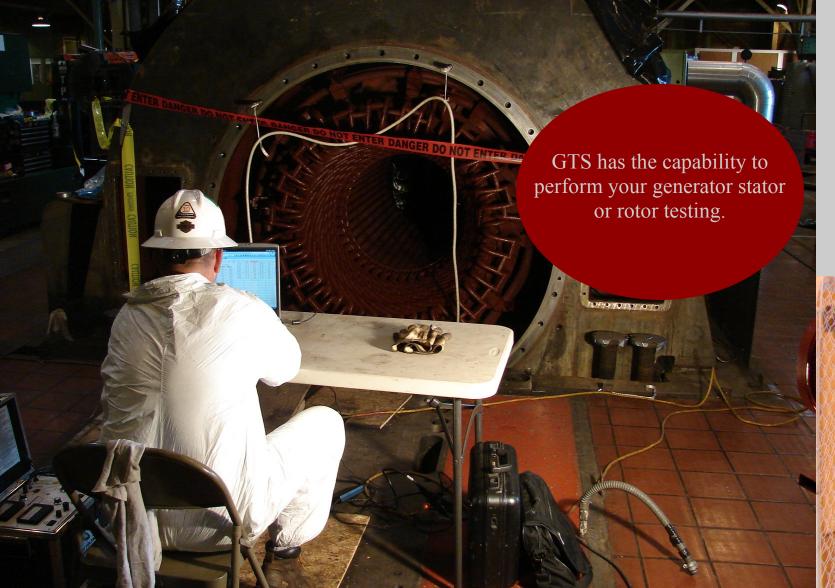




Our staff of trained generator technicians and specialists can provide in-depth visual inspections to help your company make intelligent informed decisions regarding current or future repair plans.

In addition, GTS offers state of the art electrical testing for generator stators ,rotors, and high voltage bushings. These test provide our test specialist with quality data that can be analyzed and compared to historical data. This comparison provides a depiction of the condition of the test specimen, which helps our customers plan future outages and repairs and avoid costly downtime.





# Industry Leading Generator Testing



## **STATOR TESTING**

#### **Electrical**

- Low Flux Core / Electromagnetic Core Imperfection Detection Test (EL-CID)
- DC Winding Resistance
- Insulation Resistance / Polarization Index
- Power Factor / Dissipation Factor
- DC Leakage and DC Over-Potential
- Resistance Temperature Detector (RTD) Accuracy and Insulation Resistance
- Through Bolt Insulation Resistance
- Transposition Testing
- Tube-to-Tube and Tube-to-Copper Test
- Offline Partial Discharge Monitoring

#### Mechanical

- Borescope Inspection
- Wedge Tightness and Deflection testing
- Coil Spacer Tightness
- Building & thru bolt breakaway torque checks
- End Winding Resonance / Bump Test

# **ROTOR TESTING**

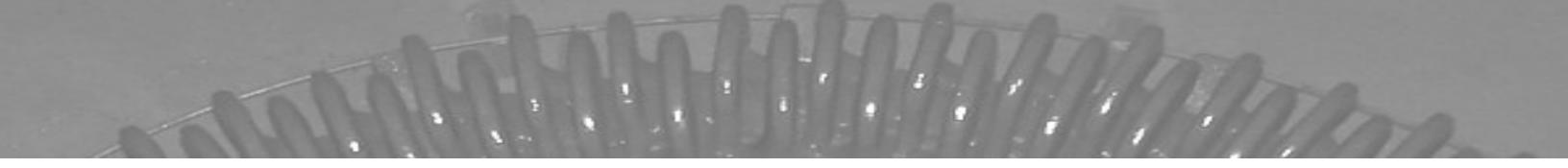
#### Electrical

- Winding Insulation Resistance
- Polarization Index
- AC/DC Over-Potential
- DC Winding Resistance
- Shorted Turn Detection
- AC impedance
- AC Pole Balance
- Recurrent Surge Oscilloscope (RSO) Testing
- Flux Probe Installation and Analysis

#### Mechanical

- Borescope Inspection
- Terminal Stud Seal Pressure Test
- Non-Destructive Evaluation Testing (NDE)—Rotor, Body and Rings
- Collector Ring Inspection

www.gentechservices.com Generator Technical Services, Inc.



## **STATOR SERVICES**

- Assembly and Disassembly
- Full and Partial Rewinds
- Core Iron Repair and Replacement
- Complete and Partial Rewedge and Radial Wedge Support System Upgrades
- High Voltage Bushing Installation and Refurbishment
- Core Tightening
- Coil Insulation Inspections and Repairs
- Installation/Repair of RTD's and Thermocouplers
- End Winding Support System Repair and Installation
- RTD Panel Manufacturing and Installation







# **ROTOR SERVICES**

- Complete and Partial Rewinds
- Coil Repair
- Disassembly and Assembly
- Repair Shorted Turns
- Retaining Ring Removal
- Collector Ring Replacement and Machining
- Manufacture of Coil and Main Lead Jumpers
- Replace Slot Liners
- Replace Inter-Turn Insulation
- Remove, Clean, and Inspect Wedges

## **EXCITER TESTING**

- Armature, Field, and Permanent Magnet Generator (PMG) Insulation Resistance
- Armature, Field, and PMG DC Winding Resistance
- Field Pole Balance
- Diode Wheel Fuse Testing, Current Leakage, and Forward / Reverse Resistance

## **EXCITER SERVICES**

- Visual Inspection
- Cleaning
- Banding Repair
- Wedge Removal, Installation, and Repair



# **HV Bushing Testing**

## Electrical

- DC Over Potential
- Power Factor / Dissipation Factor
- Hot Collar Testing

### Mechanical

- NDE Testing for cracked or damaged porcelain
- Leak-down Testing
- Air Flow Testing



# **HV Bushing Services**

- Removal and Installation
- Cleaning
- Gasket and Seal Replacement
- Replacement Porcelain
- On-site or Remote Rebuild

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