

70 MW Wartsila Generator Power Plant

Complete plant 70840 KW, Total Hot Water production : 360 ton/h, Total Steam :35 ton/h, (6) six Wartsila Natural Gas and Dual Fuel Generator sets (4) 8730 kW Wartsila 20SV34SG Natural Gas Generator Sets, Year 2006 to 2009, 15000 to 40000 hours (2) 16650 KW Wartsila 50 DF Generator sets (Natural Gas, Light Fuel Oil & Heavy Fuel Oil) Year 2010, 11,000 running hours, 514 rpm, 50 HZ, Siemens Steam Turbine, Boilers, Cooling system, Lubricating Oil System, Control and Monitoring System, Electrical System, Transformers, Pumps, Air System, Exhaust Gas System, Compressed Air System, tanks and etc. The power plant has been well maintained by OEM since installation and is in good condition The (2) 16650 KW Wartsila 50 DF Generator sets can be purchase separately from the rest of the plant.

Engine Manufacture: Wartsila

Engine Model: 20V34SG

Power Output: 8730 KW

RPM: 514 rpm

Frequency: 50 HZ

Heat rate: 8124 kj/kWe

Efficiency: 43%

Year: 2006 and 2009

Fuel: Natural Gas

Quantity: Four (4)

Engine Manufacture: Wartsila

Engine Model: 50 DF

Power Output: 16650 KW

RPM: 514 rpm

Frequency: 50 HZ

Heat rate: 7997 kj/kWe

Efficiency: 45%

Year: 2010

Fuel: Natural Gas and Liquid Fuel (HFO & LFO)

Quantity: Two (2)

Total Power: 70840 kWh

Total Hot Water production: 360 ton/h

Total Steam: 35 ton/h

Type		Year Manufactur e	Running Hour	Power (KW)	Hot Water Production ton/h	Steam Generator
1	20SV34SG	2006	36903	8730	40 (85 degree)	5 (10 bar saturated)
2	20SV34SG	2006	40574	8730	40 (85 degree)	5 (10 bar saturated)
3	20SV34SG	2008	21659	8730	40 (85 degree)	4,7 (super heated)
4	20SV34SG	2009	15910	8730	40 (85 degree)	4,7 (super heated)
5	50DF	2010	11277	16660	90	7,8
6	50DF	2010	10986	16660	90	7,8
7	Siemens Steam Turbine	2010	7930	2600	17 ton/hr, 11 bara	
Total			70840	340		35

Boilers				
Type		Year Manufacture	Steam Generator	Steam Specs
1	OKA force crc.	2006	5	10 Bar saturated
2	OKA force crc.	2006	5	11 Bar saturated
3	OKA force crc.	2009	4,7	11 BarA 320 degree superheated
4	OKA force crc.	2009	4,7	11 BarA 320 degree superheated
5	Alborg	2010	7,8	11 BarA 320 degree superheated
6	Alborg	2010	7,8	11 BarA 320 degree superheated

Siemens Steam Turbine SST-060 Specifications	
Live Steam	
Pressure	11.00 bara
Temperature	320 C
Exhaust Steam	
Pressure	0.13 bara
Temperature	50 C
Enthalpy	2,520 kJ/kg
Speed	
Turbine	11,167 rpm
Output	1,500 rpm
Power	
Flow	17,160 kg/h

Output at the Coupling	2,660.0 KW
Output at the Terminals	2,564.0 KW

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