77 MW 2011 Used GE Frame 6-6FA PG6111 Natural Gas Turbine Power Plant

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Specifications

Manufacturer	GE
Model	Frame 6-6FA
Year	2011
Condition	Used
Location	Eastern Asia
Price	$4,565,500.00
Category	Natural Gas Turbines
Subcategories	• 10 – 99 MW
Stock Number	USP010072
Wattage	77 MW
Hours	1000X Approx
Frequency	50hz
Fuel type	Natural Gas
Voltage	11,000
Balance of Plant Available? (BOP)	-

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Description & Additional Notes

77MW 50Hz GE FRAME 6-6FA GAS Turbine Power Plants

■ Main Specifications

▣ GAS Turbine

Maker	GE International Inc
Model	GE FRAME 6-6FA(PG6111)
Year of production	Sep. 2011
Output	81,000kW
Speed	5,231rpm
Inlet pressure	1.47MPa
Exhaust pressure	12.25kPa
Number of compressing stages	18
Turbine stage	3
Design ambient temperature	50°C
Inlet temperature	1,431°C
Exhaust temperature	589°C
Heat rate(Btu/kWh)	9,760
Heat rate(kJ/kWh)	10,300
Pressure ratio	15.6:1
Mass flow(kg/sec)	203
Efficiency	35%
Fuel	Town Gas
Total operation hours	Less than 1,000 hours
Number of start & stop	130~140 times

▣ Generator

Maker	GE International Inc
Year of production	2011
Voltage	11,000V
Electrical output rate	77,000kW
Speed	3,000rpm
Frequency	50Hz
Maximum ambient temperature	40°C
Minimum ambient temperature	-1°C
Maximum cooling temperature	51°C
Stator mass	approximately 79ton
Rotor mass	approximately 28ton
Rotor complete mass	approximately 145ton

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Description & Additional Notes

77MW 50Hz GE FRAME 6-6FA GAS Turbine Power Plants

■ **Equipment List**

1	GAS TURBINE
2	CO2 BOTTLES CONTAINER
3	GENERATOR ACOUSTICAL ENCLOSURE
4	COMPRESSOR WASHING SKID
5	EXHAUST SILENCEERS
6	EXHAUST PERSONAL PROTECTION
7	TEWAC GENERATOR
8	GENERATOR NEUTRAL ACCESSORY COMPARTMENT (GNAC)
9	GENERATOR LINE ACCESSORY COMPARTMENT (GLAC)
10	CORIOLIS FUEL GAS FLOWMETER
11	GT WALKWAYS
12	FUEL GAS COALESCING FILTERS
13	FUEL GAS SAFETY SHUT OF VALVE (SSOV)
14	GT AIR PROCESSING UNIT
15	SELF CLEANING AIR FILTER
16	AIR INLET DUCTS WITH SILENCERS
17	EXHAUST FIFFUSER
16	STATIC FREQUENCY CONVECTOR (5FC)
19	OIL/GAS MODULE
20	AIR INLET SUPPORT STRUCTURE
21	GT ACOUSTICAL ENCLOSURE
22	OIL/GAS MODULE ACOUSTICAL ENCLOSURE
23	STATIC EXCITATION
24	PACKAGED ELECTRONIC & ELECTRICAL CONTROL CABINET (PEECC)
25	BATTERY COMPARTMENT
26	EXCITATION TRANSFORMER
27	WASHING WATER RECOVERY PIT
28	LUBE OIL SECONDARY CONTAINMENT
29	PIPING TRENCH AND SUPPORT PEDESTAL

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Description & Additional Notes

GAS TURBINE		
1	Gas Turbine OEM	GE
2	Type	Simple open cycle 1 axle gas turbine
3	Model	6FA
4	Year of operation start	Sep, 2011
5	Operation hour	1,000h
6	Number of start & stop	140 times
7	Operation situation	Peaking
8	Number of no-load operation	–
9	Fuel	Town gas
10	Inspection cycle	Major inspection: Unexecuted. Daily inspection only.
11	Most recent inspection	Daily inspection only
12	Sales features	Power generation equipment set (Electricity control parts included.)
13	Spare parts	N/A
14	Current condition	Being stored
15	Remodelling / Modification	Stock
16	Generating power	81MW
17	Manufacturer	HITACHI
18	Thermal efficiency	35.40%
19	Combustion temperature	1,300℃
20	How to activate	Thyristor starting
21	NO x measure	Latest premixed combustion equipment

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Description & Additional Notes

22	Entrance pressure	1.47Mpa
23	Exit pressure	1.25kPa
24	Entrance temperature	1431℃
25	Exit temperature	589℃
26	Design of outside temperature	5℃
27	Rotation speed	5,231 min^{-1}
28	Critical speed of a driven machine 1st	1,768 min^{-1}
29	Critical speed of a driven machine 2nd	3,996 min^{-1}
30	Critical speed of a driven machine 3rd	6,294 min^{-1}
31	Amount of exhaust gas	650,000m^3N/h
32	Amount of smoke & soot (Sulfur oxides)	0m^3N/h
33	Smoke concentration (Nitrogen oxide)	50ppm
34	Smoke concentration (dust)	0.00 g/m^3N
AIR COMPRESSOR		
1	Type	Axial flow compressor
2	Entrance pressure	−0.65kPa
3	Exit pressure	1.47MPa
4	Entrance temperature	5℃
5	Exit temperature	383℃
6	Rotation speed	5231min−1

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Description & Additional Notes

Chimney		
1	Type	Single cylinder
2	Gas speed at exit	48.5m/sec
3	Gas temperature at exit	589℃
4	Diameter	3.86m
5	Height	40m
6	Effective height	346m
7	Quantity	1
Burner		
1	Type	Pressure injection type
2	Capacity	3.5 x 10^3 m^3N/h/Unit
3	Quantity	6
Type of gas and etc.		
1	Type	Natural gas
2	Calorific value	40,530 kJ/m^3N
3	Sulfur content	0.0%
4	Nitrogen content	Below 0.0%
5	Ash content	0.0%

Asset Images

- **Images may be representative, and actuals can be supplied upon request.**

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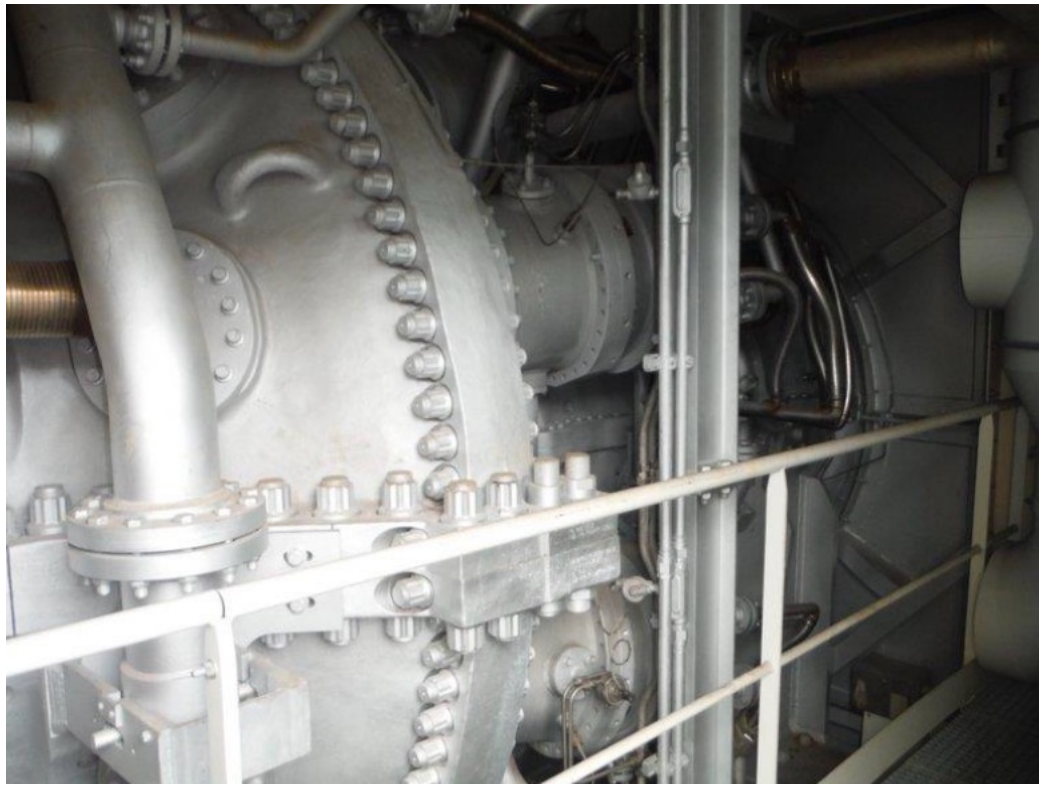

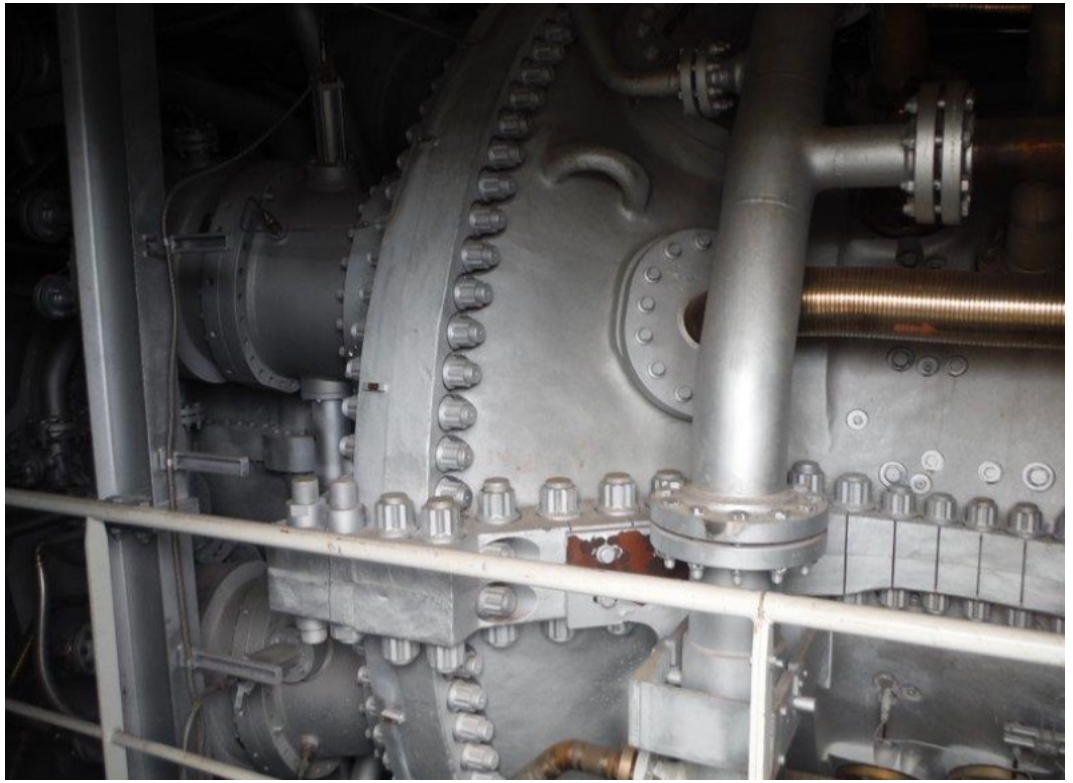

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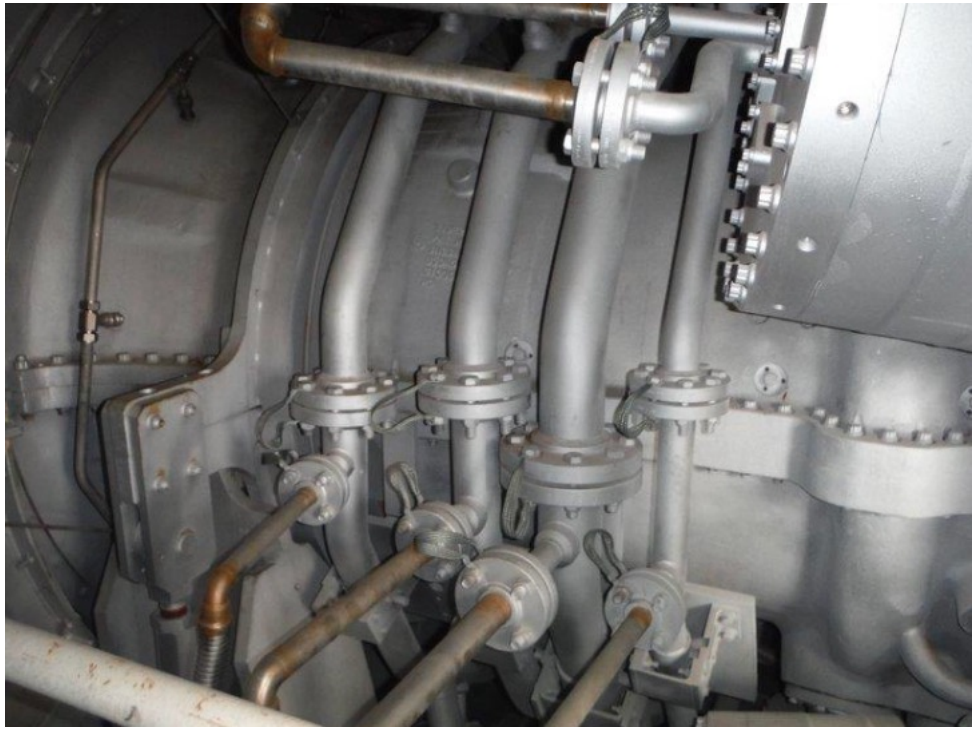

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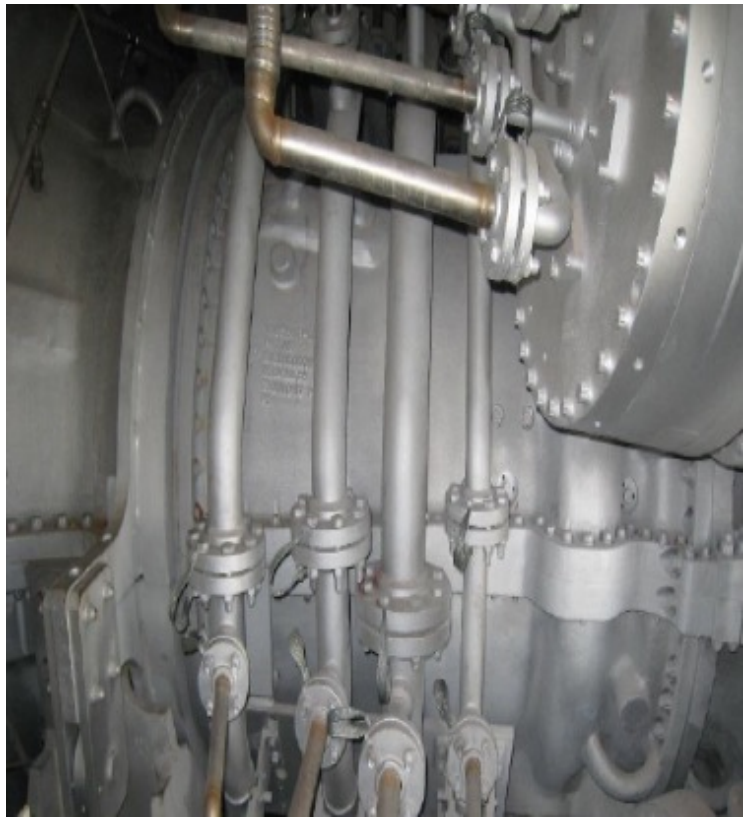

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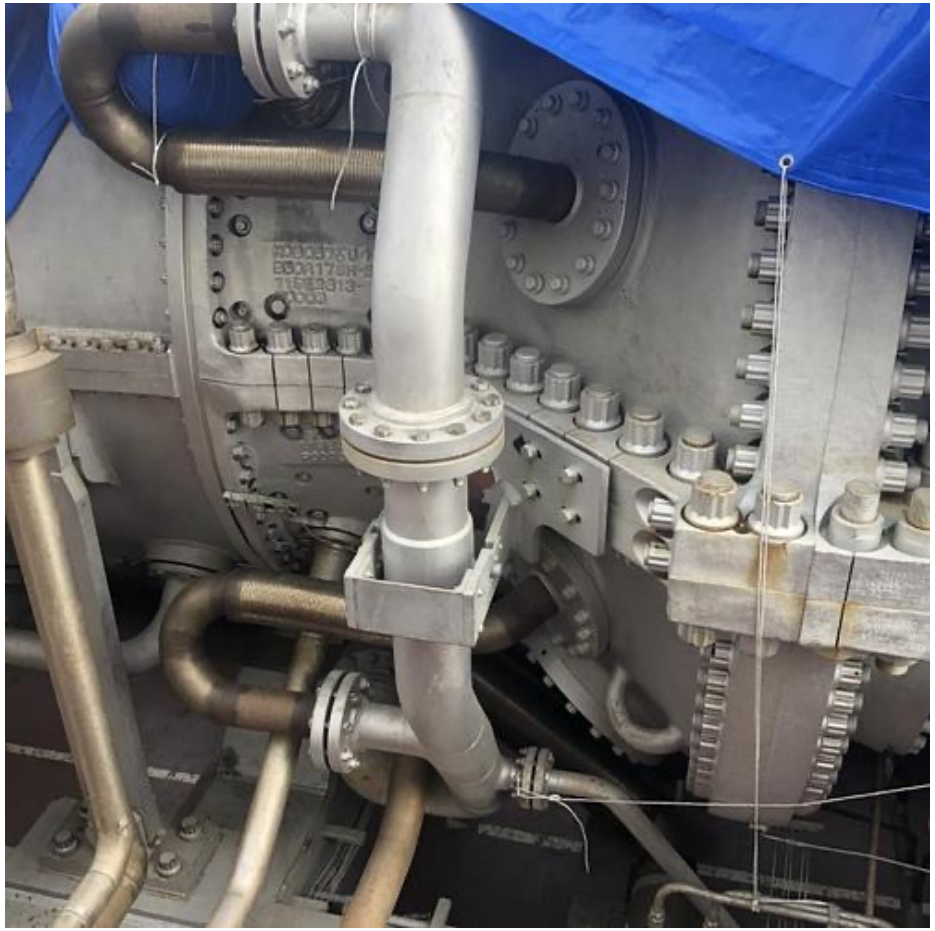

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