

NITIN CORPORATION

402, 4th Floor,
Bezzola Commercial Complex,
Sion – Trombay Road,
Chembur,
Mumbai – 400071,
India.

WEB : www.corponit.com

E – MAIL : enquiry@corponit.com
nitincorporation@yahoo.com

PH (O) : +91 - 22 - 25235386
: +91 - 22 - 25234478

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

1 No.12MW, October 2015 make Complete Power Plant, having the Following Technical Specifications:

TECHNICAL SPECIFICATION:

BOILER		
1	Type of Boiler	AFBC, Single Drum, Header Type Boiler Bank, Over bed Fuel Feeding System, Top Supported Pressure part & Hopper bottom design.
2	Number of Boilers	One
3	Make of Boiler	Thermax
4	Year of Make	October 2015
5	Specification Standards	
	Boiler rating and Parameter	
	Design steam flow(TPH)	55TPH
	MCR	55TPH
	Main stream Pressure(Kg/cm2)	67.3KKg/cm2(g)
	Steam temperature at super heater out let deg cent	490+/- 5 ⁰ C
	Feed water temperature at inlet of economizer deg cent	140deg
	Flue gas temperature at the outlet of air pre-heater deg cent	140deg
	Relative humidity	60%
	Furnace volume	
	Grate area	50.625 sq. mtrs
	Effective grate area	40.5. sq. mtrs

	Grate heat release	900°c
	Flue gas temperature	640- 800 deg .c
	Furnace heat release	
	Furnace temperature	750 to 850deg. C
	Gas temperature profile	ECO I/O:468/232 APH I/O:232/140 SSH I/O:771/648 PSH I/O:640/476
	Water side temperature profile	ECO I/L 120 ECO O/L 270
	Air temperature profile	APH I/L 55deg APH O/L 140deg
	Boiler thermal efficiency (on GCV basis%)	
6	Hest transfer area	
	Bank tubes/bed coils area	323m2
	Furnace wall tubes	722m2
	Economizer	1047m2
	Primary Super heater	700m2
	Secondary Super heater	700m2
7	FD fan	1no
	Type	21271/808
	Make	TLT Engg. India Ltd.
	RPM	1480
	Air flow, cubic meter/hr	27.53
	Dis. pressure /static head, mmWC	8829
	Motor rating KW & details	325 & 1487RPM
	Coupling type	Spring Grid Resilient Coupling Size:266A/1142,Make:Wellman/GB M
8	ID fan	1no
	Type	16378B/1062
	Make	TLT Engg. India Ltd.
	RPM	960
	Air flow, meter ³ /hr	43.4
	Dis. pressure /static head, mmWC	1766PA
	Motor rating KW & details	132 & 991RPM
	Coupling type	Spring Grid Resilient Coupling Size:236A/1132,Make:Wellman/GB M
8	PA/SA fan	No
	Type	No
	Make	No
	RPM	No
	Air flow, cubic meter/hr	No
	Dis. Pressure /static head, mmWC	No
	Motor rating KW & details	No
	Coupling type	No
9	Boiler Feed water pumps	BFWP

	No of Pumps	2nos		
	Type	HDA 80 / 13		
	Make	KSB		
	RPM	2900RPM		
	Water flow, cubic meter/hr	67.3m ³ /hr		
	Head, meter	1077m		
	Motor rating, KW & Details	Siemens, 275 KW, 2985 rpm		
10	Economizer	Design(in/out)	Actual(in/out)	
	Flue gas temperature , in/out °c	468- 232	470- 220	
	Feed water temperature in/ out °c	120	120	
	%O ₂ /CO ₂ in flue gas Economizer	8%		
11	Air Pre heater	Design(in/out)	Actual(in/out)	
	Flue gas temperature , in/out °c	232- 140	220- 138	
	Air temperature in/ out °c	40- 145	38- 145	
	%O ₂ /CO ₂ in flue gas at air preheater outlet	O ₂ - 8%		
12	Dust Collection System			
	Type of system installed	ESP		
	Out let emission levels	80mg/cu.m		
	Design efficiency of dust collection system	100mg/cu.m		
	No of fields/No of Cyclones	3		
	Transformer rating	PRIMARY 415 V,80A,SECOND AR Y 120 KV(P),300 MA		
	Collecting surface area			
	No of emitting electrodes	144		
TURBINE				
1	Type of Turbine	BLEED-CONDENSING TURBINE		
2	Make of the turbine	TRIVENI		
3	Specification Standard	12000		
4	Number of turbine stages	13		
5	Turbine Parameters	Pressure Kg/cm ²	Temperature °C	Flow TPH
	Main Steam Parameter	64 ATA	485	48.2
	Extraction-1 Cum back Pressure parameters	4.8ATA	200	6.00
	Extraction-2 cum back pressure parameters	NA	NA	NA
	Full condensing type			
6	Type of Condenser	Water Box type Divided		
	Make of Condenser (Water cooled condenser)	Chem. process System pvt ltd		
	Cleanses factor	85%		
	Cooling water flow m ³ /hr	2892 m ³ /hr		

	Design Vacuum	0.99 KG			
	Inlet/out let temperature	32/40			
	Steam flow to the condenser	42500kg/hr			
	Tube mater and Size	3/4" X BWG-20			
	No of tubes/heating surface	3118 / 1227			
7	Air Cooled condenser	NA			
	Fan make	NA			
	Fan Type	NA			
	No of fans	NA			
	Fan blade material	NA			
	Motor rating, KW	NA			
	Fan Capacity m ³ /sec	NA			
6	Condensate External (Expantion)Pumps				
	Type	Horizontal			
	Make	KSB Pump Ltd			
	Water flow m ³ /hr				
	Head, meter				
	Motor rating, KW	30,415V AC.			
AUXILIARY DETAILS					
1	Cooling Tower (Water Cooled)				
	Type	HSC-0808-04F			
	Make	HAMON SRIRAM			
	No of Cells	Four (4)			
	Water flow m ³ /hr	3600 m ³ /hr			
	Range				
	Approach				
2	Cooling water Pumps/Main circulation water Pumps				
	No of Pumps	3nos			
	Type of Pumps	CENTRIFUGAL			
	Make	Mather Platt Pump Ltd.			
	Flow m ³ /hr	1700 m ³ /hr			
	Head, meters	25Mtrs			
3	Auxiliary circulation water Pumps				
	No of Pumps	1no			
	Type of Pumps	CENTRIFUGAL			
	Make	Mather Platt Pump Ltd.			
	Flow m ³ /hr	300 m ³ /hr			
	Head, meters	35Mtrs			
4	Fuel handling System	No	Make	Capacity	KW/HP
	Chippers	no			

	Shedders	no				
	Mobile chippers/shedders	no				
	Crushers	1no	MCNALLY SAYAJI	15TPH	22/30	
	Belt conveyors	5nos	Belcosys		11/15	
	Screw conveyors	5nos	Accurate material handlers	15tph	3.7/5	
	Chain conveyors	1NO	BELCOSYS	15	7.5/10	
5	Water treatment Plant Details			1no		
	Type (Treatment Method)			REVERSE OSMOSYS		
	Capacity, m ³ /hr			10		
	Make			ION EXCHANGE		
	Parameters	Turbidity	Hardness	Conductivity	Silica	PH
	Raw Water	NA	395	1297	30	8.3
	Treated Water	NIL	NIL	<1	<0.02	8.0
	Boiler feed water	NIL	NIL	<10	<0.02	8.5-9.5
	Boiler water	NIL	NIL	<100	<2	9.8-10.2
	Cooling tower make up water	NIL	395	1300	30	8.3
Cooling tower	NIL	2000	4000-4500	30	7.8- 8	
6	Air Compressors (For Instrumentation)					
	Type			Rotary Screw		
	Capacity. M3/hr or CFM			212m3/hr,7500cfm		
	Discharge Pressure			8kg/cm2		
	Motor rating, KW			33kw		
7	Ash handling System			1no		
	Type of Conveying system			Screw & Bucket Elevator		
	Capacity			40m3/hr		
	Ash silo capacity			10m3		
	No of belt conveyors			5		
	No of screw conveyors			5		
ELECTRICALS						
a	Alternator			1 No.		
	Generator rating and Parameter					
	KVA			15000kva/12000kw		

	Voltag	11000V AC
	Current	787A
	Power Factor	0.8Lag
	Speed(RPM)	1500
	Make	TDPS
	Specification Standard	
1	Power transformer details	
	Make	Transformer & Rectifiers (India) Ltd.
	Capacity, KVA	16000KVA
	Primary and Secondary voltage	132kv/11kv
2	Auxiliary transformer details	
	Make	Transformer & Rectifiers (India) Limited.
	Capacity, KVA	2000KVA
	Primary and Secondary voltage	11000/440V
3	NGR Panel Details	
	Make	VEE VEE CONTROLS PVT LTD.
	No of CT & Details	
	No of PT & Details	
4	LASCT	VEE VEE CONTROLS PVT LTD.
	No of Lightning arrestors	3no. 12KV,10KA
	No of Surge capacity and Details	3 NO. 12 KV,0.25MICROFARAD
5	AVR Details	SANELEC EXITATION SYSTEMS LTD.98 V,11.4 A
6	HP panel details	
	Type of breakers	VACCUME CIRCUITE BREAKERS
	No of beakers	3
	Rating of breakers	11KV,1250 A,25 KA/3SEC
7	MCC Details	
	Boiler MCC details	800 KW
	Turbine MCC details	70 KW
	Cooling tower and water treatment MCC details	1000 KW
	Fuel handling system MCC details	65 KW

8	Protection/ relay panel details		
	Alternator protection details		
	Transformer protection details		
	Line protection details		
9	Distance from plant to grid receiving station, KM		
10	Substation equipment details		
	CT details		
	PT details		
	Breaker details		
	Meter details		
11	Control Panel and Instrumentation details		
PLANT GENERATION PERFORMANCE			
		Design	Actual
1	Export to the Grid	10.8MW/Hr	10.8MW/Hr
	Auxiliary power consumption, MW	1.2MW	1.2MW
	Auxiliary power consumption,%	12	12
	Plant heat rate, Kcal/Kw	3600	4200
	Plant Overall efficiency	22+-1	22+-1
2	Boiler		
	Steam Pressure, Kg/cm ²	67.3	67.3
	Steam Temperature, °C	485	485
	Flue gas out let temperature, °C (ID fan inlet)	140	138
	Economizer inlet and out let water side temperature	120/270	120/270
	Economizer out let inlet and out let temperature gas side	468/232	470/230
	Air Preheated inlet and out let gas side temperature, °C	232/140	230/140
	Air inlet and out let temperature at air heater	40/145	40/140
	Furnace temperature, °C	750-850	750-850
	Emission level mg/NM ³		
	Boiler Thermal efficiency	80%	79%
	ESP Efficiency	100%	100%
3	Turbine Specific steam consumption	3.9KG/KWH	4.2KG/KWH
	Condenser Vacuum	0.89	0.86
	Turbine efficiency	30+-1	25+-1

4	Power transformer efficiency (Losses)	97.8% AT 100% LOAD, 95.38% AT 25% Load.	97.8% at 100% Load, 95.38% at 25% Load.
5	Cooling tower inlet and out water Temperature	42°c	32°c
	Approach temperature	30/40	31/39

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