

PRICE BID (PART-II)

Tender Details: Design, Manufacturing, Supply, Installation, Testing and Commissioning of Refrigeration System for Temperature Controlled Warehouse of Multi Modal Logistics Hub at Visakhapatnam, Andhra Pradesh.

Tender No. MMLH/TCW/REF/PT/16 dated 13/01/2017

SCHEDULE OF WORK

Sl. No.	Description	Unit	Qty	SUPPLY (A)								ERECTION (B)				A + B
				Basic Rate (Rs)	Basic Amount (Rs)	Packing & Forwarding (Rs)	Excise Duty (Rs)	CST/VAT (Rs)	Freight (Rs)	Transit Insurance (Rs)	Total Amount (Rs)	Basic Erection Rate (Rs)	Erection Amount (Rs)	Service Tax (Rs)	Total Amount (Rs)	Total Amount (Supply + Erection) (Rs)
1.0	FREEZER															
1.1	Screw Compressor with motor (energy efficient type), Variable Frequency Drive Starter arrangement for Freezer application: Capacity 132 KW @ -28 Deg C Saturated Suction Temperature (SST) and 40 Deg C Saturated Discharge Temperature (SDT) along with standard accessories.	Set	4													
1.2	Gas and liquid cooler	Nos	1													
1.3	High Pressure receiver with all controls	Nos	1													
1.4	Low Pressure receiver with all controls	Nos	1													
1.5	Oil Separator	Nos	4													
1.6	Air Cooling Unit (ACU) for freezer -39.75 KW	Set	2													
1.7	Air Cooling Unit for freezer -35.16 KW	Set	9													
1.8	Valves and fittings for ACU	Nos	11													
1.9	Evaporative type induced draft counter flow design ammonia condenser	Nos	1													
1.10	Ammonia liquid Pumps	Set	3													
1.11	Condenser pump	Nos	2													

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1.12	Interconnecting pipes (Cast Iron/Mild Steel/ GI as required). Bidders need to assess the piping length based on the enclosed layout which will be finalised during detail engineering.	Lot	1														
1.13	Necessary Insulation of suitable thickness wherever required viz. for the accumulators, suction line with PUF section insulation material and finished with 24 G aluminum cladding.	Lot	1														
1.14	Refrigerated Auto air purge system	Set	1														
1.15	PLC Panel along with wiring and cabling	Set	1														
1.16	Cooling tower with pump , connecting pumps and other standard accessories for compressor head cooling (if required)	Set	1														
1.17	Danfoss & Parker make Hot gas defrosting controls with necessary piping & fittings	set	11														
1.18	Thermosyphon-cooled system for cooling of oil	Set	4														
2.0	CHILLER																
2.1	Screw Compressor with motor (energy efficient type) and Variable Frequency Drive Starter arrangement for Chiller application: Capacity 368 KW @ -6 Deg C SST and 40 Deg C SDT along with standard accessories	Set	2														
2.2	High Pressure receiver with all controls	Nos	1														
2.3	Low Pressure receiver with all controls	Nos	1														
2.4	Oil Separator	Nos	2														

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2.5	Air Cooling Unit for Chiller -60.83 KW	Set	1													
2.6	Air Cooling Unit for Chiller -40.84 KW	Set	3													
2.7	Air Cooling Unit for Sorting Room and Ante Room - 20.6 KW	Set	4													
2.8	Air Cooling Unit for AnteRoom -12.5 KW	Set	2													
2.9	Valves and fittings for ACU	Set	10													
2.10	Evaporative Condenser	Nos	1													
2.11	Ammonia liquid Pumps	Nos	2													
2.12	Condenser pump	Nos	2													
2.13	Interconnecting pipes (Cast Iron/Mild Steel/ GI as required). Bidders need to assess the piping length based on the enclosed layout which will be finalised during detail engineering.	Lot	1													
2.14	Necessary Insulation of suitable thickness wherever required viz. for the accumulators, suction line with PUF section insulation material and finished with 24 G aluminum cladding.	Lot	1													
2.15	Refrigerated Auto air purge system	Set	1													
2.16	PLC panel along with wiring and cabling	Lot	1													
2.17	Pressure pump based Humidifier with Digital controller and RS 485 port	Nos	1													
2.18	Thermosyphon-cooled system for cooling of oil	Set	2													

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3.0	OTHERS																
3.1	Aluminium armored conductors for power cable & copper control cables & wiring with necessary cable tray for all the electrical equipment's complete with cable glands and junction boxes as per scope of work & Technical Specification.	Lot	1														
3.2	Main MCC with approved make of components as per technical specifications for the entire plant with all necessary feeders for future provisions and spares. Spare feeders would be complete in all respect. However only cubicles would be provided for the feeders for the future provisions viz. 1 no. compressor feeder & ACU feeders of required numbers.	Lot	1														
3.3	All local/remote start stop push buttons for the drives to be installed at present.	Lot	1														
3.4	Approved make Desktop Computer with UPS, printer etc. and SCADA software for Chiller chamber & Frozen Chamber PLC Panel.	Lot	1														
3.5	Supply, fabrication & erection of Structural steel work as per good engineering practices for all required services for the installation of all the plant & equipment (including piping work, hanging of ACU etc.)	Lot	1														
3.6	Temperature controller with RS 485 Port	Set	10														
3.7	Alarm for man in trap inside the cold room	Nos	10														
3.8	Ammonia leak sensor and alarm	Lot	1														

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3.9	Central Monitoring System	Lot	1													
4.0	Drain pipes (insulated and heat for freezer) Running from Cold Room and terminating near plant room	Lot	1													
4.0	SPARES/CONSUMABLES/FIRST FILL															
4.1	Supply of Spares															
4.1.1	Compressor motor – Freezer	Nos	1													
4.1.2	Compressor motor – Chiller	Nos	1													
4.1.3	ACU motor – Freezer	Nos	1													
4.1.4	ACU motor – Chiller	Nos	1													
4.1.5	Ammonia Pump	Nos	1													
4.1.6	Condenser pump	Nos	1													
4.1.7	Condenser fan motor	Nos	1													
4.1.8	Temperature controller	Nos	1													
4.1.9	Electrical contactor (1 nos each for all the types provided in the control panels)	Lot	1													
4.1.10	Ammonia Gas cylinder	Nos	5													
4.1.11	Compressor oil	Lts	500													
4.2	First Charge of Ammonia gas, Oil, lubricant including top up during trial run for the complete refrigeration system	LS	1													

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4.3	Consumables for running the plant for 6 months	LS	1													
5.0	PLANT OPERATION & MAINTENANCE															
5.1	Plant Operation cost in three shift basis with minimum two trained operators for 12 months	Month	12													
5.2	Comprehensive Annual Maintenance Contract excluding the cost of spares and consumables to ensure smooth running and minimum downtime of the plant. The period would be effected after expiry of 1(one) year performance guarantee period.	Year	5													
	GRAND TOTAL															

Note: Please fill up, sign, stamp, scan and upload the above mentioned Price Bid.

Name of the Bidder :

Signature :

Seal of the

Company :

Date :

Place :