Large Turbo-Generator Maintenance

Extend the life of your turbo generator with WEG EM.
Large Turbo-Generator Maintenance

WEG EM provides 120 years of OEM experience combined with advanced diagnostics to provide a complete generator maintenance program.

Maximize the in-service life of your most-valuable equipment with a planned maintenance program developed by WEG Electric Machinery. Backed by a team of experienced engineers in Minneapolis, USA, our team will keep your generator running longer between major overhauls.

- End-Winding Dynamic Response “Bump” Testing
- ELCID Testing
- High Voltage Electrical Testing
- Non Destructive Testing
- Custom Tooling
- Rotor and Exciter Repairs
- Re-Wedge Re-Wind at Site

**Turbo Generator Preventative Maintenance**

**End-Winding Dynamic Response “Bump” Testing**
- End windings tend to loosen in-service and vibrate near the operating frequency
- Dynamic response testing provides real data to quantify end-turn condition
- WEG EM provides end-turn blocking repairs to OEM standards when required

**ELCID Testing**
- Electromagnetic Core Imperfection Detection Exam provides a detailed analysis of the core laminations
- Local defects may be detected and repaired early to prevent costly failures
- Recurring ELCID testing provides a powerful tool to determine remaining generator life

**High Voltage Electrical Testing**
- Verify the condition of stator and rotor insulation with precision electrical testing
- Polarity Index, Insulation Resistance, Step Voltage, and AC Hi-Potential Testing all Available to 35kV
- Impedance testing of rotor to locate turn-turn shorts
- Precision resistance measurements of stator and rotor
- Electrical testing of all auxiliary equipment standard

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WEG EM offers more than just maintenance; we combine experience and innovation to deliver consistency and reliability in every project.

**Non Destructive Testing**
- NDT testing to ASTM standards is available
- Mag-Particle, Fluorescent Penetrant, and Visible Dye methods are all available
- Precision measurements of journal and shaft seal areas
- Surface finish measurements and in-situ burnishing
- Shaft areas, blowers, retaining rings, couplings, and hubs should be tested at major overhauls.
- Small defects may be repaired and large defects analyzed by our experienced team of engineers to determine corrective action

**Custom Tooling**
- Custom-Tooling to lift and pull rotor
- Maintain and rotate rotor for ease of inspection and repair
- Eliminate expensive crane rentals and risk of damage
- Tooling may be rented or purchased to fit budget

**Rotor and Exciter Repairs**
- Replacement components designed and fabricated during your critical outage to exactly match original equipment
- Lead studs, oil seals, bearings, Hydrogen seals, repaired or replaced in expedited lead-time.
- 120 years of turbo engineering experience ensures correct materials and installation process

**In-Situ Overhauls**
- Core-Tightening and straightness measurements
- Flux Probe and Bus Coupler Installation
- Complete re-wedge and re-wind services offered up to 225MW at 15kV
- Coil fabrication at WEG EM facility in Minneapolis, USA
- Roebel coils and semi-conducting slot liners to match OEM specifications
- All backed by our experienced Service Department and global network

Dye Penetrant Testing
Surface Finish Measurements
Custom tooling maximizes efficiency during the outage while minimizing risk to the equipment.
Custom Lead-Stud Installation Tooling
New lead stud assembly and 50psi Hydrogen seals engineered and fabricated by WEG EM
Flux Probe Installed in Stator Wedge.
Brushless exciter retrofits on all OEM generators.