

UNEW, Inc.-UNEW International, Inc.



Heavy Industry Global Gas Turbine Engineering
Manufacturing • Refurbishment • Overhaul • Maintenance
Industrial Gas Turbine Capital Parts
Component Refurbishment. Upgrade, & Life Extension
Field Maintenance & Long-Term Service Agreements (LTSA)



Engineering Excellence in Gas Turbine Technology

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1. UNEW BACKGROUND:

UNEW was founded in 1999 with the initial mission of supporting the aviation industry through the procurement and supply of critical capital parts for Pratt & Whitney aircraft engines. The company began by specializing in high-precision turbine components, particularly turbine blades and combustion system parts used in engines powering widely deployed commercial aircraft such as the Boeing 737 and the Airbus A320 family. Through strict adherence to aviation manufacturing standards and rigorous quality control, UNEW quickly established a reputation for reliability, precision, and engineering excellence within the aerospace supply chain.

Building on this strong aviation foundation, UNEW expanded its capabilities into the power generation industry by applying aerospace manufacturing standards to industrial gas turbine components. Over the years, the company has developed into a trusted global manufacturer of capital parts for major gas turbine platforms produced by leading OEMs including GE, Siemens, Alstom, and Ansaldo Energia.

All gas turbine components manufactured by UNEW follow aviation-grade quality standards to ensure high precision, superior material integrity, and reliable long-term operation. This aerospace-driven manufacturing philosophy allows UNEW to deliver components that meet the demanding operating conditions of modern gas turbines used in power generation and industrial applications.

In addition to manufacturing replacement components, UNEW also provides engineering customization tailored to the specific operating environments of power plants. Many industrial gas turbines operate using refinery off-gas, recycled process gas, or other non-standard fuel compositions. UNEW's engineering team can optimize materials, coatings, and cooling configurations to better match these operating conditions, improving component durability and extending service life.

With more than two decades of experience and a strong commitment to engineering quality and innovation, UNEW continues to support turbine operators worldwide with high-quality capital parts and technical solutions for both the aviation and power generation industries.



2. UNEW CAPABILITY:

UNEW Capability, Gas Turbine Model Coverage

GE | Siemens | Alstom | Ansaldo

OEM	Model / family	Common variants / legacy designations	Segment	Capital parts manufacturing	Capital parts refurbishment	Maintenance / outage / inspection
GE	MS3002 / Frame 3	Legacy two-shaft mechanical-drive frame; commonly referenced with MS3002 family service support.	Heavy-duty legacy	Yes	Yes	Yes
GE	MS5001 / Frame 5	Legacy Frame 5 single-shaft family; also referenced as MS5001.	Heavy-duty legacy	Yes	Yes	Yes
GE	MS5002 / Frame 5	Legacy two-shaft Frame 5 family; commonly referenced as MS5002.	Heavy-duty legacy	Yes	Yes	Yes
GE	6B / 6B.03	Former 6B 3-Series / 6B-3; PG6521B / PG6531B / PG6541B / PG6551B / PG6561B / PG6571B / PG6581B.	Heavy-duty	Yes	Yes	Yes
GE	6C / 6F.01	Former 6C / PG6591C; legacy bridge to 6F nomenclature.	Heavy-duty legacy	Yes	Yes	Yes
GE	6F / 6F.03 family	Former 6F 3-Series / 6F-3 / 6FA / PG6101FA / 6FA+e / PG6111FA / 6FA.03; includes syngas references.	Heavy-duty	Yes	Yes	Yes
GE	7EA / 7E.03	Former 7E 3-Series / 7E-3 / PG7111EA / PG7121EA.	Heavy-duty	Yes	Yes	Yes
GE	7F.03 / 7F.04 family	Former 7F 3-Series / 7F-3 / 7FA / PG7221FA / 7FA+ / PG7231FA / 7FA+E / PG7241FA / 7FB / 7F syngas.	Heavy-duty	Yes	Yes	Yes
GE	7F.05	Former 7F 5-Series / 7F-5 / 7FA.05.	Heavy-duty	Yes	Yes	Yes
GE	7H / 7H.01	Former 7H 7-Series / 7H-7 / GS7072.	Heavy-duty legacy	Yes	Yes	Yes
GE	7HA.01	First 7HA family designation; legacy/current fleet naming.	Heavy-duty	Yes	Yes	Yes
GE	7HA.02	Second 7HA family designation; legacy/current fleet naming.	Heavy-duty	Yes	Yes	Yes
GE	7HA.03	Current HA product variant shown in GE Vernova portfolio.	Heavy-duty	Yes	Yes	Yes
GE	9E / 9E.03 / 9E.04 / 9E Max	Former 9E 3-Series / 9E-3 / PG9141E / PG9151E / PG9161E / PG9171E; includes 9E syngas naming.	Heavy-duty	Yes	Yes	Yes
GE	9EC.01	Former 9E 5-Series / 9E-5 / 9EC / GS9053.	Heavy-duty legacy	Yes	Yes	Yes
GE	9F.03 / 9F.04 family	Former 9F 3-Series / 9F-3 / 9FA / PG9311FA / 9FA+ / PG9331FA / 9FA+e / PG9351FA / 9FA.04.	Heavy-duty	Yes	Yes	Yes
GE	9F.05	Former 9F 5-Series / 9F-5 / 9FB.01 / 9FB.02 / 9FB.03.	Heavy-duty	Yes	Yes	Yes

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OEM	Model / family	Common variants / legacy designations	Segment	Capital parts manufacturing	Capital parts refurbishment	Maintenance / outage / inspection
GE	9H / 9H.02	Former 9H 7-Series / 9H-7 / GS9048 Block 2 / 9H B2A / GS9069 / G9069S Block 2A spares.	Heavy-duty legacy	Yes	Yes	Yes
GE	9HA.01	Current HA product variant; legacy transition from 9F 7-Series / 9FB.05 fleet naming.	Heavy-duty	Yes	Yes	Yes
GE	9HA.02	Current HA product variant; legacy transition from 9F 7-Series / 9FB.05 fleet naming.	Heavy-duty	Yes	Yes	Yes
GE	LM1600	Aeroderivative family.	Aeroderivative	Yes	Yes	Yes
GE	LM2500 family	LM2500 / LM2500+ / LM2500+G4 / LM2500 XPRESS+G4 / XPRESS+G5 DLE UPT.	Aeroderivative	Yes	Yes	Yes
GE	LM5000	Aeroderivative family.	Aeroderivative	Yes	Yes	Yes
GE	LM6000 family	LM6000 PC / PD / PF / PG / PH; VELOX PC Sprint and VELOX PF+ Sprint package references.	Aeroderivative	Yes	Yes	Yes
GE	LMS100 PA+	Current LMS100 PA+ configuration.	Aeroderivative	Yes	Yes	Yes
GE	LM9000	Aeroderivative family.	Aeroderivative	Yes	Yes	Yes
GE	TM2500 family	TM2500 SAC and TM2500 DLE mobile/aero package references.	Aeroderivative / mobile	Yes	Yes	Yes
Siemens	SGT5-2000E/V94.2/Si3D	50 Hz heavy-duty platform; predecessor naming includes V94.2/Si3D, V94.2A	Heavy-duty	Yes	Yes	Yes
Siemens	SGT6-2000E	60 Hz heavy-duty platform; predecessor naming includes V84.2, V84.3	Heavy-duty	Yes	Yes	Yes
Siemens	SGT5-4000F/V94.3/VO/UPGRADE	50 Hz F-class heavy-duty platform. V94.3/VO upgrade. V94.3A, V94.3A(4,5,6), V64.3, V64.3A	Heavy-duty	Yes	Yes	Yes
Siemens	SGT6-5000F	60 Hz F-class heavy-duty platform, V84,3A	Heavy-duty	Yes	Yes	Yes
Siemens	SGT5-8000H	50 Hz H-class heavy-duty platform.	Heavy-duty	Yes	Yes	Yes
Siemens	SGT6-8000H	60 Hz H-class heavy-duty platform.	Heavy-duty	Yes	Yes	Yes
Siemens	SGT5-9000HL	50 Hz HL-class heavy-duty platform.	Heavy-duty	Yes	Yes	Yes
Siemens	SGT6-9000HL	60 Hz HL-class heavy-duty platform.	Heavy-duty	Yes	Yes	Yes
Siemens	SGT-50	Industrial gas turbine.	Industrial	Yes	Yes	Yes
Siemens	SGT-100	Industrial gas turbine; service offerings include on-site maintenance options.	Industrial	Yes	Yes	Yes
Siemens	SGT-200	Industrial gas turbine; official Siemens service references list 1S and 2S configurations.	Industrial	Yes	Yes	Yes
Siemens	SGT-300	Industrial gas turbine; official Siemens service references list 1S and 2S configurations.	Industrial	Yes	Yes	Yes
Siemens	SGT-400	Industrial gas turbine; official Siemens service references list 1S and 2S configurations.	Industrial	Yes	Yes	Yes

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OEM	Model / family	Common variants / legacy designations	Segment	Capital parts manufacturing	Capital parts refurbishment	Maintenance / outage / inspection
Siemens	SGT-500	Industrial gas turbine; formerly GT35.	Industrial	Yes	Yes	Yes
Siemens	SGT-600	Industrial gas turbine.	Industrial	Yes	Yes	Yes
Siemens	SGT-700	Industrial gas turbine.	Industrial	Yes	Yes	Yes
Siemens	SGT-750	Industrial gas turbine.	Industrial	Yes	Yes	Yes
Siemens	SGT-800	Industrial gas turbine.	Industrial	Yes	Yes	Yes
Siemens	SGT-A05	Aeroderivative gas turbine; KB5 and KB7 variants.	Aeroderivative	Yes	Yes	Yes
Siemens	SGT-A35	Aeroderivative gas turbine; RB211 / GT62 family references and multiple gas-generator / power-turbine combinations.	Aeroderivative	Yes	Yes	Yes
Alstom	GT8 family	GT8B / GT8C / GT8C2; legacy silo EV and annular EV fleet naming.	Heavy-duty legacy	Yes	Yes	Yes
Alstom	GT9 family	GT9B / GT9C / GT9D; legacy silo SB and U-Duct SB / DC+ fleet naming.	Heavy-duty legacy	Yes	Yes	Yes
Alstom	GT11 family	GT11B / GT11C / GT11D / GT11N / GT11N2; includes GT11NM / GT11NMC / GT11N2 LBtu references.	Heavy-duty legacy	Yes	Yes	Yes
Alstom	GT13 family	GT13B / GT13C / GT13D / GT13E1 / GT13E2; includes DM / DMC / MXL / MXLC / MXL2 upgrade nomenclature.	Heavy-duty legacy	Yes	Yes	Yes
Alstom	GT24	Sequential-combustion family; A / AB / B / 2006 / 2011 rating nomenclature with MXL / MXL2 upgrade references.	Heavy-duty legacy	Yes	Yes	Yes
Alstom	GT26	Sequential-combustion family; AB / B / 2006 / MXL2 plus APP / HE upgrade references.	Heavy-duty legacy	Yes	Yes	Yes
Ansaldo	AE64.3A	Current Ansaldo Energia heavy-duty platform.	Heavy-duty	Yes	Yes	Yes
Ansaldo	AE94.2	Current/service-supported platform; commonly cross-referenced with V94.2 in user-conference and fleet contexts.	Heavy-duty	Yes	Yes	Yes
Ansaldo	AE94.3A	Current/service-supported platform.	Heavy-duty	Yes	Yes	Yes
Ansaldo	GT26	Current Ansaldo Energia GT26 platform.	Heavy-duty	Yes	Yes	Yes
Ansaldo	GT36-S5	GT36 configuration S5.	Heavy-duty	Yes	Yes	Yes
Ansaldo	GT36-S6	GT36 configuration S6.	Heavy-duty	Yes	Yes	Yes

3. UNEW FACILITIES:

- Largest privately owned Industrial Gas Turbine (IGT) Repair Facility in US
- Located in Florida and Houston, Texas USA
- Founded in May 1999
- Recapitalization by AEA in 2019 allowed investments in future growth

Florida capital manufacture & 2 Houston repair facilities:

- 500,000 sq foot Gran Park Way facility
- 102,000 sq foot Mills Road facility
- 450,000 sq Farrell Rd Combustion Technologies facility
 - 2020 Expansion for additional coating capacity, laser processing, and additive manufacturing
 - 2021 Expansion for NDE testing, walk-in grit blasting capability, combustion products new manufacturing



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- Comprehensive combustion repair
- Expanded component manufacturing & machining capabilities
- Premier fuel nozzle repair facility in North America
- 100% Climate Controlled
- Utilizes UNEW portfolio of coating, engineering, & repair technologies
- Utilizes UNEW portfolio of coating, engineering, & repair technologies
- Custom engineered solutions
- Problem diagnosis + RCAs
- Reconditioning
- Calibration and flow testing
- Custom designed solutions



Non-Destructive Testing



Metallurgical Lab



Walk-in Grit Blasting



Combustion Repair



Rotor Repair



Hot Gas Path Repair



4.UNEW REPAIR EQUIPMENT

(200) Tig Welding Stations (35) Induction Welding Units (5) Large Walk-In Blast Booths (9) Blast Cabinets Nondestructive Testing Equipment ➤ XRF Material Analyzer ➤ Fluorescent Penetrant & Red Dye ➤ Ultrasonic Testing ➤ Eddy current Testing ➤ Mag Particle Component-Specific Dimensional Inspection Tooling (6) Manual Mills Laserdyne Laser Hole Drilling 3D Printer (10"x10") V-Series FS Tooling Coating Robustness Upgrades	(15) Engine Lathes ➤ 7"- 80" chuck ➤ 16" - 118" swing Radial Drill ➤ 5' arm (10) Surface Grinders ➤ 16x40" table 14" grinding wheel CNC Saw ➤ 12.5x15" capacity (2) Ipsen All Metal Zone Vacuum Furnace ➤ 48x48x60" heat zone Electric Air Furnace ➤ 72x72x65" (9) Robotically Controlled Coating Booths ➤ Air Plasma Spray ➤ HVOF	Moment Weight with Balancing Software Airflow Testing CAD/CAM & SolidWorks Software Cranes: ➤ ½ Ton to 40-Ton capacity EDM Hole drilling, and Plunge (25) Vertical Boring Mills: 64" to 144" (5) Horizontal Boring Mills: 3" to 4" (10) CNC VCM up to 5 Axis with 50x20x25" (10) CNC Lathes with 10" chuck and 30" swing	Spot Welder ➤ 36" throat <u>(10) Horizontal balance machines</u> HBM1 5,000 lb capacity ➤ 10' long bed ➤ 5' swing HBM2 20,000 lb capacity ➤ 20' long bed ➤ 7' swing HBM3 80,000 lb capacity ➤ 28' long bed ➤ 12' swing (5) vertical balance machine ➤ 9,000 lb capacity Stacking Pit ➤ 8' wide x 11' deep
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5. UNEW GAS TURBINE REFURBISHMENT EXPERIENCES

UNEW's refurbishment is based on complete restoration of geometry, material condition, and performance, not just repair for the next service interval. Unlike OEM parts designed for general use, UNEW refurbishment is tailored to the actual operating conditions of every each specific power plant, including fuel type, temperature, and corrosion environment. This allows us to repair real damage such as cracking, oxidation, distortion, and material loss, and return components to a stable and reliable condition with consistent performance and extended service life.

REFURBISHMENT SCOPE & CAPABILITY

- Coating strip (chemical and abrasive) to fully expose base material
- Surface preparation and cleaning to restore metallurgical readiness
- MCrAlY bond coat application for oxidation and corrosion resistance
- Thermal barrier coating (TBC) application for thermal protection
- Abradable coating application (where applicable) to restore sealing performance
- Crack removal and defect excavation to eliminate all structural discontinuities
- GTAW weld build-up using high-temperature alloy fillers to restore structural integrity
- Weld repair of critical features including airfoil, vanes, combustor hardware, and structural sections
- Tip seal fin rebuild and clearance surface restoration to original sealing condition
- Airfoil, vane, and flow-path profile restoration to original aerodynamic geometry
- Edge feature reconstruction (e.g., angel wings, leading/trailing edges) to original form
- Seal slot reconstruction and interface rebuilding to original dimensions and fit
- Replacement of seals, pins, retainers, and wear hardware with new certified components
- Cooling hole cleaning, re-drilling, and EDM re-machining to restore cooling effectiveness and flow distribution
- Flow-path recovery and internal passage restoration to original flow characteristics
- Material build-up and dimensional restoration to recover lost base material
- CNC machining and precision grinding to restore critical geometry and tolerances
- Distortion correction and structural realignment to original dimensional condition
- Vacuum solution heat treatment to restore microstructure and relieve residual stress
- Age hardening heat treatment to recover mechanical strength and creep resistance
- Shot peening of fatigue-critical areas to improve fatigue life and durability
- Flow testing and calibration (combustion components) to restore uniform distribution and OEM-equivalent performance
- Moment weight balancing (rotating components) to ensure rotor stability and vibration control
- Final dimensional verification using precision measurement systems to confirm tolerance compliance
- Final inspection, certification, and quality release to engineering and contractual standards

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OEM	Typical Components Refurbished	Units Refurbished	Typical Scope	Regions Served
GE Frame 5	Hot Gas Path stage 1,2,3 Buckets, Nozzles, shroud, Combustion, Liners, Caps, and Fuel Nozzles	2180+	Capital component HGP and Combustion refurbishment	Asia, Middle East, Americas
GE Frame 6 / 6FA	Hot Gas Path stage 1,2,3 Buckets, Nozzles, shroud, Combustion, Liners, Caps, and Fuel Nozzles	2320+	Capital component HGP and Combustion refurbishment	Asia, Europe, Middle East
GE Frame 7EA	Hot Gas Path stage 1,2,3 Buckets, Nozzles, shroud, Combustion, Liners, Caps, and Fuel Nozzles	1250+	Capital component HGP and Combustion refurbishment	Asia, Africa, Americas
GE Frame 9E / 9FA	Combustion Systems, Buckets, Nozzles Hot Gas Path stage 1,2,3 Buckets, Nozzles, shroud, Combustion, Liners, Caps, and Fuel Nozzles	840+	Capital component HGP and Combustion refurbishment	Middle East, Asia
Siemens V64.3 - SGT-800	Buckets, Vanes, Combustion Liners	360+	HGP and combustion refurbishment and restoration all stages of vanes blades.	Asia, Europe
Siemens V84.2 - SGT-4000F	Hot gas path blades and vanes	410+	HGP and combustion refurbishment and restoration all stage of vanes and blades.	Asia, Middle East
Siemens V94.2/Si3D,V94.3/VO SGT5-2000E, SGT5-4000F	• Blades (Stage 1, 2, 3, 4) • Vanes (Stage 1, 2, 3, 4) • Vane segments • Turbine diaphragms • Vane carriers	320+	HGP and combustion refurbishment and restoration of all stage 1-4 vanes and 1-4 blades, and combustion, Combustion chamber, Burner complex, Flame tube, Mixing chamber, transition duct, Diagonal swirlers, Heat shields etc.,	Asia

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Siemens SGT5-8000H (50Hz and 60Hz)	• blades (Stage 1–4) • vanes (Stage 1–4) • Vane segments • Vane carriers • Combustion parts	75+	HGP and Combustion refurbishment and restoration including Combustor cans, Burner assemblies, Flame tubes, Transition ducts, Heat shields / liners / tiles , Blade stage 1-4 and vanes stage 1-4.	Asia, Europe, and South America
Alstom GT11N2	Combustion liners, transition pieces	90+	Combustion system refurbishment	Asia, Europe
Alstom GT13E2	Blades, vanes, combustion hardware	120+	Hot/cold section refurbishment	Europe, Asia, South America
Ansaldo Energia AE64.3A	Combustion system, turbine blades	70+	Capital part refurbishment	Europe, Middle East
Ansaldo Energia AE94.3A	Turbine stages, combustion hardware	60+	Major component refurbishment	Asia, Europe

UNEW provides refurbishment and life-extension services for industrial gas turbine capital components across major OEM platforms including GE, Siemens, Alstom, and Ansaldo Energia. Services include inspection, dimensional restoration, welding, coating (MCrAlY / TBC), machining, non-destructive testing, and performance validation.

6. UNEW FIELD-LTSA SERVICES COMPREHENSIVE FLEXIBLE LTSA

• PARTS

- CAPITAL SPARES PARTS
- CONSUMABLES PARTS
- OPERATIONAL PARTS

• REPAIRS

- COMBUSTION REPAIRS
- HOT GAS PATH REPAIRS
- ROTOR REPAIR

• FIELD SERVICES

- LTSA/PLANNED MAINTENANCE
- UNPLANNED MAINTENANCE
- SITE VISITING

• OPERATIONAL SUPPORT

- 24/7 MONITORING AND DIAGNOSTICS
CSM
- REMOTE SUPPORT

• PERFORMANCE GUARANTEES

- EMISSIONS
- OUTPUT/HEAT RATE

• TERM WARRANTY

- OUTAGE TO OUTAGE



7. CORE REPAIR & MAINTENANCE SERVICES

UNEW Advanced Coating & Repair Technology Center

UNEW operates an advanced surface engineering and turbine component refurbishment center dedicated to extending the service life of industrial gas turbine hot-section components. The technology platform integrates coating science, metallurgical engineering, and precision repair processes to restore turbine components used in GE, Siemens, Alstom, and Ansaldo Energia gas turbines.

Advanced Thermal Barrier Coating (TBC) Systems

- High-density Air Plasma Spray (APS) ceramic TBC systems for turbine blades, buckets and vanes
- Multi-layer thermal barrier coating architecture with optimized thermal strain tolerance
- Proprietary high-density ceramic coating system designed for cyclic refinery gas turbine environments
- Bond coat systems including NiCoCrAlY and CoNiCrAlY MCrAlY alloys

Protective Coating Technologies

- Diffusion aluminide and platinum aluminide coatings for oxidation protection
- Corrosion and sulfidation resistant coatings for aggressive refinery fuel environments
- Abradable and clearance-control coatings used in compressor and turbine sealing systems

Integrated Repair Technologies

- Precision TIG welding, laser welding and plasma transferred arc (PTA) restoration
- Laser cladding and metal deposition for dimensional recovery
- Precision CNC machining and grinding to restore original turbine tolerances

Inspection & Metallurgical Control

- Fluorescent Penetrant Inspection (FPI) and Eddy Current inspection
- X-ray radiography and ultrasonic inspection for internal defect detection

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- Metallographic analysis and coating microstructure validation
- Bond strength and coating thickness verification

Engineering & Quality Oversight

- Dedicated metallurgists supervising coating and repair processes
- Standardized coating booths and robotic plasma spray systems
- Strict process control aligned with aerospace-grade quality standards
- Comprehensive inspection and life-extension evaluation for turbine components

UNEW's advanced coating and repair technologies provide cost-effective life-extension solutions for critical turbine components including blades, buckets, vanes, combustion liners, transition pieces, and sealing hardware used in heavy-duty industrial gas turbines worldwide.



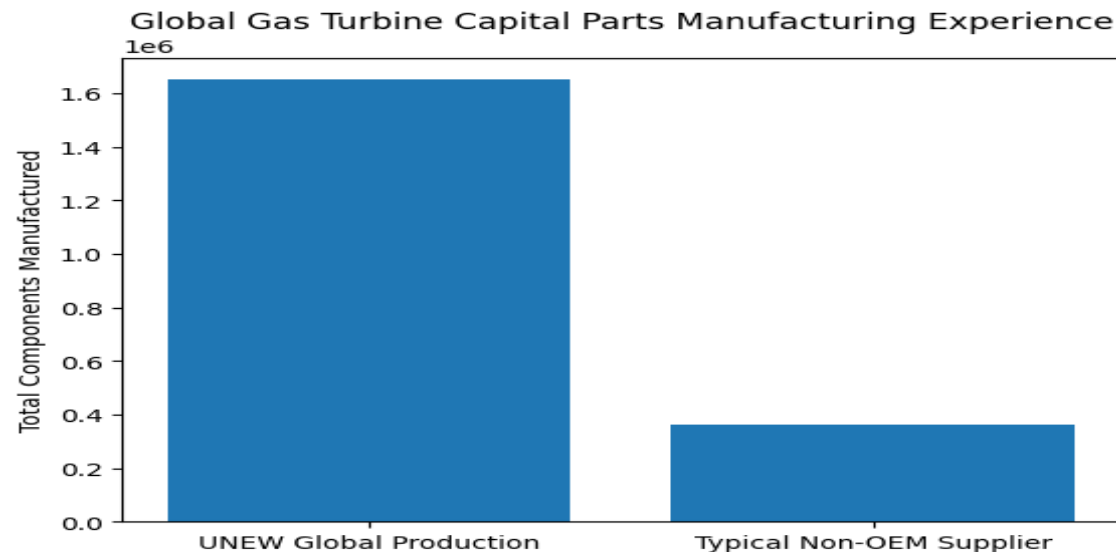
8. UNEW GLOBAL GAS TURBINE CAPITAL PARTS MANUFACTURING EXPERIENCE

UNEW is recognized as one of the most experienced independent manufacturers of capital parts for heavy-duty industrial gas turbines worldwide. Leveraging advanced metallurgy, aerospace-grade precision machining, and proprietary coating technologies, UNEW manufactures high-performance turbine components for utilities, refineries, and industrial power producers globally. Unlike conventional replacement parts designed for generic operating conditions, UNEW components are engineered with enhanced nickel-based superalloys, advanced MCrAlY and thermal barrier coating systems, and optimized cooling configurations to maximize durability and thermal efficiency.

UNEW's engineering team also evaluates fuel composition and site-specific operating conditions, particularly for turbines operating on refinery off-gas, platform gas, and other variable fuel sources. Components can be customized with specialized materials and coating systems to improve resistance to sulfur, contaminants, high combustion temperatures, and cyclic thermal loading, resulting in longer service life, improved reliability, and extended maintenance intervals.

Global Production Summary

Estimated cumulative production of heavy-duty gas turbine capital parts manufactured or refurbished by UNEW exceeds 1,650,000 components worldwide, including turbine blades, vanes, combustion hardware, transition pieces, shrouds, rotating hardware, and **fuel nozzles**.



Manufacturing Experience by Gas Turbine Platform

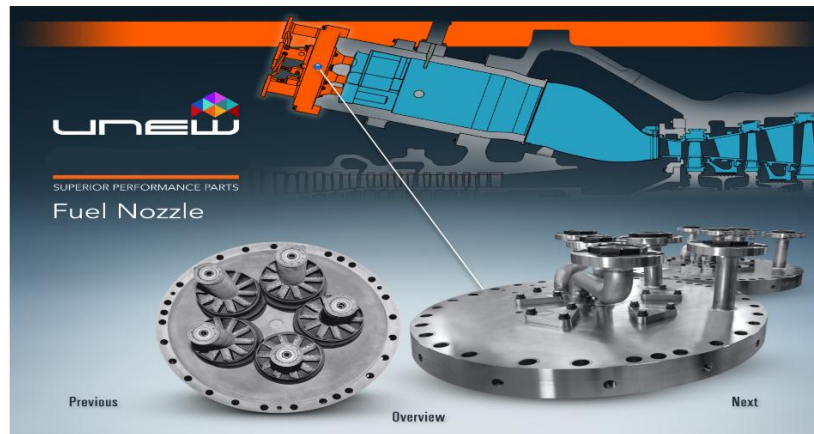
OEM	Turbine Model	Turbine Blades	Nozzle / Vane Segments	Combustion Liners & Caps	Transition Pieces	Shrouds / Ring Segments	Rotating Hardware	Fuel Nozzles	Total Parts
 GE	Frame 5	36000	25500	7200	4800	9600	8400	12600	104100
 GE	Frame 6 / 6B	55500	39600	10800	7500	14100	12300	18600	158400
 GE	Frame 7EA	78000	55500	12600	9300	18600	15900	21600	211500
 GE	Frame 7FA / 7FA.03	66000	48000	11700	8400	16800	14700	20400	186000
 GE	Frame 9E	43500	30600	7500	5700	10800	9300	14400	121800
 GE	Frame 9FA	53400	37200	9000	6600	12600	11100	16800	146700
 Siemens	V94.2/Si3D/SGT5-2000E	50400	36600	9300	6900	12300	10500	16200	142200
 Siemens	V94.3/VO/V94.3A/SGT5-4000F	55500	41400	10200	7800	13800	11700	17400	157800
 Siemens	SGT5-8000H (50Hz and 60Hz)	16400	11400	3280	2400	4500	3800	5200	46980
 Ansaldo	AE94.2	39600	29400	7500	5700	10200	9000	14100	115500
 Ansaldo	AE94.3A	44700	33600	8400	6300	11400	9900	15300	129600
 Alstom	GT13E/GT13E2	32400	24600	6900	5100	9000	7800	12600	98400

Industry Positioning

The scale of UNEW's manufacturing and refurbishment portfolio positions the company among the most capable non-OEM suppliers supporting heavy-duty gas turbine fleets globally.

9. CAPITAL PART FOUNDATION AND EVOLUTION

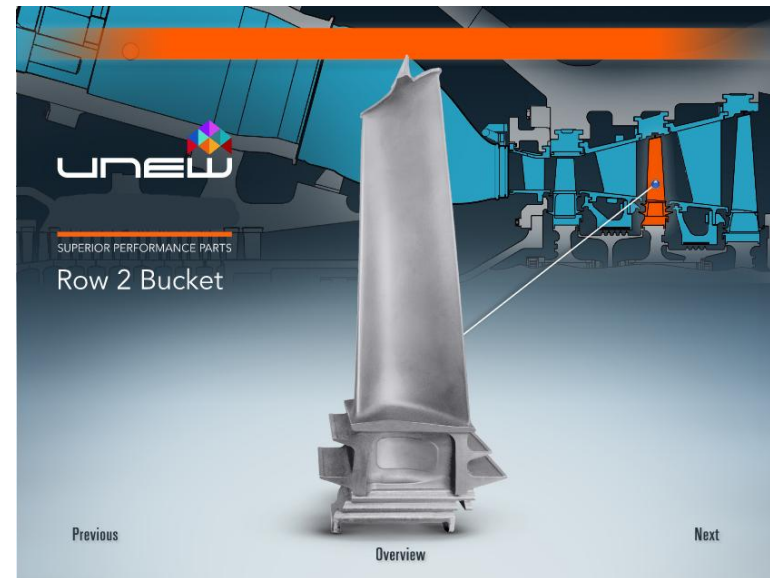
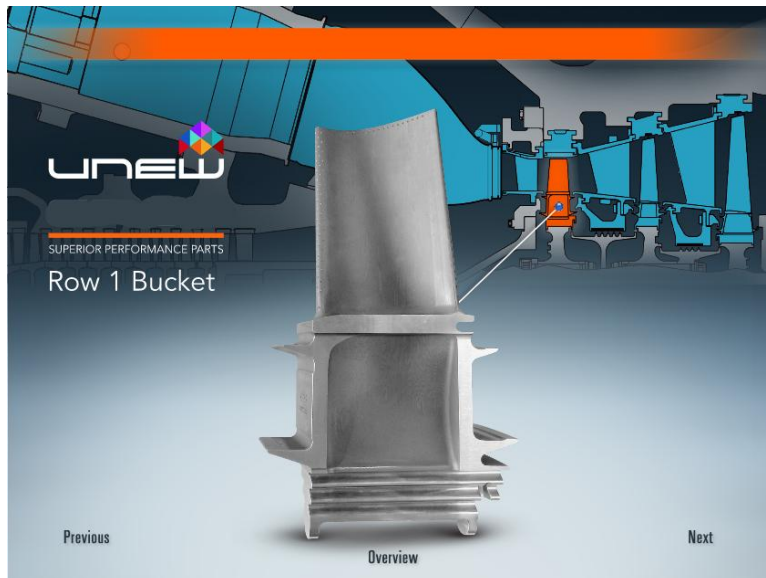
UNEW has successfully reverse engineered, manufactured, and supplied aviation-grade capital parts for a wide range of heavy-duty gas turbine platforms, including GE Frame series (5, 6, 7, 9), Siemens V and SGT series, Ansaldo AE series, and Alstom GT series. All components are produced in accordance with aerospace manufacturing standards, advanced metallurgy, and precision engineering practices.

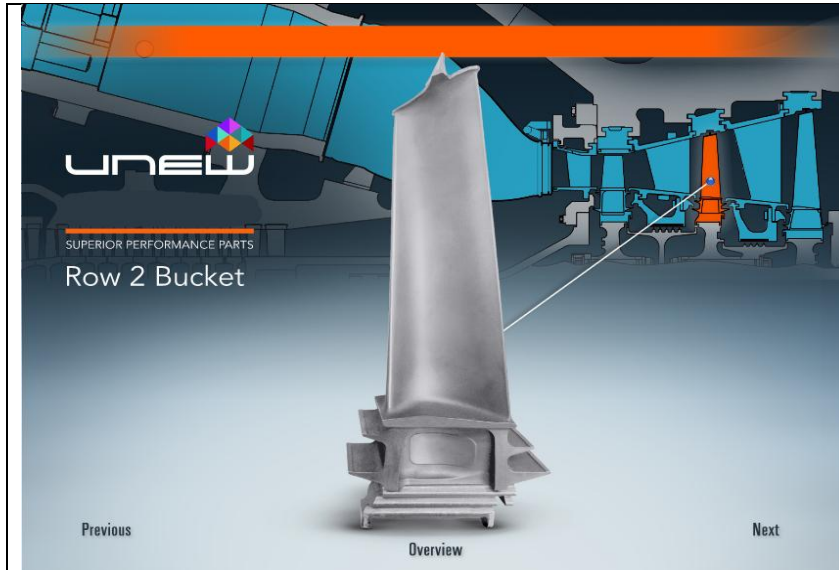


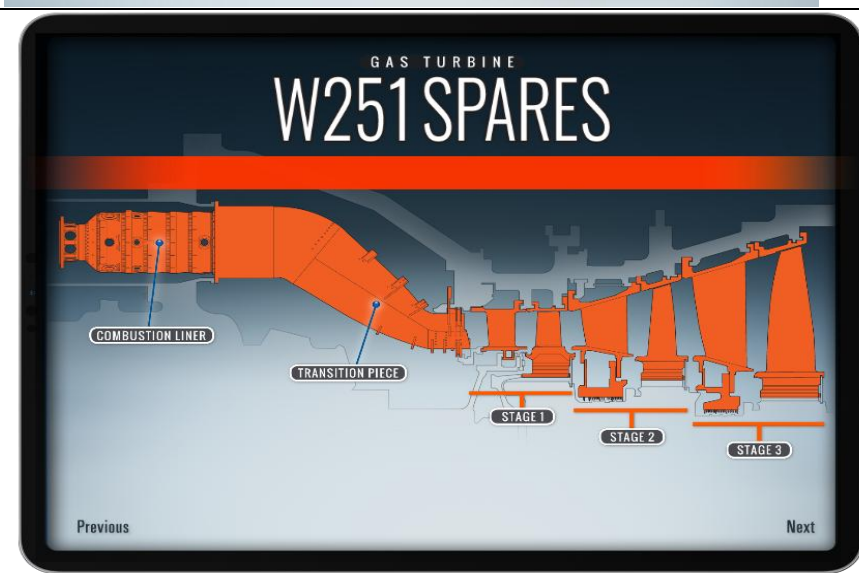
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- Current Focus: Addressing operational challenges in demanding environments by developing enhanced replacement components that improve reliability, extend service life, and reduce total lifecycle costs for power plants, refineries, and industrial facilities.
- Engineering Flexibility as a Core Advantage
 - Provide customers with a broad range of component design options and assembly configurations, rather than limiting solutions to fixed OEM upgrade packages.
 - Maintain high manufacturing capacity and responsive supply capability to support customers requiring rapid delivery, large quantities, and outage-driven schedules.
 - Establish redundant and diversified supply chains to ensure stable production and protect customers from disruptions related to single-source suppliers.
 - Apply advanced materials, coatings, and design improvements to optimize component performance for site-specific operating conditions and fuel compositions.









Vane



Blade



Blade



Blade

10. UNEW Gas Turbine Consumable Parts Capability

UNEW manufactures and supplies a comprehensive portfolio of high quality consumable components supporting heavy duty industrial gas turbines produced by GE, Siemens, Ansaldo Energia, Alstom and other major turbine manufacturers. These components support routine maintenance, combustion inspections, hot gas path inspections, and major outage activities. Through advanced manufacturing processes, qualified materials, and strict quality control, UNEW ensures reliable sealing performance, mechanical integrity, and long service life for consumable parts operating in demanding high temperature turbine environments.

Key Consumable Components



High temperature gaskets including spiral wound gaskets, serrated metal gaskets, combustion chamber gaskets, and sealing rings used throughout turbine casing and combustion assemblies.



High strength turbine fasteners including bolts, studs, nuts, washers, and combustion hardware fasteners manufactured from

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high strength alloy steels and nickel based materials.

Sealing components including E seals, Hula seals, honeycomb seals, brush seals, and turbine casing seals designed to maintain internal pressure and minimize leakage.



Typical Consumable Parts Supplied

Category	Examples	Application
Sealing Components	Spiral wound gaskets, serrated gaskets, O rings	Turbine casing and combustion sealing
Fasteners	High strength bolts, studs, washers	Structural connections and turbine casing
Combustion Consumables	Fuel nozzle parts, ignition accessories	Combustion system maintenance
Wear Components	Brush seals, honeycomb seals, sealing strips	Efficiency and leakage control

Supply Capability

UNEW maintains large production capacity and flexible supply capability to support major turbine outages and maintenance

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schedules worldwide. The company supports utilities, refineries, and petrochemical plants by providing reliable consumable components with consistent quality and rapid delivery.

Through strong engineering capability and global supply chain management, UNEW continues to deliver high quality consumable parts that help ensure safe, reliable, and efficient gas turbine operation.



9. UNEW GAS TURBINE TECHNICAL TRAINING & CERTIFICATION PROGRAM

Many power plants currently rely on foreign Field Technical Advisors (TFA) to supervise gas turbine inspections and maintenance activities. Local technicians are typically capable of performing millwright tasks but often lack the technical authority required to lead turbine inspections or make engineering decisions during outages.

UNEW's Technical Training and Certification Program is designed to close this gap by developing local engineers and technicians into qualified turbine specialists capable of supervising inspections and maintenance activities. The program combines classroom instruction, hands-on field training, and structured technical certification.

TRAINING STRUCTURE

UNEW training programs combine both theoretical knowledge and practical field experience:

- Classroom Training – Gas turbine design, thermodynamic principles, component identification, inspection theory, safety procedures, maintenance planning, and troubleshooting.
- Field Training – Practical turbine inspection training including CI and HGPI procedures, tooling usage, component handling, inspection documentation, and outage coordination.
- Technical Workshops – Case studies, troubleshooting exercises, and real maintenance scenarios from operating gas turbine fleets.

COMBUSTION INSPECTION (CI) TRAINING CURRICULUM – 2 DAY PROGRAM

Module	Topics Covered	Duration
CI Module 1	Gas turbine operating principles and combustion system overview	1 Day
CI Module 2	Combustion components: fuel nozzles, liners, caps, transition pieces	
CI Module 3	Inspection procedures and wear analysis	
CI Module 4	Component removal, installation procedures, tooling and safety	1 Day
CI Module 5	Inspection reporting, troubleshooting and maintenance planning	

Total CI Training Duration: 2 Days

HOT GAS PATH INSPECTION (HGPI) TRAINING CURRICULUM – 5 DAY PROGRAM

Module	Topics Covered	Duration
HGPI Module 1	Advanced turbine design and hot gas path components	1 Day

HGPI Module 2	Turbine blades, vanes, shrouds and cooling technologies	1 Day
HGPI Module 3	Disassembly procedures, tooling and outage planning	1 Day
HGPI Module 4	Inspection criteria, life assessment and repair decisions	1 Day
HGPI Module 5	Reassembly procedures, alignment verification and performance checks	1 Day

Total HGPI Training Duration: 5 Days

FIELD TECHNICAL ADVISOR (TFA) DEVELOPMENT PROGRAM

The UNEW TFA Development Program is designed to progressively train technicians and engineers to become qualified Field Technical Advisors capable of supervising turbine inspection and maintenance activities.

TFA Level	Training Focus	Training Duration	Outcome
Entry Level TFA	Basic turbine design, component identification, safety procedures and inspection fundamentals	1 week	Technicians support turbine inspection teams and assist maintenance activities
Intermediate TFA	CI/HGPI/MI inspection procedures, outage preparation, maintenance coordination	2 Weeks	Technicians assist in supervising inspections and coordinating turbine maintenance work
Advanced TFA	Advanced diagnostics, inspection evaluation, outage leadership and technical reporting	3 Weeks	Engineers and senior technicians can independently lead turbine inspection teams and supervise outage execution

11. UNEW Technical Certification

Upon successful completion of the training program, participants receive official UNEW Technical Certificates recognizing their competency in gas turbine inspection and maintenance.

Certification Categories:

- Certified Gas Turbine Maintenance Technician
- Certified Combustion Inspection (CI) Specialist
- Certified Hot Gas Path Inspection (HGPI) Specialist
- Certified Field Technical Advisor (TFA)

These certificates confirm that the participant has completed both classroom and field training and has demonstrated competency in turbine inspection procedures.

UNEW certification programs are designed to follow internationally recognized engineering and maintenance practices used throughout the global gas turbine industry. As a result, these certificates provide strong professional recognition and are accepted by turbine operators and maintenance organizations worldwide.

By obtaining UNEW certification, technicians gain internationally recognized credentials that demonstrate their ability to support gas turbine inspection and maintenance activities at power plants around the world.

12. GLOBAL SUPPORT & CONTACT

UNEW provides global engineering, manufacturing, refurbishment, and field maintenance services for heavy-duty industrial gas turbines used in power generation, petrochemical, and industrial energy facilities worldwide.

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Services:

Capital Parts Manufacturing
Component Refurbishment, Upgrade, Overhaul, & Life Extension
Field Maintenance & Outage Services
Long Term Service Agreements (LTSA)

Engineering Reliability • Global Power Solutions