We are Chromalloy.
We are innovators.
And we are working today — and everyday — to meet the needs of our customers, to extend the life of gas turbine engines and to reduce their operating expenses.
Replacement and Spare Parts
Component Manufacturing
Component Repair
Rotor Repair and Overhaul
Complete Rehabilitation
Jet Engine Services
Long Term Service Agreements
Engineered Technology and Support
Framing Services
Control System Retrofitting
Condition Monitoring and Diagnostics
Pitot Altimeters
Vapor Aluminides
Powder Aluminizing
Ceramic and Ceramic Overlay Coatings
EBPVD Metallic and Ceramic Overlay Coatings
Ceramic Abradable Seals
Abrasive Tip Coatings
Low K Ceramic Coatings
Under Platform Coatings
Metal Replacements
Cobalt and Nickel Brazes
Single Crystal Brazes
Blade Tip Laser Powder Welding
Extended Limit Repairs
Upgrade Metallic Repairs
Coating Upgrade Repairs
Combustor
Compressor Frames
High Pressure Compressor
High Pressure Turbine
HPT Blades, Vanes, and Shrouds
Inlet Guide
Low Pressure Compressor
Low Pressure Turbine
LPT Shrouds
Shafts, Disks and Seals
Turbine Frames
Chromalloy provides OEM-licensed repairs as well as coatings, replacement parts and depot services that extend engine life and reduce operating expenses.

We support the full range of LM2500, LM5000 and LM6000 gas turbine engines used in both power generation and marine applications.

Why choose Chromalloy?
To extend engine life, aeroderivative gas turbine owners and operators turn to Chromalloy for three key reasons.

First, we are the only independent company in the world that provides a full spectrum of services—from design engineering of parts, castings and core development, to machining, coatings, repairs and field services for LM series engines. By providing world-class expertise in every phase, our customers can feel confident and benefit from the simplicity of working with one partner.

Second, we can dramatically reduce your costs. On average, Chromalloy repairs cost 80% less than a newly manufactured part. Chromalloy coatings increase the durability of components and extend the time between overhauls. In addition, Chromalloy’s fast turnaround times and rotatable spares reduce the length of outages.

Third, Chromalloy provides outstanding customer service. We work with our customers to develop solutions that meet their specific needs. Throughout our engagement, we provide a single point of contact and detailed reports. We conduct workscoping and analysis in a collaborative, transparent manner. We guarantee workmanship and materials, and we provide comprehensive warranty coverage for the engines we service.
Chromalloy is the only non-OEM company in the world that provides a full spectrum of services for aeroderivative gas turbine engines.

Every discipline in the Chromalloy value chain is driven by innovation and focused on extending engine life.

**Design Engineering**
Our engineers add value to each of our capabilities—from replacement part design to repair process development. They combine their expertise with the world's leading technology to provide our customers with unique competitive advantages.

**Castings / Core**
Chromalloy operates several state-of-the-art castings centers including facilities in Carson City, Nevada and Tampa, Florida that are among the most technologically advanced in the world. These centers provide our customers with a single source for replacement parts.

**Machining**
Machining plays an integral role in the Chromalloy value chain. Our advanced machining capabilities allow us to design, produce and repair even the most sophisticated gas turbine engine components with utmost precision.
Coating Technology
Chromalloy provides advanced vapor aluminide coating services to every major OEM. We are the world's largest provider of both EBPVD coatings and Low Pressure Plasma Spray Overlay coatings.

Repair Technology
Chromalloy's technological advancements and patented and proprietary repair processes enable us to extend the life of gas turbine engine parts, and significantly reduce operating expenses in a way that no other company can.

Field Services
Chromalloy staffs a wide range of experienced mechanical engineers, instrumentation and control engineers, field engineers, technical advisors and project managers. We promptly dispatch experts to evaluate and perform both on-site and remote engineering services for planned and unplanned maintenance.
Chromalloy repairs extend aeroderivative engine life and provide a reliable, cost-effective alternative to new parts and costly OEM repairs. Over the last several decades, Chromalloy has invested millions of dollars in the research and development of innovative repair processes that return components to their original form, fit and function.

We currently provide a full range of salvage repairs for LM2500, LM5000 and LM6000 engines. In addition, we provide OEM-licensed repairs for both the LM2500 and LM5000.

**Re-Engineering and Design Capabilities**
- Coordinate Measuring Machine
- Video Measuring Machine
- ATOS scanning
- Full Engineering Analysis

**Inspection Capabilities**
- Eddy Current Inspection
- Fluorescent Penetrant Inspection
- Metallurgical Analysis
- Optical Contour Inspection
- Radiographic Inspection
- Ultrasonic Inspection
- Scanning Electron Microscope (SEM)
- X-ray Inspection
- Component Life Evaluations
Preparation Capabilities
- Chemical Stripping/Cleaning
- Degreasing
- Hydrogen Fluoride Ion Cleaning
- Water Jet Stripping & Cutting

Repair Capabilities
- Electron Beam Welding and Automatic TIG Welding
- 5-axis Laser Powder Welding with Vision System
- Induction Welding
- Gas Tungsten Arc Welding
- Coatings: Robotic HVOF, Plasma and Wire Arc
- Heat Treat and Thermal Processing
- Laser Cutting, Drilling and Shaping
- Honeycomb Sealing and Replacing
- Vacuum Furnace High Temperature Brazing
- Induction Brazing
- Automated Blending and Recontouring
- CBN Abrasive Tip Grinding
- Electro Chemical Grinding
- CNC Milling, Turning and Grinding
- Jig Boring and Grinding
- Shaped Hole Drilling
- Robotic Laser Drilling
- Vibro Super Polishing
- Corrosion Resistant Painting
- Glass Bead Peening
- Steel Shot Peening
- Blade Moment Weigh Balancing
Chromalloy has been a leader in developing aluminide coatings for decades. Today, we continue to provide these coatings and their derivatives to all the major OEMs, as well as owners and operators around the world.

We invest substantially in the research and development of ceramic thermal barrier coatings, diffused precious metal/aluminide coatings, vacuum plasma coatings and other innovative coating processes. We are the world’s largest provider of Low Pressure Plasma Spray Overlay and Electron Beam Physical Vapor Deposition (EBPVD) coatings.

These capabilities protect gas turbine components and increase their efficiency and reliability at higher operating temperatures and under severe environmental conditions.
Chromalloy incorporates years of advanced coating and repair technology into the redesign, casting and manufacturing of parts for the LM2500 and LM6000. We utilize single crystal technology. And we use leading-edge manufacturing tools and processes to produce the most sophisticated components with utmost precision. This generates high-quality components that not only cost less, but also perform equal to the OEM parts they replace. Currently, there are more than 100 LM2500 and over 50 LM6000 Chromalloy-manufactured hot sections in successful operation around the world.

**Castings**
The Chromalloy facilities in Carson City, Nevada and Tampa, Florida are among the most technologically advanced castings and manufacturing centers in the industry. These highly specialized locations allow us to provide a single source for replacement parts, and enable Chromalloy to meet the operational and financial needs of our customers in a way that no other company can. By managing the entire replacement part supply chain—from design, test and systems engineering, tooling, castings and core development, to repair technology, machining and coating—Chromalloy expedites turnaround times and reduces costs.

**Technology**
- Turbine Aerodynamic Design and Analysis
- Engine Performance Analysis
- Secondary Air System Design and Analysis
- Blade/Vane Cooling Design and Analysis
- CFD Analysis
- 3D Thermal Design and Analysis
- 3D Structural Design and Analysis
- Vibration/Modal Analysis
- Mechanical Design and Analysis
- Engine Instrumentation and Testing
- Engine Tuning and Optimization
- Hardware Characteristics
New Part Development Process
Chromalloy’s capital parts development technology enables us to provide a fully-integrated supply chain.

Redesign: Cast components
- Single Crystal
- Equiax
- DS
On-site core development

Casting & Cores: Machine component
- Drill

Machining: Apply industry leading protective barrier coatings.

Coating: Flow
- NDT
- X-ray
- FPI

Test: Deliver the part
- Install the part
- Monitor performance
- Provide life evaluations

Deliver: Redesign part using largest repair database in the industry to inform improvements.
Chromalloy LM2500 depot services provide a cost-effective, customer-focused alternative to OEM support.

For more than 20 years, Chromalloy has performed advanced repairs for the LM2500. We currently provide full tip to tail salvage repairs through a wide variety of OEM-licensed and third party repairs.

In addition, we were the first to manufacture and offer single crystal High Pressure Turbine blades and vanes for the LM2500. Today, we leverage this experience with our world-class casting capabilities to provide a wide range of newly manufactured LM2500 replacement parts.

Chromalloy’s 111,000 square-foot San Diego facility features an on-site LM2500 test cell—the only independent LM2500 test cell in the western United States. When we finish servicing an engine, we rigorously test the engine in real world conditions before delivering it to our customers.

Depot Services for the LM2500 range from Level I and II (Field Inspection & Repair) to Level IV (Shop Overhaul, Repair and Test Cell Capability).

**Services and Capabilities**

- On-site test cell—the only independent test cell in the western United States for LM2500 gas turbines provides core engine testing and troubleshooting.
- HPT module repairs and overhauls
- HPT module exchange
- Gas generator overhaul
- Power turbine overhaul
- Replacement blades, vanes and shrouds—newly manufactured, OEM equivalent
- Lease engines
- Field Services including engine troubleshooting, borescope inspection, HPT/top case repairs, combustor and TMF replacement
- TIGER® diagnostic analysis for trend monitoring, heat rate performance and other performance related reports
Chromalloy repairs help LM5000 owners and operators extend the life of their engines and reduce operating expenses. We currently provide full tip to tail salvage repairs as well as OEM-licensed repairs for LM5000 gas turbine engines.
Chromalloy works with LM6000 owners and operators around the world to extend engine life and reduce operating costs. Through our state-of-the-art castings and manufacturing facilities in Carson City, Nevada and Tampa, Florida, we provide newly manufactured HPT blades, vanes and shrouds. In addition, we provide complete tip to tail salvage repairs that restore LM6000 components to their original form, fit and function.
Our key industrial gas turbine facilities are located in New York, Florida, Scotland, the United Kingdom and Thailand.
We are Chromalloy.
We are innovators.
And we are working today — and everyday — to meet the needs of our customers, to extend the life of gas turbine engines and to reduce their operating expenses.

Aeroderivative Gas Turbine Engine Capabilities
LM2500® / LM6000® / LM6000®