

PACKAGE / SYSTEM : ASH HANDLING SYSTEM

EQUIPMENT : REFRIGERANT DRYER FOR TAC

VENDOR : SUMMITS HYGRONICS PVT. LTD.


VENDOR REFERENCE NO. : E282-1516 Category 5- For Infomation

1	Document updated.	03-Feb-20			
0	For Information	12-Dec-19			
REV	DESCRIPTION	DATE	PPD	CHKD	APPD

PROJECT

**IB THERMAL POWER STATION 2 × 660 MW UNITS 3 & 4
BANHARPALI, JHARSUGUDA ODISHA – 768234, INDIA**

OWNER



ODISHA POWER GENERATION CORPORATION LIMITED

OWNER'S CONSULTANT




**DEVELOPMENT CONSULTANTS PVT. LTD.
CONSULTING ENGINEERS
KOLKATA, INDIA**

EPC CONTRACTOR



**BGR ENERGY SYSTEMS LIMITED
CHENNAI - INDIA**

<p>AHP VENDOR</p> <div style="display: flex; align-items: center;">  <p>BGR ENERGY SYSTEMS LIMITED CHENNAI - INDIA</p> </div>	<p>AHP EQUIPMENT SUPPLIER</p> <p>SUMMITS HYGRONICS PVT. LTD.</p>
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	NAME	SIGN	DATE	SHEET SIZE	NO. OF SHEETS	
PPD.	BALAJI	- sd -	12-Dec-19	A4	3	
CHD.	GOUTAMCHAUDHURI	- sd -	12-Dec-19			
APPD.	SRM	- sd -	12-Dec-19			
DEPT.		SCALE	WEIGHT (KG)	REF.TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
CODE		N.A	N.A	N.A	N.A	N.A

TITLE	CARD	BGR DOCUMENT NO.	REV.
DATASHEET OF REFRIGERANT TYPE DRIER FOR TAC	CODE	GID-208-ME-ETP-DS-55351	1
	NA		

DATA SHEET OF REFRIGERANT TYPE DRIER FOR TAC

Doc No.: GID-208-ME-ETP-DS-55351	E282-1516	Date: 24.03.2016
Product Classification:	Project Category (P Category)	
Product Group:	Air Dryer, Refrigeration	
Product Series:	SI Series	
Model Variance:	SI 650 DW	
Total Qty	3 No's	
Description	UoM	Parameter
Capacity at ideal condition	M3/HR	6185
Type		Vapour Compression, Water Cooled
End Connection, In/ Out, Compressed air	N1,N2	8" NB, ANSI B 16.5 CL. 150 LBS SORF
End Connection, In/ Out, Cooling water	N3,N4	1-1/2" NB, ANSI B 16.5 CL. 150 LBS SORF
Drain End Connection	N5	1/2" BSPF, 1000#
Pressure Drop across Air Dryer	bar g	0.2
Ideal condition		
Ambient temperature	°C	50
Inlet air pressure	Kg/cm ² g	1.8
Inlet air temperature	°C	42
Outlet air temperature	°C	38
Relative Humidity of inlet air	%	100
Inlet water temperature	°C	30 to 38
Outlet water temperature	°C	46
Pressure dew point of outlet air	°C	+2
Air Quality at inlet, Recommended		ISO 8573-1,2010 Table 1, Class 2
Design of Air Quality at outlet		ISO 8573-1,2010 Table 2, Class 4
Code of construction		ASME SEC VIII DIV. I
Operating range		
Inlet air pressure	Kg/cm ² g	1.8 to 3
Inlet air temperature	°C	40 to 42
Ambient temperature	°C	35 to 50
Inlet water temperature	°C	38 to 43
Relative Humidity of inlet air	%	0 to 100
Pressure dew point of outlet air	°C	1 to 10
Outlet Air Temperature	°C	3 to 7 less then inlet
Outlet water temperature	°C	8 high then inlet
Design Condition		
Design Pressure	bar g	110 % of Maximum operating pressure
Power Supply, Load Circuit		415 VAC, 3 Ph, with neutral 50 Hz
Refrigerant Compressor		
Make Of motor		Emerson Copeland/Danfoss/Bitzer
Type		Semi hermitic, reciprocating
Refrigerant		R22
Operating power	KW	19.7
Rated Power	KW	34
Condenser		
Make		Summits
Type		Water Cooled, Brazed Plate Heat exchanger
Cooling Medium		Water
Water flow rate	Lpm	180

Water In/Out temperature	°C	38 / 46
Water inlet pressure	Kg/cm2	2.5 to 5.5
Water outlet pressure	Kg/cm2	1 less than the inlet pressure
Expansion Device		
Make		Danfoss/Emerson
Type		Thermostatic
Evaporator (Heat Exchanger)		
Make		Summits
Type		Plate type, cross flow aluminium alloy heat exchanger
Moisture separator type		Demister pad
Consists of		Pre-cooler, Evaporator, Moisture Separator
Refrigerant Liquid line Filter drier		
Make		Alco / Danfoss / Sporlan /Emerson
Pressure Transmitters, Refrigerant Suction, Discharge		
Make		Honeywell / Summits
Pressure gauges, Refrigerant Suction & Discharge		
Make		Wika / H GURU / Summits
Capacity regulator, Hot gas by-pass valve		
Type		Electrical / Electronic operated
Make		Danfoss / Emerson / Sanhua / carel
Sight glass		
Make		Castle / Danfoss / Emerson
Suction line accumulator & liquid line receiver		
Make		Summits
Liquid Line indicator		
Make		Emerson
Oil Heater		
Make		Danfoss/Emerson
Dryer controller		
Type		Programmed micro controller
Make		Summits
Annunciation		
Audio Visual alarms	)	Compressor over load
	)	High refrigerant condensing temperature
	)	Low refrigerant suction pressure
	)	High refrigerant discharge pressure
	)	High refrigerant discharge temperature
	)	Poor Dew Point
	)	High Inlet air temp
	)	Phase failure
Display	)	Compressor over load
	)	High refrigerant condensing temperature
	)	Low refrigerant suction pressure
	)	High refrigerant discharge pressure
	)	High refrigerant discharge temperature
	)	Poor Dew Point
	)	High Inlet air temp
	)	Phase failure
Indications.	)	Compressor over load
	)	High refrigerant condensing temperature
	)	Low refrigerant suction pressure
	)	High refrigerant discharge pressure

System Trips.	)	High refrigerant discharge temperature
	)	Poor Dew Point
	)	High Inlet air temp
	)	Phase failure
	)	Cooling water flow rate low
	)	Dryer Air inlet flow rate low
	)	Compressor over load
	)	High refrigerant condensing temperature
	)	Low refrigerant suction pressure
	)	High refrigerant discharge pressure
	)	High refrigerant discharge temperature
	)	High Inlet air temp
	)	Phase failure
	)	Cooling water flow rate low
)	Dryer Air inlet flow rate low	
RS 485 MODBUS interfacing available.		
On delay time to protect the compressor due to sudden failure		

Drain Valve		
Type		Zero loss
Size	inch	1/2" BSP F
Water Valve		
Type		Electrical operated
Size	inch	1-1/2" BSP F
Painting details		
Equipment Description		Dryer Canopy
Moc		Powder Coated sheet steel
Surface Preparation		7 tank process
Colour as per IS		DA Grey & Sky blue (632&101)
Total DFT	Micron	150
Dimensions Details		
Overall Size (W x D x H)	mm	As per GA drawing
Weight (approx.)	Kg's	1800 (approx)

Control Details					
Rev No.	Date	Details	Altered By	Checked By	Approved By
00	11.12.2019	For Approval	SS	KM	RMS

Notes:

-) Unless otherwise specified make and specification of bought items are as per manufacturing standard.
-) Inspection & testing shall be as per Approved QAP.
-) Scope of supply inclusive of matting flanges with fasteners.