



Performance Data

GT10 Cogeneration Plant

3. PERFORMANCE DATA

3.1.0 GUARANTEE PERFORMANCE DATA

3.1.1 GAS TURBINE GENERATOR

a) Set Description

Gas Generator	ABB STAL GT10
Power Turbine	ABB STAL 73.1-2.7700

b) Reference Conditions

Ambient Temperature	35°C
Ambient Air Pressure	1.013 bar (a)
Relative Humidity	70%
Duct Pressure Losses	
- Inlet	100 mm H2O
- Outlet	250 mm H2O
Fuel	Naphtha according to specification C=84.525% H2 = 15.425% S = 0.05% (wt) LHV = 39 795 KJ / Kg

Frequency	50 Hz
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Power Factor	0.8
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Conditions of set	New and clean, according to ISO 2314.
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GT Load	100%
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Water/ Fuel ratio	1.0
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c) Performance Data

Gross Power output (At Generator terminals)	19540 KW
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Gross Spec Heat Consumption	100.00 KJ / KW
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3.1.2 HEAT RECOVERY STEAM GENERATOR

a) Set Description

HRSG Type Unfired Single pressure

b) Reference Conditions

Ambient Temperature 35°C

Total pressure drop flue gas side < 25 mbar

Blow down & vent losses 2%

Feed Water temperature at
Inlet of deaerator 30°C

Flue gas outlet temperature 82 °C

Conditions of set New and clean

GT Load 100%

GT Exhaust Gas Conditions

- Exhaust Flow 76.2 kg/sec

- Exhaust Gas temperature 505 °C

- Exhaust Gas Composition Vol%

H2O 11.8

CO2 4.36

N2 70.7

O2 12.2

Ar 0.84

SO2 0.001

