# THE ICHHAMATI CO-OPERATIVE MILK PRODUCERS UNION LTD.

HATIPUKUR ROAD, BARASAT-700124, NORTH 24 PARGANAS

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Date- 11.09.13

Ref no: - IMUL: Tender: IDDP: 386

TENDER

The Ichhamati Co-operative Milk Producers' Union Ltd. is a Anand Pattern District level co-operative Society which is functioning under leadership of District Magistrate, North 24 Parganas. This Milk Union is inviting sealed quotation for purchase and installation of I no 'Condensing Unit' for milk condensing. For details specification/ description of Condensing Unit is as under:-

# **Technical Specification**

Evaporator for 450-500 Kg/hr. Milk handling for Concentrated Milk.

1.	Feed rate	19.	450-500 Kg/hr.
2.	Initial T.S (Total Solid) of Milk	Kladi	12 %
3.	T.S Out Put	4	28-30 %
4.	Concentrated Milk Out	Lat.	165 Kg
5.	Condensate Out		333 Kg
6.	Steam Pressure required		8 Kg /Cm <sup>2</sup>
7.	Kg Steam required	:	350Kg
8.	Power required		16.5 HP 12.31 KW.

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# 1. Feed Balance Tank

Qty: 01 No CAPACITY

It will be fabricated from stainless steel of 2mm thick conforming to AISI 304 quality. It will be supported on 3 No S.S legs & adjustable ball feet. It will further comprise of inlets for concentrated milk, concentrated milk of the sampling line and one number outlet connection for milk complete with union.

#### 2. Inline Filter

Qty: 01 No

It will be fabricated from AISI 304 S.S. This filters the foreign materials present in milk.

#### 3. Feed Pump.

Qty: 01 No

Sanitary type, capacity matching with evaporating plant.
This will pump milk from balance tank to the evaporating plant through different pre

#### 4. Pre heaters.

Qty: 02 Nos

Type-Coil

M.O.C SS 304

The pre heaters will utilize the vapors from the Evaporating plant and will be suitable for heating the milk from  $6^{\circ}\text{C}$  to  $65^{\circ}\text{C}$ 

# 5. High Heater: 01

Single Stage

Purpose: To heat milk to 85°C..

# 7. Calandria

Qty: 02 Nos

All the calandria will be fabricated from stainless steel confirming to 304 quality. Around the evaporator tubes S.S shell will be provided with necessary connections for steam vapors, condensate outlet, Air vent easily detachable cover & with special liquid distribution device from obtaining an even distribution of liquid to the evaporator tubes. At the bottom, the calandria will be connected with vapor separator. Calendria will be supported on the ground floor

### 8. Vapor Separator

Qty: 02 Nos

Each Calandria will be connected to the vapor separator. It will be fitted with sight and light glass assembly, vacuum gauge, and thermometer packets with thermometer, manhole, cleaning nozzles. The vapor separator will be polished from inside to 150 grits & from outside to dairy finish.



# CONDITIONS OF SUPPLY OF EQUIPMENT

- Validity
   This offer will remain valid for a period of four months from the date of work order issued.
- 2. Taxes: As Per Norms
- 3.Payment
  60 % of the total order value will be disbursed after reaching of the materials plus taxes, packing and forwarding charge. 30 % of the total order value will be paid after eraction & commissioning of the Evaporator.
  10 % of Payment will be given with the Bank grantee for 12 month.
- Delivery
   Equipment will be supplied within 2 months from the date of work order.
- 5.Warranty

  Repair or replace if required any component found to be defective due to bad workmanship or faulty raw material, free of cost including damage during transit. This warranty will be valid for a period of 12 months from the date of handing over as functioning condition of equipment.
- 6.Order Cancellation
  If Order cannot be executed without three months from the date of work order it will be deemed as cancelled.

Authority of Milk Union reserves the right to accept or reject or regret the tender without reason there off.

Last date of submission of quotations:- 17.09.2013 at 12 noon. Opening date of tender:- 17.09.2013 at 1 P.M

Managing Director Ichhamati Milk Union

# 9. Intermediate Product & Concentrate Transfer Pumps.

Qty: 02 Nos To transfer products from one pass to next within the same calandria. Or from one effect to next.

## 10. Condensate Pump

Qty: 01 No

To transfer the condensate from the evaporator.

# 11. Vacuum Pump.

Qty: 01 No

Is used to maintain the vacuum in the system.

# 12. Thermo Vapor Recompress or (TVR)

Qty:01No

Milk vapors will be reutilized to meet total heat required from evaporation with the help of specially designed TVR.

# 13. Condenser

Qty: 01 No M.O.C: SS 304

Type: Barometric (Inter Mixing Type)

To condense the vapor released from the vapor separators

## 14. SS Pipes, Valves & Fittings

# 15. Water Balance Tank

Qty:01 No

M.O.C: SS 304

To supply water to pumps seals.

# 16. Cooling Tower Qty: 01 No.

M.O.C.:- FRB

To S

Supply Cool water for condenser.

# 17. Steam Pipes'C' class M.S (From header to TVR ASSEMBLY only)

## 18. Electrical Panel with all starter and

