

109FB Single Shaft

Conditions Ambiantes: .9810 bar,a, 11.3 °C, 79.40 % RH

Gaz Naturel, DLN

Turbine à Gaz: PG9371

Turbine à Vapeur: 1 x 1,219.3 mm LSB

CC en charge de base
Conditions ambiantes moyennes
Emissions 30 mg NOx

1. Performance de la Centrale

1.1 Puissance (kW)

Gross Equipment Power *	418790
Equipment Auxiliary Power	750
Net Equipment Power	418040
Plant Auxiliary Power	9360
Net Plant Power	408680
* Gross Power At Generator Terminals Minus Excitation Power	

1.2 Combustible

Type de Combustible -Gas Naturel

Specification - GEI 41040G Specifications Complémentaires

Système de Combustion - DLN

Pouvoir Calorifique Inférieur (kJ/kg)	PCI	48,829.
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Consommation (10 ⁶ kJ/hr)	PCI	2,575.6
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1.3 Consommation Spécifique

1.3.1 Net Equipment Heat Rate (kJ/kWh)	PCI	6,161.
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1.3.2 Net Equipment Thermal Efficiency (%)	PCI	58.43
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1.3.3 Net Plant Heat Rate (kJ/kWh)	PCI	6,302.
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1.3.4 Net Plant Thermal Efficiency (%)	PCI	57.12
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1.4 Conditions d'Opération

Température Ambiante de l'Air (°C)	Sèche	11.3
	Humide	9.4
Humidité Relative Ambiante (%)		79.40
Pression Ambiante de l'Air (bar,a)		.9810
Altitude du Site (m above MSL)		0
Temperature à l'Entrée du Compresseur (°C)	Sèche	11.3
Humidité relative à l'Entrée du Compresseur (%)		78.54
Pression à l'Echappement de la Turbine à Vapeur (mm Hga (@15°C)A)		35.56

1.5 Equipment Auxiliary Power (kW)

1.5.1 Gas Turbine (1 GT), Steam Turbine (1 ST), Generator (1 GEN)

Lube Oil Pump	
Hydraulic Oil Pump	
Compartment Vent Fans	
Seal Oil Pump	
Lube Oil Tank Exhauster	
Exhaust Frame Blower	
Heating and Cooling Pump	
Vapor Extractor	
Conditioning Pump	
Steam Gland Exhauster	
Controls	
GT Controls & Instrumentation	
Turbine Subtotal	697

1.5.2 Heat Recovery Steam Generator (1 HRSG)

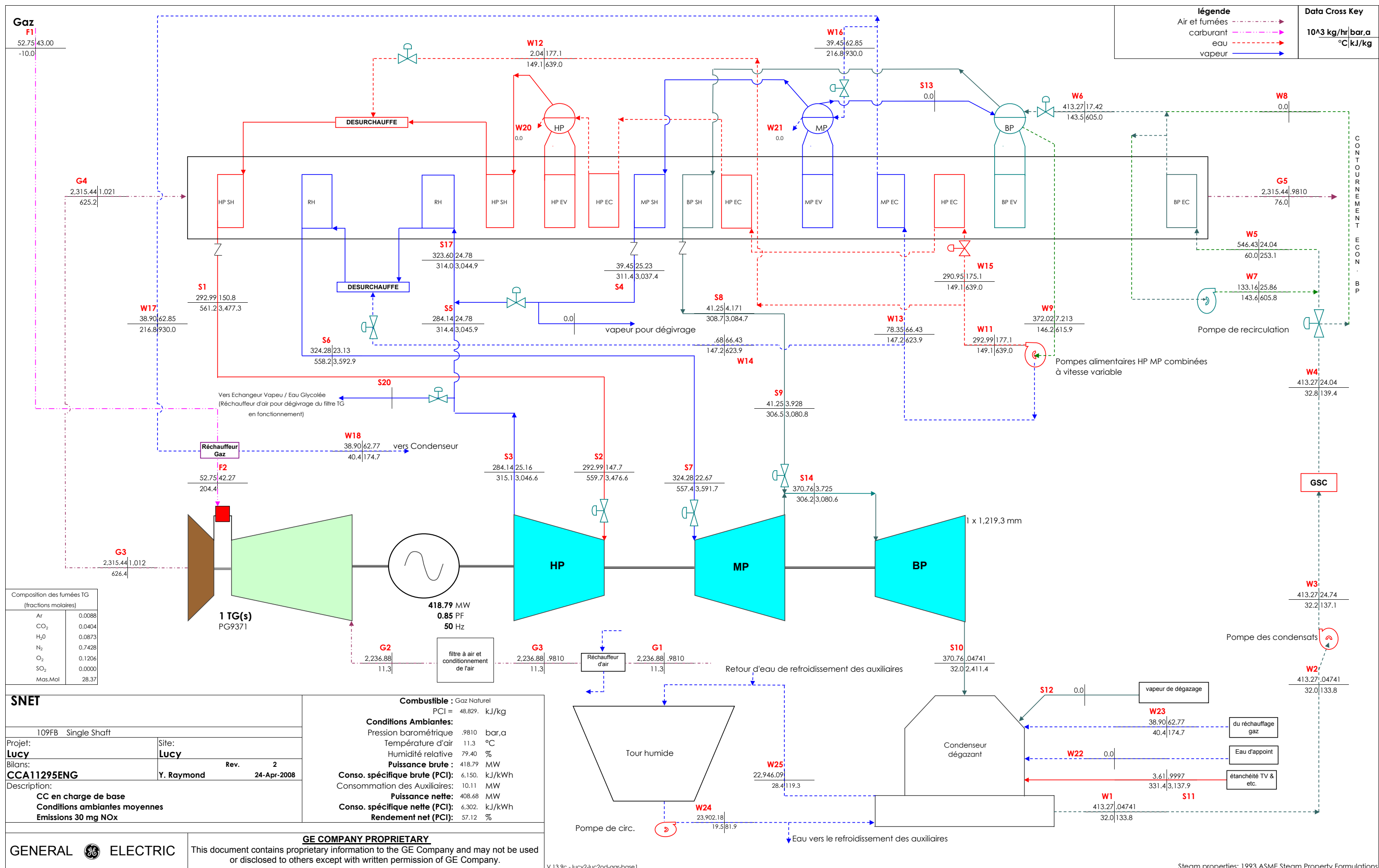
Controls & Instrumentation	20
Low Pressure Economizer Recirculation Pump	32
HRSG Subtotal	52

Total Equipment Auxiliary Power 750

1.6 Plant Auxiliary Power (kW)

Condensate pumps	419
Combined HP/IP Boiler Feedwater pumps	2154
Circulating Cooling Water Pumps	2006
Cooling Tower Fans	1243
Main Transformer Losses	1482
Vacuum Pumps	86
Water Pumps	73
Closed Circuit Cooling Water Pumps	183
Air Compressors	97
HVAC & Miscellaneous BOP	Note 1 523
Chemical Plants	5
Demi Water Treatment Plant	Note 2 0
Waste Water Treatment System	84
Auxiliary Transformer Losses	189
Miscellaneous electrical losses and lighting	Note 3 815
Total Plant Auxiliary Power	9360

- Note 1 :** Minimum consumption of HVAC system due to partial switch-off (e.g electrical and turbine building) during performance test as per INTEC criteria
- Note 2 :** Considering full demin water tanks during performance test
- Note 3 :** Minimum consumption of lighting due to partial switch-off during performance test as per INTEC criteria



109FB Single Shaft

Conditions Ambiantes: .9810 bar,a, 11.3 °C, 79.40 % RH

Gaz Naturel, DLN

Turbine à Gaz: PG9371

Turbine à Vapeur: 1 x 1,219.3 mm LSB

CC à 53% charge
Conditions ambiantes moyennes
Emissions 30 mg NOx

1. Performance de la Centrale

1.1 Puissance (kW)

Gross Equipment Power *	224220
Equipment Auxiliary Power	750
Net Equipment Power	223470
Plant Auxiliary Power	8582
Net Plant Power	214888
* Gross Power At Generator Terminals Minus Excitation Power	

1.2 Combustible

Type de Combustible -Gas Naturel

Specification - GEI 41040G Specifications Complémentaires

Système de Combustion - DLN

Pouvoir Calorifique Inférieur (kJ/kg)	PCI	48,829.
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Consommation (10 ⁶ kJ/hr)	PCI	1,540.5
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1.3 Consommation Spécifique

1.3.1 Net Equipment Heat Rate (kJ/kWh)	PCI	6,893.
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1.3.2 Net Equipment Thermal Efficiency (%)	PCI	52.22
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1.3.3 Net Plant Heat Rate (kJ/kWh)	PCI	7,169.
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1.3.4 Net Plant Thermal Efficiency (%)	PCI	50.22
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1.4 Conditions d'Opération

Température Ambiante de l'Air (°C)	Sèche	11.3
	Humide	9.4
Humidité Relative Ambiante (%)		79.40
Pression Ambiante de l'Air (bar,a)		.9810
Altitude du Site (m above MSL)		0
Temperature à l'Entrée du Compresseur (°C)	Sèche	23.1
Humidité relative à l'Entrée du Compresseur (%)		37.18
Pression à l'Echappement de la Turbine à Vapeur (mm Hga (@15°C)A)		25.39

1.5 Equipment Auxiliary Power (kW)

1.5.1 Gas Turbine (1 GT), Steam Turbine (1 ST), Generator (1 GEN)

Lube Oil Pump	
Hydraulic Oil Pump	
Compartment Vent Fans	
Seal Oil Pump	
Lube Oil Tank Exhauster	
Exhaust Frame Blower	
Heating and Cooling Pump	
Vapor Extractor	
Conditioning Pump	
Steam Gland Exhauster	
Controls	
GT Controls & Instrumentation	
Turbine Subtotal	697

1.5.2 Heat Recovery Steam Generator (1 HRSG)

Controls & Instrumentation	20
Low Pressure Economizer Recirculation Pump	29
HRSG Subtotal	49

Total Equipment Auxiliary Power 750

1.6 Plant Auxiliary Power (kW)

Condensate pumps		357
Combined HP/IP Boiler Feedwater pumps		2063
Circulating Cooling Water Pumps		2007
Cooling Tower Fans		1244
Main Transformer Losses		856
Vacuum Pumps		86
Water Pumps		73
Closed Circuit Cooling Water Pumps		183
Air Compressors		97
HVAC & Miscellaneous BOP	Note 1	523
Chemical Plants		5
Demi Water Treatment Plant	Note 2	0
Waste Water Treatment System		84
Auxiliary Transformer Losses		189
Miscellaneous electrical losses and lighting	Note 3	815
Total Plant Auxiliary Power		8582

Note 1 : Minimum consumption of HVAC system due to partial switch-off (e.g electrical and turbine building) during performance test as per INTEC criteria

Note 2 : Considering full demin water tanks during performance test

Note 3 : Minimum consumption of lighting due to partial switch-off during performance test as per INTEC criteria

