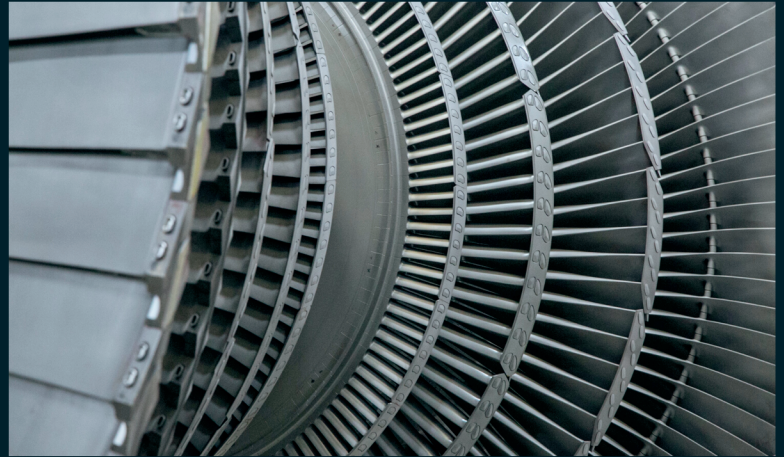


Geothermal Steam Turbines

Industry-leading engineered solutions and support for the geothermal power industry. Over 40 years of experience with 900+ steam turbine overhauls, upgrades, and repairs.



Steam turbine repairs

- Complete steam path inspections
- Rotors, diaphragms, blade rings, casings, valves & seals
- Rapid turnaround on replacement parts
- Weld restoration of gland steam shaft seal areas, diaphragm vanes, seal faces & joint restoration
- Welded repaired or re-rounded casings
- Replacement rotors & diaphragms
- On-site and shop based overhauls

Advanced rotor welding

- Comprehensive engineering
- Modern dovetails to reduce peak stress & resist SCC
- Geothermal specific 12cr weld alloys

New geothermal steam designs

- Modern airfoil shapes improve efficiency
- Lower alternating stress & resistant corrosion-assisted fatigue cracking
- New 12cr diaphragms with improved moisture removal
- Improved rotor, blade material & coupled blades

Engineering & redesign

- Over 35 years completing rotor repairs
- Extensive engineering experience
- Improved designs to reduce stress & erosion rates
- Improved drain piping configurations
- Advanced welding from shaft end to rotor

About EthosEnergy

EthosEnergy turns on potential to deliver services and solutions globally for rotating equipment to make energy affordable, available and sustainable.

A unique combination of partnership and service quality, backed by a track record of tailored solutions, for the power, oil & gas, industrial and aerospace markets.

EthosEnergy operates in over 100 countries to consistently improve performance across the value chain.

Generator Capabilities

Permanent maintenance & regular upkeep services guarantee the most efficient operation of generators. We plan in partnership with our customers to ensure the highest optimization of power plant operation.

Generator upgrades

- 15% power improvement with redesigned components
- Increased generator reliability & life cycle improvements
- Increased time between inspection services
- Decreased vibrations & sound

Generator assessment program

- Rotor-in & rotor-out assessments
- Multiple options designed to fit turbine outage schedules
- Impending faults identified in stator & rotor windings

Shop and field services

- Generator service capabilities up to 600 MW & 20 kV
- Stator & rotor rewinds, slots rewedging, routine inspections & overhauls
- Stator core, retaining rings & end winding kits & improvements
- On-site reverse engineering measurements
- Additional rotor services include:
 - Truth machining
 - Over-speed balancing
 - On-site trim balancing
 - Emergency repairs

Diagnostics and testing

- AC & DC high voltage tests
- Measurements include:
 - Tan delta & partial discharge
 - Insulation & winding resistance
 - Wedge tightness
- Rotor leakage & flux
- Recurrent Surge Oscillograph (RSO)
- Electromagnetic Core Imperfection Detection (ELCID)
- Core heating & thermovision mapping
 - Rotor bore examination (RBE)
 - Retaining ring inspection (RRI)

Spare parts and components

- Hydrogen seals & seal oil supply systems
- Two-chamber hydrogen driers
- Brush holders

