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

1 No. 25 MW THERMAX/ SHIN NIPPON (2013) make, Coal based Complete Condensing type Power Plant, having the Following Technical Specifications:

POWER PLANT INFORMATION:

1. The 25 MW Power Plant is designed to use steam coal as a fuel for 110 TPH Boiler. Steam Coal stored in Coal Yards (2 Nos.) is fed to Boiler through Coal handling plant (make-Bevcon) in which coal is crushed to size below 6 mm. In Boiler coal is stored in bunker having capacity of approx. 400 MT. Coal from bunker goes to furnace through Drag Chain feeders. The boiler used at site is a 110 TPH made in India by Thermax Ltd.
2. Boiler is supported by a Thermax make Electro static Precipitator (ESP) to control the particulate matter and smoke generated is led to ash Silos (2Nos. RCC, capacity- 320 MT & 120 MT) from where it is loaded in trucks.
3. Boiler Auxiliaries include a DM water Plant (make -Get Water systems, capacity 27 M³/Hr), Boiler Feed Pumps (make- KSB, flow 68TPH), FD (Forced Draft- 2Nos), ID (Induced Draft-2 Nos.) and PA (Primary Air-2 Nos.) Fans.
4. Steam Produced in Boiler is led to a multi stage steam Turbine (make- Shinn Nippon machinery Co Ltd, Japan) which is coupled to a Turbo generator through a gear box and Coupling. The turbo Generator and its auxiliaries like lubricating system are housed in TG building. The entire operation of Power is controlled using a DCS control system (make -ABB) with different control panels, drives, systems & consoles.
5. The alternator in TG system generates power having generation voltage of 11 KV which is fed to grid through 220 KV switch yard (make -Areva) with the help of Generator transformer (make-Areva).

6. Utilities in the form of Air Compressors (make IR & Atlas Copco), water storage tanks, Air cooled condenser unit (make- Paharpur), Fire fighting system, etc. have also been provided in Power Plant.

TECHNICAL DETAILS:

SR No.	Description/List of Main Equipment of power plant	Make
1	AFBC, 110 TPH coal fired water tube boiler, Pressure-110 kg/Cm ² , steam Temperature-515°C	Thermax Ltd
2	25 MW Steam turbine- impulse, Multistage, horizontal, axial flow, condensing, extraction-4Nos, I/L pressure-108 kg/Cm ² , I/L steam Temperature-510°C	Shin Nippon machinery Co Ltd, Japan.
3	TG Gearbox Input speed 6227 rpm, Output speed-1500 RPM for driving generator	Seisa, Japan
4	Generator-25 MW, 50 Hz, 1500 rpm	TDPS
5	Boiler feed Pumps 3 Nos, Flow-68TPH Pressure-150 kg/Cm ² , H-1594 Mtr, Temp-150°C	KSB
6	Coal Handling Plant 110 TPH 6 Nos Belt Conveyor, 2 Nos crusher	Bevcon wayors Pvt Ltd.
7	Air Cooled Condensor Unit 8 Nos fans	Paharpur Ltd
8	Ash Handling Plant Pneumatic type	Macawber Beakay Pvt Ltd.
9	DM Plant Capacity 27 M ³ /Hr, 2 Nos (6M ³ /Hr) 1 No (15M ³ /Hr)	Get water Solution Pvt Ltd.
10	RCC Ash Silos 1 No-320 MT, 1 No-120 MT	
11	220 KV switch yard with generator transformer 220/11KV, 37.5 MVA YNd1, double wound, 50 Hz	Areva
12	DCS	ABB
13	RCC Chimney 75 Mtrs Height	

BOILER DETAILS:

NUMBER & TYPE OF BOILER : 1 nos. AFBC, Natural Circulation, Single Drum, Top supported, Water tube, Balanced draft, suitable for semi outdoor installation, with under bed fuel feeding system.

1. DESIGN SPECIFICATIONS OF STEAM GENERATOR

PARAMETERS	UNIT	VALUE
Boiler Rating [MCR]	TPH	110
Steam Pressure at Main Steam Stop Valve Outlet from minimum Load upto MCR	Kg/cm ² (a)	112
Steam Temperature at the Main Steam Stop valve at MCR	Deg C	515 ± 5° C
Main Steam Temperature Control range at the Main Steam Stop Valve Outlet	% MCR	50 – 100
Feed Water Temperature at Economiser Inlet without HP heater	Deg C	170
Feed Water Temperature at HP heater outlet	Deg C	230
Flue Gas Temperature at APH Outlet	Deg C	175
Start Up Fuel for Coal		LDO
Fuel Firing Combination		<ul style="list-style-type: none">• 100% Indian coal or• 100% Imported Coal (Performance Fuel)
Boiler Performance Testing Procedure		ASME PTC 4 Energy Balance Method

2 DESIGN CODE:- IBR 1950 WITH AMMENDMENTS UPTO 1995

Boiler & Economiser / Pressure Parts : As per IBR.

4 EVAPORATING HEATING SURFACE AREA

Zone	Unit	Value
Furnace Panels, Evaporator & Conv. bank	Sq.Mtr	1801
Economiser	Sq.Mtr	1971
Total Heating Surface	Sq.Mtr	3772
Super Heater (Primary SH & Secondary SH)	Sq.Mtr	1735

5 FUEL

a) Main Fuels : Indian Coal & Imported Coal

b) Start up Fuel : LDO

6 FUEL ANALYSIS (% BY WT)

6.1 Ultimate Analysis

Composition	Unit	Indian Coal	Imported Coal
Hydrogen	%	2.80	3.00
Carbon	%	34.30	41.20
Nitrogen	%	0.90	0.80
Oxygen	%	6.40	9.50
Moisture	%	11.00	10.00
Ash	%	44.00	35.00
Sulphur	%	0.70	0.50
Calorific Value (GCV)	Kcal/kg	3400	4000

6.2 Fuel Size

100 % : < 6 mm
6 – 10mm : 20% Max
Fines around 35 % (Max.) : < 1 mm

17 BOILER FEED WATER PUMP

Make : KSB

Description	Unit	Parameter
Pump Type & Size	-	HGC 3 – 14
No of Stages	-	14
Liquid	-	Boiler Feed Water
Temperature	Deg C	150.5
Specific Gravity	-	0.9169
NPSH pump/plant	M	3.9
Vapour Pr	Kg/cm ²	4.87
Rated Flow	M ³ /hr	68
Minimum Flow	M ³ /hr	23
Rated Head	M	1594
Differential Pressure	Kg/cm ²	146.15
Normal speed	Rpm	2950
Direction of Rotation		CW seen from Drive End
Shut off head	M	1700
Nominal Efficiency	%	66.2
Bearing Lubrication		Ring Oil
Shaft Seal; Type & Size		Mechanical Seal/SBPO/E 45 EF VEE
Coupling		Make-Rathi; Gear Type Spacer
Motor		ABB;480 KW, ABB MAKE

PLEASE REFER VENDOR OPERATION INSTRUCTION & MAINTENANCE MANUAL FOR DETAILS.

18 HP & LP DOZING PUMPS

Make : Metapow Industries Pvt Ltd
Drg no : A-1123 & A -1122

Description	HP	LP
Pumps		
Make	Metapow Industries	Metapow Industries
Type	Reciprocating Plunger	Reciprocating Plunger
Flow	0-10 LPH by Stroke Adjustment	0-7.5 LPH By Stroke Adjustment
Discharge pressure	140kg/cm ² g (Design)	8 kg/cm ² g (Design)
	123 Kg/cm ² g (Normal)	7 Kg/cm ² g (Normal)
Relief valve set pressure	154 kg/cm ² g	9.5 kg/cm ² g
Motor for Dosing Pumps		
Make	Crompton	Crompton
Type	1 HP, AC, 415 V, 50 Hz, IP55 Flanged Mounted.	3 Ph, AC, 415 V, 50 Hz, IP55 Flanged Mounted.
Rating	1 HP / 1500 rpm	0.5 HP / 1500 rpm
Motor for agitator		
Make	Crompton	Compton
Type	1 HP, 415 v, 50 Hz ac	0.5 HP, 415 v, 50 Hz ac
Rating	1 HP / 1000 rpm	0.5 HP / 750 rpm
Storage working Volume	300 litres	150 litres

19 DRAG CHAIN FEEDERS (FOR UNDERBED FEEDING)

Make – Rosmic India Engineering Coorporation.

Refer– G.A for Drag Chain Feeder. Drg No : 900111R102

Description	Drag chain Feeder
Capacity	See Table Below
Material Used	Indian Coal
Conveyor rpm/Speed	0 to 6.27rpm / 0.0803 m/sec
Geared Motor (3 Phase, 415 V & 50 Hz)	2.2 k.W with Variable Frequency Drive.
Chain	76.2 mm Pitch, Pin Bush
Drive Sprocket	38 nos. teeth/3.4" P Duplex
Driven Sprocket	45 nos. teeth/3.4" P Duplex
Head Side Brg; P. Block	BRG.No 22213K+H313, SN-513
Tail Side Brg; P. Block	BRG.No 22213K+H313, SN-513

Boiler ID,FD & PA Fan Details

Sr.No:	FANS DETAILS	I D Fan No:1 & 2	F D Fan No:1 & 2	P A Fan No:1 & 2
1	Make	Flakt woods (india ltd)	Flakt woods (india ltd)	Flakt woods (india ltd)
2	Capacity	39.7 m3 /sec	23.2 m3 /sec	8.5 m3 /sec
3	Inlet Static Pressure	Below 200 mmwc	Below 25 mmwc	600 mmwc
4	Outlet Static Pressure	0	845 mmwc	1450 mmwc
5	Total Static Pressure	200 mmwc	870 mmwc	
6	Total Pressure	222.7 mmwc	945 mmwc	754 mmwc
7	Operating Temp.	155 deg.	50 deg.	206 deg.
8	Density	0.781 kg/cm2	1057 kg/cm2	0.757 kg/cm2
9	Fan Speed	980 rpm	1488 rpm	1485
10	Critical Speed	1450 rpm	2086 rpm	
11	Absorbed Power	119 kw	241 kw	
12	Efficiency	77.30%	86.50%	88%
13	Damper Stroke Length	305 mm	305 mm	
14	Impeller Dia. & Width	1753 & mm	1703 & 395 mm	
15	Tip Speed	90 m/sec.	140 m/sec.	
16	Bearing	22224 CK	22224 CK	22314
17	Bearing Housing	SN 524	SN 524	Free SOFN 314 BL Fixed SOFN 314 BN
18	Bearing Sleeve	H 3124	H 3124	
19	Coupling	GRC- 324	GRC- 336	110 Z
20	Coupling Type	Resilient grid coupling	Resilient grid coupling	Resilient grid coupling
21	Coupling Make	Flexocon with cover	Flexocon with cover	Fenner
	MOTOR DETAILS			
1	Make	SIEMENS	SIEMENS	SIEMENS
2	Kw / Hp	132	300 / 400	132
3	Frame Size	355 L	355 L	315 M
4	Type	ISE0- 356-6	1 LA8355 -4	1LA0314- 4YA80-Z
5	No:	N8 / 64408392	N8 / 64407031	N8 / 64400601
6	Efficiency	95.70%	96%	95%
7	Bearing DE / NDE	6322 C3 / 6322 M	6220 C3 / 6322 M	6319 C3 / 6319 C3
8	RPM	992 rpm	1488 rpm	1485 rpm

TURBINE DETAILS:

1. SPECIFICATION OF STEAM TURBINE AND ACCESSORIES

1-1. Type of Steam Turbine :

Type : : Horizontal, impulse, multi-stage
multi-valve, axial flow, condensing,
extraction, geared.
(Axial exhaust type)

Manufacturer's model No. : C8-R14-ERLX

1-2. Output :

Rated output : : 25,000 kW
(at generator terminal)

1-3. Operating Conditions :

Speed (turbine/generator)	:	<u>6227/1500</u>	rpm
Inlet steam pressure	:	<u>108</u>	kg/cm2A
Inlet steam temperature	:	<u>510</u>	deg. C
Exhaust steam pressure	:	<u>0.2</u>	kg/cm2A
Max. 1st Extraction pressure	:	<u>32.5</u>	kg/cm2A
Un-Controlled Extraction	:	at turbine nozzle	
Max. 2nd Extraction pressure	:	<u>15.5</u>	kg/cm2A
Un-Controlled Extraction	:	at turbine nozzle	
Max. 3rd Extraction pressure	:	<u>5.50</u>	kg/cm2A
Un-Controlled Extraction	:	at turbine nozzle	
Max. 4th Extraction pressure	:	<u>3.55</u>	kg/cm2A
Un-Controlled Extraction	:	at turbine nozzle	
Max. Inlet flow	:	<u>104.40</u>	t/h
1st Extraction flow	:	<u>0 & 2.5 to 13.93</u>	t/h
2nd Extraction flow	:	<u>0 & 2 to 6.71</u>	t/h
3rd Extraction flow	:	<u>0 & 1.3 to 3.44</u>	t/h
4th Extraction flow	:	<u>0 & 3.6 to 12.13</u>	t/h
Max. Exhaust steam flow	:	<u>80.78</u>	t/h
		at	0.2 kg/cm2A

<u>OPERATION CASE</u>		<u>CASE-1</u>	<u>CASE-2</u>	<u>CASE-3</u>	<u>CASE-4</u>	<u>CASE-5</u>
			HP HEATER-1, 2 OFF	50% LOAD	HP HEATER-1, 2 OFF	70% LOAD
Inlet steam					50% LOAD	
Pressure	(ata)	<u>108</u>	<u>108</u>	<u>108</u>	<u>108</u>	<u>108</u>
Temperature	(deg. C)	<u>510</u>	<u>510</u>	<u>510</u>	<u>510</u>	<u>510</u>
Flow	(t/h)	<u>104.40</u>	<u>96.35</u>	<u>54.80</u>	<u>51.00</u>	<u>74.70</u>
1st Extraction	(Un-Controlled Extraction) at turbine nozzle					
Pressure	(ata)	<u>32.05</u>	<u>32.31</u>	<u>16.98</u>	<u>17.12</u>	<u>22.96</u>
Temp	(deg. C)	<u>357</u>	<u>364</u>	<u>316</u>	<u>317</u>	<u>335</u>
Extraction flow	(t/h)	<u>8.21</u>	<u>0</u>	<u>3.51</u>	<u>0</u>	<u>5.25</u>
2nd Extraction	(Un-Controlled Extraction) at turbine nozzle					
Pressure	(ata)	<u>14.55</u>	<u>15.50</u>	<u>7.81</u>	<u>8.23</u>	<u>10.49</u>
Temp	(deg. C)	<u>270</u>	<u>282</u>	<u>237</u>	<u>242</u>	<u>253</u>
Extraction flow	(t/h)	<u>6.71</u>	<u>0</u>	<u>2.93</u>	<u>0</u>	<u>4.35</u>
3rd Extraction	(Un-Controlled Extraction) at turbine nozzle					
Pressure	(ata)	<u>5.18</u>	<u>5.50</u>	<u>2.84</u>	<u>2.98</u>	<u>3.78</u>
Temp	(deg. C)	<u>167</u>	<u>178</u>	<u>143</u>	<u>147</u>	<u>155</u>
Extraction flow	(t/h)	<u>2.95</u>	<u>3.44</u>	<u>1.35</u>	<u>1.54</u>	<u>1.97</u>
4th Extraction	(Un-Controlled Extraction) at turbine nozzle					
Pressure	(ata)	<u>3.35</u>	<u>3.55</u>	<u>1.88</u>	<u>1.97</u>	<u>2.47</u>
Temp	(deg. C)	<u>137</u>	<u>140</u>	<u>118</u>	<u>119</u>	<u>126</u>
Extraction flow	(t/h)	<u>11.06</u>	<u>12.13</u>	<u>4.32</u>	<u>4.69</u>	<u>6.87</u>
Exhaust press	(ata)	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>
Exhaust temp	(deg. C)	<u>59.66</u>	<u>59.66</u>	<u>59.66</u>	<u>59.66</u>	<u>59.7</u>
Gland leakage	(t/h) App.	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>
Exhaust flow	(t/h) App.	<u>75.37</u>	<u>80.68</u>	<u>42.59</u>	<u>44.67</u>	<u>56.16</u>
Generator power	(KW)	<u>25,000</u>	<u>25,000</u>	<u>12,500</u>	<u>12,500</u>	<u>17,500</u>

REMARKS

1. Guarantee Point: Case-1
2. The measured steam consumption figures are subject to a tolerance margin of $\pm 2.5\%$ for instrumentation and human errors.

OPERATION CASE		CASE-6	CASE-7	CASE-8	CASE-9	
		HP HEATER-1 OFF	HP HEATER-2 OFF	HP HEATER-1 OFF	HP HEATER-2 OFF	
Inlet steam				50% LOAD	50% LOAD	
Pressure	(ata)	108	108	108	108	
Temperature	(deg. C)	510	510	510	510	
Flow	(t/h)	104.40	96.35	55.00	52.60	
1st Extraction	(Un-Controlled Extraction)					
Pressure	(ata)	32.32	31.82	16.4	17.43	
Temp	(deg. C)	353	362	313	318	
Extraction flow	(t/h)	13.93	0	6.11	0	
2nd Extraction	(Un-Controlled Extraction)					
Pressure	(ata)	14.56	14.43	7.89	8.00	
Temp	(deg. C)	273	276	238	234	
Extraction flow	(t/h)	0	6.68	0	3.03	
3rd Extraction	(Un-Controlled Extraction)					
Pressure	(ata)	5.19	5.14	2.86	2.9	
Temp	(deg. C)	171	173	144	144	
Extraction flow	(t/h)	2.99	3.05	1.38	1.45	
4th Extraction	(Un-Controlled Extraction)					
Pressure	(ata)	3.35	3.32	1.9	1.92	
Temp	(deg. C)	137	136	118	118	
Extraction flow	(t/h)	11.06	10.97	4.4	4.49	
Exhaust press	(ata)	0.2	0.2	0.2	0.2	
Exhaust temp	(deg. C)	59.66	59.66	59.66	59.66	
Gland leakage	(t/h) App.	0.1	0.1	0.1	0.1	
Exhaust flow	(t/h) App.	76.23	75.55	43.01	43.53	
Generator power	(KW)	24,600	24,000	12,500	12,500	

REMARKS

1. Guarantee Point: Case1
2. The measured steam consumption figures are subject to a tolerance margin of $\pm 2.5\%$ for instrumentation and human errors.

1-4. Direction of Rotation : (Viewed from Generator to Turbine / Axial Exhaust Steam Turbine)

Steam turbine	:	<u>C. W.</u>
Generator	:	<u>C. C. W.</u>

1-5. Lubrication, Governor and control oil :

Type of lubrication	:	Forced lubrication
Lubrication oil pressure	:	<u>1.0</u> kg/cm ² . G
Control oil pressure	:	<u>14.0</u> kg/cm ² . G
Normal required oil flow	:	
Lube and trip oil	:	<u>792</u> Lit/min
Control oil	:	<u>50</u> Lit/min
Kind of oil	:	Turbine oil ISO VG46

1-6. Mechanical Design Condition :

Inlet steam section	:	<u>124</u> kg/cm ² . G	<u>540</u> deg C
1st Extraction steam section	:	<u>35.0</u> kg/cm ² . G	<u>390</u> deg C
2nd Extraction steam section	:	<u>18.0</u> kg/cm ² . G	<u>320</u> deg C
3rd Extraction steam section	:	<u>7.0</u> kg/cm ² . G	<u>220</u> deg C
4th Extraction steam section	:	<u>5.0</u> kg/cm ² . G	<u>200</u> deg C
Exhaust steam section	:	<u>0.90</u> kg/cm ² . G&F. V.	<u>180</u> deg C
Cooling water section	:	<u>5.0</u> kg/cm ² . G	<u>80</u> deg C
Instrument air section	:	<u>9.90</u> kg/cm ² . G	<u>50</u> deg C
Aux. steam (Sealing header) section	:	<u>14.97</u> kg/cm ² . G	<u>380</u> deg C

Nozzle orientation

(Viewed from Turbine to Condenser)

1-7. Flange Size

Steam inlet nozzle	:	<u>200</u> mm (8 inch)	<u>RIGHT SIDE</u> (ASME 2500 Lb)
1st Extraction nozzle connection	:	<u>80</u> mm (3 inch)	<u>RIGHT SIDE</u> (ASME 300 Lb)
2nd Extraction nozzle connection	:	<u>80</u> mm (3 inch)	<u>RIGHT SIDE</u> (ASME 300 Lb)
3rd Extraction nozzle connection	:	<u>100</u> mm (4 inch)	<u>RIGHT SIDE</u> (ASME 150 Lb)
4th Extraction nozzle connection	:	<u>200</u> mm (8 inch)	<u>UPPER</u> (ASME 150 Lb)
Exhaust nozzle	:	<u>1600</u> mm (64 inch)	<u>AXIAL</u> (ISO PN2.5)

1-8. Approximate Weight (Dry) :

Steam turbine with soleplate	:	<u>App. 34000</u> kg
R. Gear with sole plate	:	<u>App. 14000</u> kg
Oil unit	:	<u>App. 12000</u> kg
Others	:	<u>App. 5000</u> kg

1-9. Reduction Gear

Type	:	Horizontal, Single reduction. Double helical gear type
Service factor	:	AGMA 1.3 (AGMA 421)
Applied standards	:	JIS, AGMA
Quantity	:	One (1) set / One unit

1-10. Emergency Stop Valve

Type	:	Oil pressure operated type with steam strainer and limit switch for indication of closed position.
Quantity	:	One (1) set / One unit

1-11. Journal Bearing

Type	:	Tilting Pad type, forced lubricated
Quantity	:	Two(2) sets / One unit

1-12. Thrust Bearing

Type	:	Multi-segment tilting pad type , combined with coupling side journal bearing (Kingsbury type)
Quantity	:	One (1) set / one unit (Double side)

1-13. Speed Governor

Type	:	Electro-Hydraulic Governor
Model No./Mfr name	:	505 / WOOD WARD (Single CPU)
Adjustable speed range	:	105-95% of rated speed (109% Max speed limit)
Speed regulation	:	4% as droop
NEMA CLASS	:	D

1-14. Overspeed Governor

Type	:	Electric signal from governor & 2 out of 3 voting electrical type (Wood Ward Protech GII)
Tripping speed	:	114 % of rated speed (Elec. By Governor) 115 % of rated speed (Electrical 2 out of 3)
Quantity	:	One (1) set / One unit

1-15. Governing valve :

Type	:	Bar lift and MULTI VALVE
Quantity	:	1 / One unit

1-16. Insulation and Jacketing

Turbine casing and emergency stop valve are insulated and jacketed to maintain jacket temperature below 75 deg C.

1-17. Coupling :

Coupling between turbine and R/gear	:	Flexible type
Coupling between R/gear and generator	:	Flexible type (Oil contained gear type)

1-18. Sole plate

Type		
	for Steam turbine	: Soleplate
	for Reduction gear	: Soleplate
	for Generator	: Soleplate

1-19. Turning Device

Type	:	Electric(AC) motor driven, Combined of Cyclo & Bevel Gear or worm gear reduction, automatic engage and automatic disengagement.
Motor rating	:	Refer to attached utility list
Quantity	:	One (1) set / One unit

1-20. Oil Reservoir

Type	:	Steel plate fabricated type
Full capacity	:	3 minutes of normal required flow at least
Quantity	:	One (1) set / One unit

Reservoir is furnished with oil level indicator, drain valve, oil charging nozzle, gas vent fan (1x100%).

1-21. Main Lube Oil Pump

Type	:	Screw type ,driven by the AC motor.
Capacity	:	1.1 times of required lube oil flow, as minimum.
Discharge pressure	:	<u>6.9</u> kg/cm2. G
Motor rating	:	Refer to attached utility list
Quantity	:	One (1) set / One unit

1-22. Auxiliary Lube Oil Pump

Type	:	Screw type ,driven by the AC motor.
Capacity	:	1.1 times of required lube oil flow, as minimum.
Discharge pressure	:	<u>6.9</u> kg/cm2. G
Motor rating	:	Refer to attached utility list
Quantity	:	One (1) set / One unit

1-23. Main Control Oil Pump

Type	:	Screw type, driven by AC electric motor
Capacity	:	1.1 times required lube oil flow, as minimum.
Discharge pressure	:	<u>15.9</u> kg/cm2. G
Motor rating	:	Refer to attached utility list
Quantity	:	1 set / One unit

1-24. Auxiliary Control Oil Pump

Type	:	Screw type driven by AC electric motor
Capacity	:	1.1 times required lube oil flow, as minimum.
Discharge pressure	:	<u>15.9</u> kg/cm2. G
Motor rating	:	Refer to attached utility list
Quantity	:	1 set / One unit

1-25. Emergency Oil Pump

Type : Gear type mounted on oil reservoir
and driven by DC electric motor

Quantity : One (1) set / One unit

1-26. Oil Cooler

Type : Shell and tube type

Cooling water - Kind : Cooling tower water

- Quantity : Refer to attached utility list

- Fouling factor : 0.0002 m²h°C/kcal

Cooling Surface : 120% of required area (20% of tube plugging margin)

Quantity : Two (2) sets / One unit

1-27. Lube Oil Filter

Type : Duplex with change-over lever

Filtration : 40 micron

Quantity : One (1) set / One unit
(twin element)

1-28. Control Oil Filter

Type : Duplex with change-over lever

Filtration : 10 micron

Quantity : One (1) set / One unit
(twin element)

1-29. Oil Pressure Adjusting Valve

Type : Self acting type

Setting pressure

-Lube oil : 1 kg/cm². G

-Trip oil : 4 kg/cm². G

-Control oil : 14 kg/cm². G

Quantity : 1 lot / One unit

1-30. Gland Steam Condenser

(Cleanliness factor : 85%)

Type : Shell and tube, fixed tube sheet type
with AC motor driven exhaust fan

Cooling water - Kind : Condensate Water

- Quantity : Refer to attached utility list

Cooling Surface : 100% of required area

Quantity - exhaust fan : 1 set(s)/one unit

- condenser : 1 set(s)/one unit

ACC DETAILS:

ACC Fan Details & Specification		
Sr. No:	Fan Details 8 Nos.	
1	Make	PAHARPUR Cooling Tower Ltd.
2	Item No:	5
3	Sr.No:	10.1.0028
4	Code	API - 661 ASME SEC VIII Div.-1
5	Design Pressure	0.5 kg/cm ²
6	Test Pressure	1.3 kg/cm ²
7	Design Temp.	120 deg.
8	Operating Fluid	Steam
9	Corrosion Allowances	1.5 mm
	Motor Details:	
1	Make	MERATHON ELECTRICALS LTD
2	Sr.No:	
3	Type	
4	Frame Size	VP 2305
5	KW / HP	75 / 100
6	Current	128 amps
7	Efficiency	93%
8	speed	1480 rpm
9	Bearing DE / NDE	6317 / 6314

PHOTOGRAPHS:









