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THE FOLLOWING POWER PLANT AVAILABLE FOR SALE WITH US WITH IMMEDIATE DELIVERY:

220 MW Gas Based Power Plant, having the Following Technical Specifications:



POWER PLANT INFORMATION:

Introduction

We have equipments readily available of 220 MW of Gas / Naphtha based state of the art Combined Cycle Power Project in excellent operating condition for direct sale. The plant boasts of state of the art machineries and has an excellent and proven track record for its ceaseless reliability among the similar industries for past 13 years.

Project Status

The Gas Turbine was commissioned on 26th January 2002 and Plant COD (Commercial Operation Date) declared on 24th December 2002. Thereafter it was continuously operated on Natural Gas as well as Mix Fuel Operation (Gas + Naphtha) till 5th January 2015. Currently the plant is in the preservation mode.

Plant Equipment

The plant boasts of state of the art machineries like Gas Turbine, Steam Turbine both with ABB Controls, Heat Recovery Steam Generator, Electrical Generators and Foxboro DCS Control System for HRSG & BOP. *(Please refer Annexure I for detailed list of equipment for the Project and their respective suppliers.)*

The Power Station is certified for Integrated Management System (IMS) for Quality, Environment, Safety, Social Accountability and Information Security.

Land, Water & Fuel Requirements

The total land required for the Project including power block and Balance of Plant facilities is ~15 acres.

Total (sweet/ processed) water requirement for the Project is ~ 6000 Cu.M/day with closed cooling system.

Base load gas requirement for the Project is about 1.05 million standard cubic meter per day (mmscmd).

Advantage

All the equipment is under preservation mode and so is readily available upon dismantling and can be installed in the shortest possible time.

The plant is capable of dual fuel operation.

In lieu of the excellent operation and maintenance procedures, which can be verified from the maintenance records, the plant will have better Heat rate and higher efficiency than such machinery available worldwide at a lower cost, thus efficiently utilizing the gas resources.

TECHNICAL DETAILS

Equipment	Specification	Technology	Manufacturer	Type
Gas Turbine Unit	140 MW (Base load as per Site) Equivalent Operating Hours (EOH) since commissioning: 113613.9	Siemens V94.2	Ansaldo Italy	Dual Fuel Firing- Liquid & Gas (Gas/Naphtha/HSD)
Gas Turbine Generator	200 MVA, 15KV , 50Hz	Ansaldo	Ansaldo Italy	WY21Z-097LLT (Air cooled, Static Excitation)
GTG Transformer	210 MVA (235/15KV)	BHEL	BHEL, India	Oil filled, OFAF
Diverter Damper	Boiler side opening 5500 mm X 5500 mm ; Bypass side opening 5900 mm X 5900 mm With Blanking plate and winch Hydraulic pack, tank and pump : Single van positive displacement : 2 No's , 210 bar, 60 LPM; Motor 3ph, Induction motor, 50 Hz, 30 KW Seal Air Fan: 2 No's; 7500 m3/h , 850 mm WC; Motor : 3ph, induction motor, 415 V, 30 KW		Fouress Engg (I) ltd	Hydraulically operated
Heat Recovery Steam Generator (HRSG)	HP steam 226 TPH at 83.4 kg/cm2. 528 deg C LP steam 56 TPH at 5.24 kg/cm2. 205 deg C	Ansaldo	Ansaldo, Italy	Horizontal, Natural circulation & all modules fully drainable, with Condensate Pre heater. Separate Deaerator,
Stack	Main stack: 60 meter Bypass stack: 40 meter		Fouress Engg. (India)Ltd	Installed with Bypass Stack Dampers
Steam Turbine	Rated MW: 80 Steam pressure (HP/LP): 83.78	Ansaldo	Ansaldo, Italy	HDS16010NDA31. Single Cylinder, Dual

	kg/cm ² / 5.24 kg/cm ² Steam temperature (HP/LP): 526 deg c/ 198.9 deg c Equivalent Operating Hours (EOH) since commissioning: 95209.2			Pressure, extraction & Condensing
Steam Turbine Generator	105.5 MVA, 11.5 KV , 50 Hz	Ansaldo	Ansaldo, Italy	WY18Z-073LLT (Air cooled, Static Excitation)
STG Transformer	110 MVA (235/11.5KV)	BHEL	BHEL, India	Oil Filled
Surface Condenser	Hot well capacity : 19.7 M3 Material of Tube : SA 249 TP 304 NO. of Tubes : 10800 Length of condenser : 13500 mm	TEMA	TEMA India Ltd.	Indirect cooling
HP Feed water pump & Motor	Pump capacity : 276 Cu.m / Hr Total TDH MWC :1256.5 Model : GSG 100-300/11 Motor : 3Ph AC Induction Motor, 6600V, 50Hz, 1280 KW No. of pump & Motor : 2 HT Variable frequency drive (VFD) ; HARSVERT – AO6/150; 1750 KVA; 6.6 KV	German	Motor : Kirloskar Pump : Sulzer pumps	Diffuser
LP Feed water pump & Motor	Pump capacity : 68 Cu.m / Hr Total TDH MWC :202.5 Model : MB 80/5 Motor : 3Ph AC Induction Motor 415V, 50Hz, 75 KW No. of pump & Motor : 2 LT variable Frequency Drive (VFD) Make: Yantra Automation Model: Allen Bradley Power Flex	German	Motor : Kirloskar Pump : Sulzer pumps	Diffuser

	400			
Condenser Extraction Pump & Motor	Pump capacity : 344 Cu.m / Hr Rated TDH, MLC: 204.5 Model: TTMC 150-400/4 Motor :Model: VSCx400F ; 3Ph AC Induction Motor; 6600V, 50Hz, 270 KW No. of pump & Motor : 2		Motor : Kirloskar Pump : Sulzer pumps	Vertical can
Vacuum pump	No Of Pumps & Motor: 2 NASH : Type: AT- 1006 Motor : 3ph, 415V, 50Hz, 45 KW Type: BF4-280MA68		Pump :NASH Motor: EFACEC	
Station Transformer	No. of Transformers :2 Power Rating : 16 MVA No Load voltage : 220 / 6.9 (HV/LV), KV, OLTC, cooling : ONAF		BHEL	Oil Filled,
Power Block Transformer	No. of Transformers :2 Power Rating : 2000 KVA No Load voltage : 6600/ 433 (HV/LV), V		Kirloskar	Dry Type
Fuel Oil Transformer	No. of Transformers :2 Power Rating : 630 KVA No Load voltage : 6600/ 433 (HV/LV), V		Voltamp	Oil filled
Lighting Transformer	No. of Transformers :4 Power Rating : 200 KVA No Load voltage : 415 / 415 (HV/LV), V		Voltamp	Dry type

GTG SFC Transformer	No. of Transformers :1 Power Rating : 2100 KVA No Load voltage : 6600/ 1550 (HV/LV), V		S.E.A , Italy	Dry Type
GTG EXC Transformer	No. of Transformers :1 Power Rating : 1150 KVA No Load voltage : 6600/ 440 (HV/LV), V		S.E.A , Italy	Dry Type
STG EXC Transformer	No. of Transformers :1 Power Rating : 750 KVA No Load voltage : 6600/ 440 (HV/LV), V		S.E.A , Italy	Dry Type
220KV Switch Yard (AIS)	No. of Bays: 10 Generator Bay Circuit Breaker : Alstom – 2 No's, Spring Gang Operated Other Bays Circuit Breaker: ABB – 8 No's Current Transformer: ABB		Generator Bay Circuit Breaker : Alstom Other Bays Circuit Breaker: ABB Current Transformer: ABB	Double Bus with Bus Coupler and Transfer Bus Scheme.
Fuel oil Pumps	<u>Naphtha Unloading Pump</u> Model: 4HPX13A (100m3/hr) – 2 no's <u>Naphtha Forwarding Pump</u> Model: 3HPX12A (100m3/hr) -2 no's <u>HSD Unloading Pump</u> Model: 3HPX13A (70m3/hr) – 2no.s		Ingersoll-Rand (I) Limited	Hazardous Area classification: Class: 1, Division: 1, Group: D

	<u>HSD forwarding Pump</u> Model: 3HPX13A (100m3/hr) – 2no.s <u>Fuel oil Injection Pump & Motor – 2Nos</u> Model GSG80=260/13, Flow 69.8 M3/hr, 1250 MWC. Motor: 6.6 KV, 50 Hz, 3Ph, AC , Model: CAD450C2,		Pump : Sulzer, motor : Siemens	
Fuel Oil Tanks	Naphtha : 2 X 2500 KL HSD :3 X 300 KL Centrifuge System: Veronesi Separatori , Italy; 5100 RPM; motor Brook Crompton; 415 V, 50 Hz 3ph, 30 KW; 4 no's on Skid mounted			Naphtha tank with Floating Roof: double deck HSD tank fixed Roof
Balance of Plant				
Black start DG	500 KVA ~ 2 No's		Cummins India Ltd	(Engine model VTA 28-G. Generator : Stamford, model HC54402)
Fuel Gas System	Max operating flow 1.46 MMSCMD		Multitex	With Redundant Filters & Pressure Regulators as well as Orifice Flow meter, Pressure Reduction 27/19 Bar
Cooling Tower	20000m3/h flow , 7 No's twin Cells Induced Draft Counter flow Seven twin cell : 14 No's Fan, motor and Gear box Axial flow propeller; Diameter mm: 8535; 114 Rpm ; G Box Spiral bevel cum helical Motor : ABB., 3Ph AC Induction Motor, 415 V, 50 Hz, 55 KW, 1475 Rpm		Paharpur Cooling Tower, Calcutta	Concrete Structure Paharur model no 83462-4.0-108

	With metal Stop logs at the CT basin and trash grills			
Circulating Cooling Water Pumps	3 No's, Vertical Mixed Flow, 8872 M3/H Motor: 3Ph, AC Induction Motor, 6600 V, 50 Hz, 630 KW		Pump : Mather and Platt (I) Limited Motor : Crompton Greaves	Model No 36 VMF4 Model: SPDP FR: VUDC 1180
Aux. Cooling Water Pumps	3 No's, Vertical Mixed Flow, 890 M3/H Motor: 3Ph, AC Induction Motor, 415 V, 50 Hz, 90 KW		Pump : Mather and Platt (I) Limited Motor : Crompton Greaves	Model No 12 VMF
Closed Cooling Water Pumps	3 Nos, Horizontal Centrifugal, 240 M3/H Motor: 3Ph, AC Induction Motor, 415 V, 50 Hz, 30 KW		Pump : Mather and Platt (I) Limited Motor : Crompton Greaves	Model No. ET ISO 25 Model: NADM 13351
Intake Water Pumps	3 Nos, Vertical Centrifugal, 500 M3/H Motor: 3Ph, AC Induction Motor, 415 V, 50 Hz, 75 KW		Pump : Kirloskar Motor : ABB	
Raw Water Pumps	2 Nos, Vertical, 470 M3/H Motor: 3Ph, AC Induction Motor, 415 V, 50 Hz, 37 KW Variable Frequency drive HI-REL Model No: NXS01055A2H0		Pump : Mather and Platt (I) Limited Motor : Crompton Greaves	Model No: 10" VMF Single Stage Model: ND225S
DM Plant	1) Two Streams each 70 m3/h 2) Tanks (300KL) : 2 no's		Ion Exchange,	DM plant has two Stream consists of Pressure sand filter, Activated carbon, Strong Acid Cation, Strong Base Anion, Degasser, Mixed Bed and pumps & motor, regeneration Bulk storage tanks 4 No.

Plant Fire Fighting System	<p>1) Hydrant Pumps (2 Nos Motor driven and 1 Nos Diesel Engine driven)</p> <p>2) Spray System(1 Nos Motor driven and 1 Nos Diesel Engine driven)</p> <p>3) Deluge System</p> <p>4) Plant Fire Alarm System</p>		<p>1) Mather &Platt (I) Ltd.</p> <p>2) Notifier by Honeywell</p>	<p>1) Split casing Horizontal Pumps</p> <p>2) Auto/remote & Manual Operation.</p> <p>3) Addressable Type</p>
Compressed Air System	<p>Model : HX2T – 60 N2 P</p> <p>No of compressors : 3</p> <p>Type: Horizontal and Non lubricated, 5 m3/h FAD; 700 Rpm, water cooled</p> <p>Motor: 3Ph, AC Induction Motor, 415 V, 50 Hz, 45 KW</p> <p>Air Dryer 2 Nos Dual Tower heat blower type : 300 Nm3/h</p>	Continuous load (100% and 50%) - unload	<p>Chicago Pneumatic</p> <p>Motor: Crompton Greaves</p>	
HT 6.6 KV Switch gear	<p>6.6 KV HT switch gear, ABB make; model HPA12/1640 C; Spring operated; 1600 A ; no. of feeder 23 ; Incomer and Bus Coupler: 2000 A; no. of feeder 3</p>	SF6 quench Gas	ABB	
LT 415 V Switch gear	<p>415 V Switch gear,</p> <p>Circuit breakers : L&T Model C power , quench: Air Forced; Spring Operated, 1000A/ 800 A/ 3200 A& 4000 A</p> <p>Circuit breakers: GE USP1000(M-pact); quench: Air Forced; Spring Operated, 1000A</p>		L&T ; GE	PMCC : 2 No's and MCC: 16 No's
DC System	<p>GTG: CONVEL Italy: 220 V DC System; AC 415 V, 50 Hz, with Battery: Exide, lead Acid ; 220 V,</p>			

	300 AH, 108 No's STG: Amar Raja, 220 V, 405 A with battery : HBL Nife Ni-Cd ; 220 V , 450 AH, 168 Cells			
UPS System	GTG: Emerson: 1+1+SVR; 30 KVA with Battery VRLA HBL Nife, 384 V, 250 AH, 192 Cells STG: TATA Liebert: 1+1+SVR; 45 KVA with Battery Exide; Lead Acid; 420 V, 75 AH 192 Cells			
Ventilation System	No. of Fans & Motor : 49 of different size and capacity in various locations		Fan : C. Doctor India Pvt. Ltd. Motor : Crompton Greaves	
Air Conditioning System	Capacity: 17 /11.6 / 8.5 / 5.8 Ton		Carrier	
EOT Crane	GTG building – 60/15/7.5 T , Double Girder STG building – 50/10T		Anupam	
Misc. Cranes	2.5 Ton – 2 No's 5 Ton -3 No.'s 1 Ton – 1 no.		Reva Industries	
BOP Transformer	No. of Transformers :2 Power Rating : 2500 KVA No Load voltage : 6600/ 440 (HV/LV), V		Voltamp	Oil Filled
Intake Pump House Transformer	No. of Transformers :1 Power Rating : 500 KVA No Load voltage : 6600/ 433		Voltamp	Oil Filled

	(HV/LV), V			
Control Systems				
GT & ST control system	ABB MESA		ABB	Symphony Enterprise Management and Control System, INFI-NET Uni-direction, High Sped Data Network, 10 to 2 MHz, Communication Protocol INIIT 12
HRSG & BOP Control system	Control Processor : CP60	Invensys	Invensys Foxboro on XP Platform	Model Fox View V99.201

PHOTOS



































































