



# The Bhagirathi Co-op. Milk Producers' Union Limited

(A Govt. of West Bengal Project)

## **Request to Conduct Reverse Auction for Expansion and Modification of existing Ammonia Refrigeration System**

**Scope of Work:** Supply, Erection Testing & Commissioning of existing Ammonia Refrigeration System at Feeder Dairy.

**Validity of the Bid:** 180 days.

**Tentative Work/Supply Schedule:** Within 30 days of placement of work cum supply order.

### **TECHINICAL SPECIFICATION**

Sl. No.	Scope of Work
01.	Supply, Erection Testing & Commissioning of existing Ammonia Refrigeration System at Feeder Dairy As per <u>ANNEXURE-A</u> .

### **General Terms and Condition:**

- 1. Rate to be quoted by the Bidder:** Rate should be Quoted by the bidder shall be inclusive of all Taxes and Levies, GST other charges/ taxes if any for the delivery of the goods in the office of the Bhagirathi Cooperative Milk Producers' Union Ltd.
- 2. Place of Delivery:** The Bhagirathi Cooperative Milk Producers' Union Limited (BCMPUL) Feeder Dairy, Panchanantala, Berhampore, Murshidabad, W.B. 742101.
- 3. Price Escalation:** The price should quote fixed and shall not be subjected to any escalation.
- 4. Certificate:** Supplier should also Certified that the material made for manufacture goods are of food grade, non-toxic and conform to the standard.
- 5. Acceptance of Materials:** After delivery the materials shall undergo qualitative quantitative checks as per specifications. Failure to supply material as per standards shall lead to rejection of material and imposition of penalty.
- 6. Term of Payment:** Payment will be made in NEFT/RTGS within 30-45 days after delivery of the goods and receipt at the store of the Milk Union section in a good condition followed by submission of Invoice. The Bank Detail of the Party are to be clearly mentioned in the bills.
- 7. Penal Provision:** The Requisition Authority will certified the quality of the goods received at the store in case of any consignment is not conforming the prescribe specification, Quantity and Quality then penalty shall be imposed and the cost will be deducted from the bill accordingly or the material shall be rejected outright.
- 8. Liquidated Damage:** Liquidated Damage of 0.5% of the total cost shall be charged if any delay in supply of goods subjected to a maximum 10% of the total cost amount shall be recovered from the bills. If the Milk Union Makes alternative arrangements due to negligence of the party, the cost of the consignment form arranged for different source shall be deducted from the party.



## **The Bhagirathi Co-op. Milk Producers' Union Limited**

**(A Govt. of West Bengal Project)**

9. **Force Majeure:** For delay in supply of materials for which neither the supplier or the Milk Union is responsible like strikes, lockouts, war, catastrophe shall be termed as "Force Majeure" and penalty clause will not be applicable.
10. **Dispatch:** Mode of transportation, transit insurance for the supply of the goods to BCMPUL will be arranged by the bidder. Materials dispatched from the bidder until or unless reaches the BCMPUL is the sole responsibility of the bidder. The Milk Union will not be responsible for any damage in transit and no claim in this regard will be entertained.
11. **Unloading of materials:** Unloading of the materials shall be done by the Milk Union. Unloading shall be done within office hour (10:00 am to 06:00 pm).
12. **Dispute Settlement:** In Case of any dispute between the Supplier and Milk Union, decision of the Milk Union shall be the final and binding.

**Other Terms and Condition are as per stranded Terms and condition of the NCDFI.**

Sd/-  
Managing Director  
The Bhagirathi Cooperative  
Milk Producers' Union Limited



# **The Bhagirathi Co-op. Milk Producers' Union Limited**

(A Govt. of West Bengal Project)

## **(ANNEXURE-A)**

### **CLIENT SCOPE AND EXCLUSIVE SUPPLY (GENERAL)**

01. Main power and earthing connection to our control panel with proper earthing to D. G. sets and control panel and change over switch etc.
02. All necessary civil work including foundation of machineries plastering, of insulation, making and breaking of walls and supports. Details regarding civil foundation equipment will be provided by customer.
03. Machinery and equipment unloading related activity should be arranged by the customer.
04. Water and electricity required for erection, testing and commissioning of equipment would be made available to us free of charge.
05. All excess material will be taken back after commissioning of the plant.
06. Any statutory approval from the government agency should be arranged by the customer.
07. All necessary wash points in dairy, required plumbing work with makeup water and drain connection wherever is required.
08. Any other requirements and machineries / material / services which is not including in present scope of supply.
09. Customer should arrange the lockable room for our erection crew at site while doing the installation and commissioning work.
10. Any other machinery which you are going to purchase should be made available in time. Otherwise our erection people become ideal.
11. Required capacity Pouch Packing Machine, D G Sets with its accessories, Can, Crate & Lab Equipment are not considered in our quotation. Suggested to Purchase directly from Suppliers.
12. Skilled & experienced man power, technician will be available with you from the date of installation, Erection work at your site, so technically well training during the period can be possible.



# The Bhagirathi Co-op. Milk Producers' Union Limited

(A Govt. of West Bengal Project)

## REFRIGERATION SYSTEM

Function	To Pre-chill the water before Ice Bank Tank to increase the Refrigeration Capacity	
Refrigeration Compressor	Kirloskar make ammonia refrigeration compressor Model <b>KCX -2</b> giving capacity of <b>38 TR</b> while operation at evaporating temp. of -5 Deg.c. and condensing temp. of + 40 Deg.C. while consuming <b>60 HP</b> at shaft. (1 Nos)	
Compressor Accessories	<ul style="list-style-type: none"><li>-HP/LP/OP gauges and cutouts.</li><li>-Suction and discharge stop valves.</li><li>-Drive set, base frame of compressor.</li><li>- Oil separator with float &amp; oil return, drain arrangements.</li><li>- Compressor &amp; motor belt guard.</li></ul> <b>(1 Set)</b>	
Electric Motor	Crompton/Kirloskar / or equivalent make <b>60 HP</b> TEFC 4 pole electric motor operating at 415 volts 3 phase AC supply. <b>(1 Nos)</b>	
Evaporative Condenser	<b>Description</b>	<b>Technical Specs</b>
	Heat rejection Capacity	220 TR
	Condensing temperature (Deg.C)	38
	Ambient Wet bulb temperature -deg. C	28
	Total Estd. Airflow Rate CFM	11280
	Fan X Motor	36" X 2.2 KW X 3 Nos.
	Total Water flow Rate LPS at 10 Mtr. Head.	19
	<b>MOC of Evaporative condenser coil.</b>	<b>SS-304 (19 MM OD X 1.2 MM Thk.</b>
	<b>Enclosure</b>	<b>Made up of GI Powder Coated with 1.2 mm Sheet.</b>
	<b>Main Structure</b>	<b>Hot Dip Galvanized.</b>
	Size of Evaporative condenser-Approx.	3.7 L X1.6X 3.2 Mtr. High.
	Coil test pressure kg/cm2 (Pneu.)	22.5
	<b>Water Tank/Sump</b>	<b>Made up of SS-304 X 2mm thick.</b>
	<b>Water Pump- KDS-116</b>	<b>3HP (3 Phase) X 2 No.</b>
Chilled Water	Cooling water pipes and fittings to Interconnect condenser water pump and condenser as well as compressor jacket cooling in G. I. 'B' class pipe with necessary valves, strainer and pipe fittings <b>(1 Lot)</b>	
Ammonia Liquid Receiver <b>Replacement of Old Receiver and Supply of new receiver</b>	Ammonia liquid receiver capacity <b>1500 Ltrs</b> complete with following accessories. <b>(02 Nos.)</b> <ul style="list-style-type: none"><li>- Safety Valve</li><li>- Purge Valve</li><li>- Level Gauge</li><li>- Pressure Gauge</li><li>-Liquid Inlet &amp; Outlet Valve</li></ul>	
Ammonia Pre Chiller	<b>40 TR</b> Ammonia Pre-Chiller is design to Chilled the incoming water temperature from the process and pass to the ice bank tank to increase the Capacity of refrigeration system.	



# The Bhagirathi Co-op. Milk Producers' Union Limited

(A Govt. of West Bengal Project)

Refrigeration Control	Refrigeration controls comprising of -Electronic Level Controller with Float Valve -Ammonia Solenoid Valve -Hand Expansion Valve -Temp. Gauge for I.B.T. (1 Lot)
M. S. Pipes & Fittings	M. S. 'C' class pipes & fittings to interconnect all refrigeration equipment with required ammonia valve based on compact layout. (1 Lot)
Structural Materials:	One lot of structural material for support, base frame, and complete painting of plant and machinery etc. (1 Lot)
First Charge	First charge of ammonia and compressor oil. (1 Lot)
Electrical Connected Load	72.5 HP
Make	Eskimo

## ELECTRICAL SECTION

### 01. MCC CONTROL PANNEL: 08 NO

Function	To control (ON-OFF) all equipment & machinery which is having electrical connection with necessary interlocking & safety arrangement
Type	Wall Mounted
Material Construction	CRCA sheet powder coated
Electrical hardware make	Siemens/L & T
Incoming Electrical Fittings/Accessories	R.Y.B. Indication lamp, voltmeter, ammeter, selector switch, Incoming SFU,
Outgoing Electrical Fittings/Accessories	As per rating MCB, contractor, relay, terminal box & wiring, ON-OFF push button.
Digital Display	Cold Room Temp Controller as well as Raw Milk, Pasteurised milk & chilled Milk temp indicator.
Make	Eskimo

### 02. ELECTRICAL CONTROL CABLE: 02 LOT

Function	To interconnect all machineries from MCC control panel
Material Construction	4 Core, Copper Flexible cable including earthing
Cable Make	Polycab/Any Reputed
Other Electrical accessories	GI Support, Cable tray, PVC Conduit pipe, Clamps, Cable Glands etc.

## PLANT INSTALLATION AND COMMISSIONING

### ERECTION AND COMMISSIONING OF THE PLANT 01 JOB

Installation of the Machineries	All machinery and equipment will be installed in accordance with the final approved Equipment Layout Drawing.
Installation of Pipe line and support	The scope of work includes installing and connecting all interconnecting pipes (Copper, Stainless Steel (SS), Mild Steel (MS), and Galvanized Iron (GI)) to all machinery and equipment, as per the approved Equipment Layout
Insulation	The scope of work includes Insulation work for Chilled Water, Hot water & Refrigeration Suction line.



## **The Bhagirathi Co-op. Milk Producers' Union Limited**

**(A Govt. of West Bengal Project)**

Electrical Cabling	As per final approved Equipment Layout Drawing all equipment & Machinery will be electrically interconnected
Testing	All machinery and equipment will be tested after successful installation, Additionally, all pipelines will undergo leak testing under operating pressure. Comprehensive testing will be conducted to ensure readiness before plant startup.
Commissioning	After satisfactory completion of testing and inspection of the plant and pipelines, witnessed and approved by our expert engineers and your representatives, the plant will be commissioned and handed over for commercial production
Training for Plant Operator	We will provide comprehensive training to operators to ensure they are fully competent to operate and maintain the milk dairy plant safely, efficiently, and in compliance with regulatory requirements

Sd/-

Managing Director  
The Bhagirathi Cooperative  
Milk Producers' Union Limited