



Steven B. Kushnick, P.E., Inc.

Mechanical Engineering

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If you OWN, OPERATE, OR MAINTAIN

- **TURBINE ENGINES**
 - Land-based for electric power generation, or process plants
 - Aircraft engines, turbofans, turboprops, jets
 - Marine gensets or propulsion
 - Steam turbines, combustion turbines, gas turbines, expanders
- **COMPRESSORS**
 - Turbocompressors, centrifugal or axial
 - Reciprocating compressors
 - Cryogenic, air, process gas
- **PUMPS**
 - Cryogenic, LNG, boiler feed, process fluid, water, high pressure
- **DIESEL ENGINES**
 - Over the road, land based, genset, pipeline, or utility
- **OTHER TURBOMACHINERY**
 - Turboexpanders, generators, turbochargers, air motors

STEVEN B. KUSHNICK, P.E., INC. provides

- **FAILURE ANALYSIS**
 - Root cause determination, failure sequence, failure avoidance
- **ENGINEERING STUDIES AND ANALYSIS**
 - Process optimization, uprate, performance, and testing
 - Stress, thermal, thermodynamic, rotordynamic, vibration, fatigue
 - Finite element analysis (Ansys™ FEA)
- **MECHANICAL DESIGN AND REVERSE ENGINEERING**
 - Blades, vanes, nozzles, bearings, rotors, discs, gears, wheels
 - Repair engineering, evaluation, and drawings
 - CMM precision measuring
 - Material substitution or upgrade, high temperature materials
- **EXPERT SERVICES**
 - Expert witness, expert consultant, third-party engineer
 - Warranty dispute support
 - Third-party overhaul and turnaround witness