Technical Parameters of GE LM6000PA Aero-Derivative Gas Turbine (Dunhuang Unit)

This document contains the complete technical parameters of the GE LM6000PA aero-derivative gas turbine (Dunhuang unit). All indicators comply with GE's original design standards and third-party testing specifications. It is for reference in technical evaluation and docking, and does not include any business-related clauses.

(I) Core Configuration & Equipment Origin

- Gas Turbine Model: GE LM6000-PA
- Manufacturer: GE Marine & Industrial Engines, USA
- Matched Gearbox: LUFKIN, USA, Model NFVQ 2419C (included in the unit scope)
- Matched Generator: Brush, UK, Model BDAX7-290ERJ (included in the unit scope)
- Equipment Type: Dual-rotor aeroderivative gas turbine, Structure: 5-stage LPC (Low Pressure Compressor) + 14-stage HPC (High Pressure Compressor) + 2-stage HPT (High Pressure Turbine) + 5-stage LPT (Low Pressure Turbine)
- Fuel Nozzles: 30 units
- Control System: Netcon5000 (included in the unit scope)
- Equipment Location: Dunhuang, China
- Latest Inspection: Full third-party borescope inspection completed on January 29, 2026 (Inspection Report Rev.00, Inspected by Mr. Saroch Chinnakam / Mr. Prasert Marayat)

(II) Core Performance Parameters

1. Core Parameters of Gas Turbine Main Unit

Parameter	Rated Value	Other Key Parameters
Output Power	39.46MW	Locked Speed 627r/min, Thermal Efficiency 40%
Rated Speed	3627Rpm	Heat Rate T48 1620°F, Exhaust Gas Flow 957.8LB/s
LPC Pressure Ratio	2.4:1	5-stage Low Pressure Compressor
HPC Pressure Ratio	12:1	14-stage High Pressure Compressor, Inlet Manifold Pressure Ratio >580PSIG
Gearbox Speed Ratio	1.209:1	Input 3627Rpm, Output 3000Rpm
Gearbox Rated Power	7000 HP	Gearbox Equipment No. 11848

2. Core Parameters of Matched Generator

- Manufacturer: Brush Electrical Machines Ltd., UK
- Rated Power: 50.6MW / 59530KVA
- Rated Speed: 3000Rpm
- Outlet Voltage: 11kV
- Rated Stator Current: 3124A
- Power Factor: 0.85
- Excitation Parameters: Rated Excitation Voltage 125V, Rated Excitation Current 6.5A
- Connection Mode: Star Connection, 3 Phase / 50Hz

（III）Application Scenarios

This unit is fully configured (including gearbox, generator and control system), suitable for peaking power generation, grid backup power supply, distributed energy stations and industrial park self-owned power plants. It can be directly put into relevant power supply scenarios without additional matching of core auxiliary equipment.

（IV）Operation & Maintenance Technical Information

1. Basic Operation Data

- Production Date: 1995 (Original GE Factory, USA)
- Official Commissioning Date: October 2000
- Total Accumulated Operating Hours: 90,000 hours
- Latest Inspection Date: January 29, 2026 (Full third-party borescope inspection)
- Operating Mode: Peaking / Base Load Operation

2. Overall Borescope Inspection Conclusion

The overall operation condition of the equipment is normal, with no structural damage. Some components have scaling and coating loss after normal operation, which need to be cleaned and replaced according to the inspection recommendations before installation. A major comprehensive inspection in accordance with the original GE factory standard must be completed before equipment installation to ensure reliability after commissioning.