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Specification No.	7802
Item No.	SP/MISC/1/7/7802
Location	BAY-9
Quantity	03No.

DESIGN,SUPPLY, INSTALLATION & COMMISSIONING OF WATER COOLED WATER CHILLER ,CAPACITY- 20 TR @ 15 °C FOR VAPOR PHASE DRYING VESSEL

NOTE :

- VENDOR must submit complete information against clause No-10.0 (Qualifying Condition). The offer meeting this clause would only be processed
 - The " offered" Column and where applicable, the " Deviations" Column of this format shall be filled in by the Vender and submitted along with the offer. Technical details also submitted with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specification / requirements shall be treated as non - compliance.
 - The offer and all documents enclosed with offer should be in English language only.
- NAME & ADDRESS OF THE SUPPLIER :
CONTACT PERSON'S NAME
TELEPHONE NOS :
E-MAIL ADDRESS :

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF WATER COOLED WATER CHILLER (CAPACITY-20 TR @ 15 °C)

S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS
1.0	REQUIREMENT			
	WATER COOLED WATER CHILLER (CAPACITY-20 TR @ 15 °C) REQUIRED FOR COOLING OF WATER USED IN THE WATER JACKET OF VAPOR CONDENSERS, FUNCTIONING IN VAPOR PHASE PLANT Qty-03 no.	VENDER TO CONFIRM		
2.0	SCOPE			
	Design,Supply, Installation and Commissioning of 20 TR @ 15 °C water cooled water chiller for vapor phase plant no. ME-1/7/2117, 2118, 2293 in bay-9. i. Installation & commissioning of water chilling unit (Inlet & Outlet line connection with cooling tower , process plant & makeup water line). ii. Initial gas charging of chiller. iii. Operator's training for operation & control of water chiller.	VENDER TO CONFIRM		
3.0	SPECIFICATION			
	a).Cooling Capacity: 20TR@15°C	VENDER TO CONFIRM		
	b).Min/Max Operating Temp: +5°C/+25°C	VENDER TO CONFIRM		
	c).Min/Max Ambient Temp.: +5°C/+45°C	VENDER TO CONFIRM		
	d).Media to Cool: Clean Water	VENDER TO CONFIRM		
3.1	Main Refrigeration Components:			
	a).Compressor Make: Emerson/Danfoss only	VENDER TO CONFIRM		
	b).Compressor Type: Scroll/SEALED SCROLL	VENDER TO SPECIFY		
	c).Condenser Type: Water cooled, Shell & Tube type	VENDER TO SPECIFY		
	c).Condenser Make:ALPHALAVAL	VENDER TO CONFIRM		
	d).Evaporator Type: CBE(Brazed Heat Exchanger).	VENDER TO CONFIRM		
	d).Evaporator Make: GEA/ Swep/ Kaori/ Alphalaval.	VENDER TO CONFIRM		
	e).Refrigeration Circuits: 02	VENDER TO CONFIRM		
	f).Refrigerant: R134a/R407C	VENDER TO SPECIFY		
3.2	Refrigeration Control Circuit with Accessories	VENDER TO CONFIRM		
3.3	Externally Mounted Pump: (on Tank Skid)			
	a).Make: Grundfoss/Kirloskar/Crompton only	VENDER TO CONFIRM		
	b).Type: Centrifugal, Multistage	VENDER TO SPECIFY		
	c).Construction: SS304 Impeller/CI Housing	VENDER TO CONFIRM		
	d).Process Flow Rate & Pressure: 200 L/Min @ 4Bar	VENDER TO CONFIRM		
3.4	Electrical:			
	a.MPCB for Compressor, Pump, Fan etc.: Schneider/ABB/L&T/Siemens	VENDER TO CONFIRM		
	b).Contactor for Compressor, Pump, Fan etc.: Schneider/ABB/L&T/Siemens	VENDER TO CONFIRM		
	c).Main switch on/off: Schneider/ABB/L&T/Siemens only	VENDER TO CONFIRM		
	d).Single Phase Preventer: Schneider/ABB/L&T/Siemens only	VENDER TO CONFIRM		
	e).Microprocessor based controller	VENDER TO CONFIRM		
	f).antifreeze switch	VENDER TO CONFIRM		
3.5	Water Reservoir:			
	a).Volume: 500 Ltrs (with a provision for water level monitoring)	VENDER TO CONFIRM		
	b).Construction: SS 304	VENDER TO CONFIRM		
	c).Nitrile rubber insulation	VENDER TO CONFIRM		
3.6	Hydraulic Specs:			
	a).Piping: Non-Corrosive	VENDER TO CONFIRM		
	b).Inlet/Outlet End Connections: 1-1/2" BSP	VENDER TO CONFIRM		
3.7	Power Supply:			
	Electric supply 3 PH., 415 V,50Hz,AC will be provided by BHEL at one place only	VENDER TO CONFIRM		
3.8	Safety Devices:			
	a).Hand shut off Valve: Both Suction & Discharge side of the Compressor for servicing purpose.	VENDER TO CONFIRM		
	b).Digital Temperature Controller.	VENDER TO CONFIRM		
3.9	Control Accessories:			
	a).High Pressure Trip	VENDER TO CONFIRM		
	b).Low Refrigerant Trip	VENDER TO CONFIRM		
	c).Phase Reversal Trip	VENDER TO CONFIRM		
	d).Water Level Low Trip	VENDER TO CONFIRM		
	e).Overload Relay Trip	VENDER TO CONFIRM		

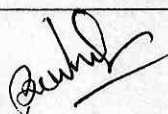
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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF WATER COOLED WATER CHILLER (CAPACITY-20 TR @ 15 °C)

S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS
	f).High/Low Temperature Alarm	VENDER TO CONFIRM		
	g).Antifreeze Trip	VENDER TO CONFIRM		
4.0	Erection & Commissioning			
4.1	Erection & Commissioning shall be done by supplier at BHEL works.	VENDER TO CONFIRM		
4.2	Interconnecting piping between chiller ,tower & process plant shall be in vender's scope	VENDER TO CONFIRM		
4.3	Supplier to bring all the tools & tackles required for installation & commissioning.	VENDER TO CONFIRM		
4.4	Initial charge of Refrigerant shall be provided by supplier.	VENDER TO CONFIRM		
4.5	If any special tool required for O & M it should be supplied by supplier along with chiller.	VENDER TO CONFIRM		
4.6	First fill up of oil,greese & gas will be in the scope of supplier	VENDER TO CONFIRM		
4.7	Successful proving of all function at site as per specification by the supplier shall be considered as part of commissioning.	VENDER TO CONFIRM		
5.0	Guarantee			
5.1	Guarantee for equipment shall be for 24 months from the date of commissioning.	VENDER TO CONFIRM		
6.0	Packing:			
6.1	All components shall be suitably packed so that the material reachesBHEL without any damage/loss in transit.	VENDER TO CONFIRM		
7.0	INSPECTION			
7.1	Pre dispatch inspection will be carried out by the representative of BHEL as per specification at supplier's works.	VENDER TO CONFIRM		
7.2	Minimum 15 days advance notice to be given by supplier for Inspection at supplier's works.	VENDER TO CONFIRM		
8.0	Miscellaneous :			
8.1	Notwith standing the details in this specification, if any thing else is required for its functioning the same shall be specifically brought out and included in the offer	VENDER TO CONFIRM		
8.2	WATER COOLED WATER CHILLER (CAPACITY-20 TR @ 15 °C) should be in ready to use condition with all required accessories for its functioning.	VENDER TO CONFIRM		
9.0	Documentation :			
9.1	Water chiller shall be supplied with 3 set of manual. The manual shall contain the details of - a. Refrigeration circuit diagram b. Complete wiring diagram with ferrule no. c. Spare parts details and d. Operation manual with maintenance details.	VENDER TO CONFIRM		
9.2	GA & PI diagram with detail for refrigeration system shall be provided by supplier.	VENDER TO CONFIRM		
9.3	lay out diagram	VENDER TO CONFIRM		
9.4	Foot print area	VENDER TO CONFIRM		
9.5	Total electrical load	VENDER TO CONFIRM		
10	Qualifying condition			
10.1	To qualify for this tender, vendors shall submit the following detail and documents A.The supplier should be the manufacturer(OEM) or authorized represetative of the manufacturer .Authorisation/OEM certificate must be submitted with offer. i. Only those vendors/bidders, who have supplied and commissioned at least THREE numbers of water chiller of capacity 20 TR (or) more in the last FIVE years (as on date of tender opening) for industrial use should quote. ii. Vendor/bidder should submit Performance Certificate from their customers for the satisfactory performance of water chiller (capacity 20 TR or more capacity supplied vide above submitted purchase order), for a minimum period of one year (as on original date of tender opening).	Vender to submit		
11.0	Bhel reserves the right to verify information submitted by vender. In case the information is found to be false/ incorrect, the offer shall be rejected.	Vender to confirm		

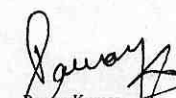

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