# **CASE STUDY**

FX-TURBO Evaluation & Redesign

# Turboexpander-Gearbox-Generator



#### Application:

Geothermal Power Generation

#### Location:

California, USA

#### Challenge:

(8) Non-LAT turboexpander-gearboxgenerator units were performing inconsistently, components were failing and the plant personnel were experiencing unreliable OEM service.

### Specifications:

Process Gas: Isobutane
Inlet Temperature: 500 PSIA

Speed: 11,000 HP Power: Up to 5 MW



L.A. Turbine (LAT) is a recognized leader in aftermarket repair, redesign, maintenance and production of spare parts for all LAT & non-OEM turboexpander brands and configurations.

Our global FX-TURBO team provides diagnostic and emergency help 24/7/365 via our +1 855 FX-TURBO hotline (+1 855 398 8726) as well as on-site field service support.

LAT is also an OEM of turboexpanders for hydrocarbon processing, propane dehydrogenation, geothermal power generation and other industrial power recovery and refrigeration applications.

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## Case Study: Turboexpander-Gearbox-Generator

### **Challenge:**

Eight (8) non-LAT turboexpander-gearbox-generator units were underperforming in their output levels and operationally, internal components were failing, and the end-user was experiencing unreliable aftermarket support and service from the OEM.

### **Solution:**

Following LAT's on-site and shop evaluations, it was determined a redesign of the eight turboexpandergearbox-generator machines was needed. The redesign included a change in the material selection and a modification to the fabrication and design of key components within the mechanical center section. LAT field service personnel also installed and recommissioned the repaired units.

### Result:

Since the redesign, all units are functioning successfully.

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