

## **E-TENDER DOCUMENT**

Supply and Installation of 60 KL Milk Silo at Vihar Milk chilling centre of Mehsana District Cooperative Milk Producer's Union Ltd.



Purchase Department Dudhsagar Dairy Mehsana



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# Mehsana District Co-operative Milk Producers' Union Limited, Mehsana Tender document : MDCMPUL/ 2018-19/ 47 / Vihar / 60KL Milk silo

## **1. General Information**

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Tender Notice No.	MDCMPUL/ 2018-19/ 47 / Vihar / 60KL Milk silo
Bid Documents Download Start	12th January,2019
Bid Documents Download End	8th February,2019 at 17:00 Hrs.
Pre-Bid Meeting	23rd January,2019 at 11 hrs.at M-Floor, Admin Block, Dudhsagar Dairy, Mehsana
Last Date & Time for ONLINE submission of commercial bids	8th February,2019 at 17:00 Hrs.
Last Date & Time for sending tender fee, EMD and other documents (in hard copy) as mentioned in the tender document	13th February,2019 at 18:00 Hrs.
Bid Validity Period	90 Days
Bid Document Fee :	Rs.2,000.00
Bid Security/EMD (INR) :	RS. 25,000.00
Bid Document Fee/EMD Payable To :	Mehsana district Co-operative Milk producer's Union Ltd , Mehsana
Name of Company	Mehsana District Co-operative Milk Producers' Union Ltd, Dudhsagar Dairy , Highway,Mehsana-384002
Name of Tender	New 60 KL Milk Silo supply at Vihar Milk chilling centre of Dudhsagar Dairy, Mehsana
Name of Work	Design, Fabrication,Supply, Installation and commissioning of new 60 KL Milk Silo at Vihar Milk chilling centre of Dudhsagar Dairy, Mehsana
Period of Completion of Project	03 months from Acceptance of Purchase order
Estimated cost of Tender	Rs 25.00 Lakhs
Online Bidding Details	www.nprocure.com
Terms and Conditions	This is a two stage tender i.e. first, technical data submitted by bidders will get analyzed at our end. Then commercial bid of only technically qualified bidders will be considered for second stage of commercial evaluation. Bidders have to abide by all terms and conditions and specifications of items mentioned in tender document.
Officer Inviting Bids :	Managing Director
Bid Opening Authority :	Managing Director

#### **1.1Notice Inviting Tender**

Address :	Managing Direc	ctor
	Mehsana Distri Ltd, Dudhsaga Highway, Mehs	
Contact Details :	02762-253201	-05
Contact Person (Technical )	Mobile No.	e-mail id
Sh. Nagjibhai S. Chaudhari - AGM(Project, Civil & CCs)	96625 37523	nsc@mehsanaunion.coop
Sh. J.P.Jani – Manager (Project and CCs)	99740 59258	jpjani@mehsanaunion.coop

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#### **1.2 Eligibility Criteria**

The Bidder / Supplier shall have turn over in any two of the last three years, at least two times to the estimated cost of the job and must have fabricated and supplied milk silo ( of size 30 KL to 150 KL ) at least 3 dairy plants. Copy of purchase orders to be submitted in hard copy as supporting documents.

The vendor which are blacklisted by our organization. GCMMF / NDDB are not eligible to bid otherwise, bid will not be accepted and EMD may be forfeited.

#### **1.3 Downloading of Tender Document**

The Bid document can be downloaded from website www.nprocure.com. Price of the Bid document (non-refundable) is Rs. 2,000/- by Demand Draft from a Nationalized / Scheduled Bank in favor of Mehsana District Co-operative Milk Producers' Union Limited, payable at Mehsana.

#### **1.4 Submission of th**

#### e Tender Fee, EMD and tender bids

The bidder has to submit all documents in envelope in hard copy through courier /registered post /in person to Managing Director at Dudhsagar Dairy, Mehsana Gujarat as under.

- (1) Technical Bid (signed and sealed copy of tender document, technical details, DD of tender fee and EMD).Bidder has also to submit following documents along with tender technical bid:
- 1. EMD and Tender Fee
- 2. Copy of balance sheet of FY 2015-16 , 2016-17 and 2017-18
- 3. Copy of GST certificate and PAN No.
- 4. Copy of Vendor Registration Form (if vendor is not already registered with Dudhsagar Dairy)
- 5. Product leaflet
- 6. Reference list in India
- 7. P.O. copies of similar Civil work along with work completion certificates
- 8. Tentative Work execution schedule
- 9. GA drawing and detail civil drawing.

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#### **1.5 Bid Security**

All Bids must be accompanied by Earnest Money Deposit (EMD) in the form specified in the Bidding document. The Bids not accompanied with EMD shall be summarily rejected. The Bid security shall be denominated in Indian Rupees of value as specified and shall be in the form of Demand Draft from Nationalized or Scheduled banks in favor of **Mehsana District Co-operative Milk Producers' Union Limited**, payable at Mehsana. The Bid security may be forfeited if:

- A Bidder or Supplier withdraw its bid during the period of bid validity specified by the Purchase on the tender document or
- In case of successful Bidder / Supplier, if the Bidder / Supplier fails to sign the contract or execute the contract within specified period of contract.

#### **1.6 Rights Reserved By Dudhsagar Dairy, Mehsana**

Dudhsagar Dairy, Mehsana, at its sole discretion and without assigning any reason thereof, reserves the right to accept and / or reject the whole or part of any or all the Bids received.

#### **1.7 Validity**

The offer should be valid for 90 days from the last date of bid submission.

Managing Director Dudhsagar Dairy, Mehsana Tender document : MDCMPUL/ 2018-19/ 47 / Vihar / 60KL Milk silo

## 2. Check List

#### A. General checklist

The details to be provided by bidders in prescribed General check list format, as below: (Supporting documents to be submitted in hard copy):

Sr.	Particulars	Confirmation / Status
1	Agreed for Turnkey Supply (Yes / No)	
2	Executed similar nature of supply at least 3 nos. in dairy plants, in the last three years in India (Yes / No). Submit documents.	
3	Details on Turn Over ( in INR)	(in Rs. Only) Text and numbers Strictly restricted on n-procure
	Yr: 2017-18	
	Yr: 2016-17	
	Yr: 2015-16	
4	Agreed for General Terms and Conditions as enclosed in Annexure (Yes / No)	
5	Agreed for Technical Specification and Scope of supply as per Annexure (Yes / No)	
6	Earnest Money Deposit (EMD) enclosed. (Yes / No) – Provide details	
7	Total Supply & Installation of SS Milk Silo (30 KL to 150 KL capacity) in India - Year wise details	(in numbers only)
	Yr: 2017-18	
	Yr: 2016-17	
	Yr: 2015-16	
8	Drawing of Milk Silo to be attached herewith	
9	Duly signed and sealed copy of tender document (submit hard copy along with supporting documents to Dudhsagar Dairy)	
10	Already Registered with Dudhsagar Dairy (Yes / No). If Yes, then mention your Vendor code no. otherwise, submit enclosed vendor registration form along with supporting documents listed therein.	
11	Contact No.	
12	Address	
13	Email ID	

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## 3. Annexure-I: General Terms and Conditions

#### 3.1 Standards

The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the latest Indian Standards.

#### 3.2 Patent Rights

The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial designs rights arising from use of the goods or any part thereof.

#### 3.3 Inspection and Tests

The Purchaser or its representative shall have the right to inspect and/or test the goods to confirm their conformity to the Contract. The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor(s) or at point of delivery and/or at the good's final destination. For SS 304 material 3rd party test certification will be mandatory and in scope of supplier.

If any inspected or tested goods fail to conform to the specifications, the Purchaser may reject them and the Supplier shall either replace the rejected goods or make all alternations necessary to meet specification requirements free of cost to the Purchaser.

The Purchaser's right to inspect, test, and, where necessary, reject goods after the goods' arrival at the destination shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment from the country of origin.

#### 3.4 Programme of Installation

As soon as practicable after the acceptance of the bid, the Supplier shall submit to the Purchaser for his approval a comprehensive programme as may be required by the Purchaser showing the sequence of order in which the Supplier proposes to carry out the works including the design, manufacture, delivery to site, erection and commissioning thereof. After submission to and approval by the Purchaser of such programme, the supplier shall adhere to the sequence of order and method stated therein. The submission to and approval by the Purchaser of such programme shall not relieve the Supplier of any of this duties or responsibilities under the Contract.

Supplier has to provide a bar chart mentioning all sequences of activities to the Purchaser immediately after receipt of purchase order. The programme approved by the Purchaser shall form the basis of evaluating the pace of all works to be performed by the supplier.

#### 3.5 Testing

The following tests should be conducted by the manufacturer at its works.

- Dye penetration test for welding joints.
- Water fill-up test of inner vessels for water tightness.
- When man way is closed and cover tightened without gasket then the gap at any place between the man way neck and cover should not exceed 0.5 mm.

The Supplier shall demonstrate proper working of all mechanical and electrical controls, safety and protective device, in presence of the Purchaser's engineer and the same should be duly recorded.

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After conducting testing, in case particular equipment is not working properly or not giving rated output the Supplier will furnish a detailed report to the Purchaser stating therein the detailed account of the performance of the equipment with possible reasons for improper or not working of the same.

Further, before the commencement of testing or commissioning, the Purchaser reserves the right to invite the original manufacturer's representative at the cost of the Suppliers for start-up help, assist and guide the Supplier.

However, in either of the cases the manufacturer's representatives would be called with prior information to the Supplier and the Supplier will have to extend all cooperation to such representatives in good spirit and in the interest of the work. The cost of such visit shall be borne by Supplier.

The necessary quantities of cleaning chemicals, lubricants etc., required for the installation, commissioning, testing and start-up of all the equipment till handing over are to be supplied by the Supplier and nothing extra would be paid for these.

#### 3.6 Assignment

The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the Purchaser's prior written consent. Such assignment shall not relieve the supplier from any liability or obligation under the contract.

#### **3.7 Review and Coordination**

The supplier shall depute senior and competent personnel to attend the site coordination meetings that would generally be held at the site. The supplier shall take necessary action to implement the decisions arrived at such meetings and shall also update erection schedule.

#### 3.8 Training of Personnel

Necessary staff deputed by the Purchaser shall be trained by the Supplier for operating the equipment.

#### 3.9 Approval & Insurance

The supplier shall obtain all the necessary legal approvals, if any.

The damaged caused to our Items/equipment during the execution of job shall be borne by the supplier. The insurance of personnel working at our site shall have to be ensured by supplier in the case of any untoward incident.

#### 3.10 Jurisdiction

Settlement of any dispute out of the Purchase Order / Contract against this Bid shall be subject to the courts at Jurisdiction Mehsana, Gujarat only.

#### 3.11 Price Basis

Price charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in its bid and the contract shall be on fixed price basis.

- Free delivery at site including loading and unloading.
- The Price specified should be inclusive of
  - Duties if any applicable
  - packing and forwarding,
  - GST as applicable, any other Levi of government
  - transit insurance and freight (FOR site)
  - Free delivery at site including loading and unloading

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- Storage and work execution
- Warranty as specified in tender
- Preparation of drawing for bid as well as for final approval

#### 3.11 Bid Evaluation

The price bid will be evaluated on net landing rate (FOR our store /destination) for all items & work. However, Purchaser will award contract for any option (Full supply / Part Supply) at its sole discretion without assigning any reason.

#### **3.12Delivery and Documents**

All the delivery of the goods should accompany with Original and three copies of:

- The supplier's invoice showing Purchase Order No., Goods Description, Quantity, Unit price, Total amount etc.
- Delivery note / Packing list
- Lorry receipt.
- Manufacturer's / Supplier's Warranty Certificate.
- Inspection Certificate issued by the Nominated Inspection Agency, and Supplier's Factory inspection Report
- Certificate of origin (for imported items).
- Any other document evidencing payment of statutory levies.
- Test certificates of Raw Material & equipments, operating procedure manual, maintenance schedule & manual, SOP spare parts' list & description.

#### 3.13 Variation in Order Quantity

The order quantity may vary up to 10% or + /- 1 no., while finalizing the order and / or while execution of the complete order.

#### 3.14 Warranty / Guarantee

The supplier warrants that the goods and equipment supplied, installed and commissioned under the contract are new, unused, of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that the goods supplied under this contract shall have no defect arising from design, materials or workmanship (except in so far as the design or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the normal conditions.

The supplier also guarantees that the goods supplied shall perform satisfactorily as per the designed / rated / installed capacity as provided for in the contract. The warranty will not cover normal wear and tear of consumables; however the electrical parts will be covered under warranty. This warrantee / guarantee shall remain valid for minimum 12 months after the Milk silos have been put on load condition for the goods or any portion thereof as the case may be.

The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty. However, supplier has to submit complete matrix of its service network including e-mail ids and direct contact nos. of service team as well as of Head office.

Upon receipt of such notice, within 24 hours, the supplier shall, with all reasonable speed, repair or replace the defective goods or parts thereof, without cost to the purchaser.

If the supplier, having been notified, fails to remedy the defect (s) within a reasonable period, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's

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risk and expense and without any prejudice to any other rights which the purchaser may have against the supplier under the contract.

#### 3.15 Performance Security

The Performance Security shall be 10% of the Contract price as PBG from a nationalized/scheduled bank and will remain valid for 60 days beyond the end of warrantee period of 12 months.

The proceeds of the performance security shall be payable to the purchaser (Dudhsagar Dairy) as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

The performance security will be discharged by the Purchaser and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, under the Contract. The Performance Security shall be denominated in Indian Rupees and shall be in one of the following forms:

- A bank guarantee issued by a Nationalized / Scheduled Bank in India and in the form provided in the Bidding Document. Such bank guarantee shall be valid for 60 days beyond the expiry of the warranty period.
- Demand draft from a Nationalized / Scheduled Bank in India, in favour of Mehsana District Cooperative Milk Producer's Union Ltd. Payable at Mehsana.

#### 3.16 Payment Terms

- 20 % advance of total contract value against-
  - Submission of advance bank guarantee (ABG) valid for 30 days beyond stipulated delivery / completion period and
  - Acceptance of order by submitting duplicate copy of the order duly signed and sealed.
- 50 % payment within 15 days after receipt of goods at site.
- 30 % balance payment after 30 days of satisfactory commissioning and against submission of performance bank guarantee of 10 % of total contract price valid for 60 days beyond the end of warrantee period of 12 months from the date of Milk silo put on load.

#### Note

- The entire bank guarantee should be obtained from Nationalized / Scheduled bank. Its format is given below.
- Payment shall be made on complete supply of an item / group of items specified in the contract. No payment shall be made if supply of an item / group of items is incomplete. i.e. part supply.

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### **4.**Format of Advance / Performance Bank Guarantee

#### Bank Guarantee No:-

#### Date:

- 1. In consideration of the Mehsana District Co-Operative Milk Producers' Union Limited (hereinafter called `MDCOMPUL') having agreed to grant an advance of Rs. 1,96,00,000 (Rupees One Crore Ninety six Lakhs) to M/s. XXXXX Pvt. Limited(hereinafter called the said supplier) under the terms and conditions of an contract/purchase order No.12345-0 dated 28<sup>th</sup>March 2015made between the 'MDCMPUL' and M/s. XXXXX Pvt. Limited for the Supply, Installation and Commissioning (hereinafter called the `said contract/purchase order') on production of a Bank Guarantee for Rs.1,96,00,000(Rupees One Crore Ninety six Lakhs). We \_\_\_\_\_\_\_ (hereinafter called `the Bank') do hereby undertake to pay the 'MDCMPUL' an amount not exceeding Rs.1, 96, 00,000(Rupees One Crore Ninety six Lakhs) against any loss/damage caused to or suffered would be caused or suffered by the 'MDCMPUL' by reason of any breach by the said supplier(s) of any of the terms and conditions contained in the said contract/purchase order.
- 2. We, \_\_\_\_\_\_, do hereby undertake to pay the amounts due and payable under this guarantee without any demur merely on a demand from the 'MDCMPUL' which has to be served on us before the expiry date of Bank Guarantee i.e., 31<sup>st</sup> March 2015stating that the amount claimed is due by way of loss or damage caused to our would be caused to or suffered by the 'MDCMPUL' by reasons of any breach by the said supplier(s) of any of the terms and conditions contained in the contract/purchase order or by reasons of the supplier(s) failure to perform the said contract/purchase order, any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee shall be restricted to an amount not exceeding Rs. 1,96,00,000 (Rupees One Crore Ninety six Lakhs).
- 3. We, \_\_\_\_\_\_, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said contract/purchase order and that it shall continue to be enforceable till all the dues of the 'MDCMPUL', under, or by virtue of the said contract/purchase order have been fully paid and it's claims satisfied or discharged or till the 'MDCMPUL' certifies that the terms and conditions of the said contract/Purchase order have been fully paid and it's claims satisfied or discharged or till the 'MDCMPUL' certifies that the terms and conditions of the said contract/Purchase Order have been fully paid and it's claims satisfied or discharged or till the 'MDCMPUL' certifies that the terms and conditions of the said contract/Purchase Order have been fully and properly carried out by the said supplier(s) and accordingly discharge the guarantee unless a demand or claim under this guarantee made on us in writing on or before 31<sup>st</sup> March 2015, we shall be discharged from all liability under this guarantee thereafter.
- 4. We, \_\_\_\_\_\_, further agree with the 'MDCMPUL' that the 'MDCMPUL' shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said contract/purchase order to extend time of performance by the said Supplier from time to time or to postpone for any time or from time to time any of the power exercisable by the 'MDCMPUL' against the said supplier and to forbear or enforce any of the terms and conditions relating to the said contract/Purchase Order and we shall not be relieved from our liability by reason of any such variation, or extension or for any forbearance, act of omission on the part of the 'MDCMPUL' or any indulgence by the 'MDCMPUL' to the said Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
- 5 The Bank agrees that the amount hereby guaranteed shall be due and payable to the '**MDCMPUL**' on serving us with a notice before expiry of Bank Guarantee requiring the payment of the amount and such notice shall be deemed to have been served on the Bank either by actual delivery thereof to the Bank or by dispatch thereof to the Bank by registered post at the address of the Bank.
- 6. We, \_\_\_\_\_\_, lastly undertake not to revoke this guarantee during its currency except with the previous consent of the '**MDCMPUL**' in writing.

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- 7. We, \_\_\_\_\_, undertake to renew the Bank Guarantee provided the request for renewal is made by the said supplier before the expiry of Bank Guarantee.
- notwithstanding anything stated hereinbefore (i) our liability under this Bank Guarantee is restricted to Rs.1, 96, 00,000(Rupees One Crore Ninety six Lakhs).
  (ii) The guarantee shall remain in force till the 31<sup>st</sup> March 2012and (iii) The Bank is liable to pay the
- (ii) The guarantee shall remain in force till the 31<sup>st</sup> March 2012and (iii) The Bank is liable to pay the guarantee amount or any part thereof under this bank guarantee only if the 'MDCMPUL' serves upon the Bank a written claim or demand on or before 30<sup>th</sup> April, 2012.

Place:

Date:

(SIGNATURE)

SEAL

CODE NO.

1. THE VALUE OF THE STAMP DUTY SHOULD BE AS PER LATEST STAMP ACT OF LOCAL STATE GOVERNMENT FROM WHERE THE BANK GUARANTEE ISSUED.

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### 5. Dudhsagar Dairy Vendor Registration Form

(1) Name of the Party			
(2) Name of the contact Person			
(3) Adds. of Reg. Office			
(4) Adds. of the Factory/ Works			
(5) Adds. of the local nearest			
branch for correspondence			
Contact no.:			
E-mail id.:			
(5) Production Machineries &			
their Capacity			
(6) Type of Firm			imited / Public Limited.
(7) Type of Firm	Manufacturing / Tra-	ders / Authorize	ed Distributor / Dealer (In
	case of Manufacture	r- Manufa. Lice	ense no.)
(8) Year of Establishment			
(9) PAN No.			
(10) GST No.			
(11) A/c no. & IFSC Code			
(12) GST Regi. completed ?			
Yes/ No			
(13) Turnover of Last 3 Year (Rs.)	(1)	(2)	(3)
(154) Name of Other Dairy units			
(If you have executed any			
purchase orders)			
(15) If you have any quality standard			
(16) Name of Product	Please, attach separa	te sheet.( As pe	er below Table)
Sr. Item Description(In short)	Make / Brand	Dealership	if any,
(17) Nature of Work Dealing in			
(18) Name of Clients			

(19)Documents to be attached: - Copy of PAN CARD, TIN NOS, Registration, ISO Certificates, Authorized Dealership Certificate, Copy of Last year Financial Statement, Brochures/Pamphlets/leaflets of all the product deal by you, Copies of important Purchase Order you have Executed (Min.5 Pos' copy)

(Signature of Authorized Person with Company's Seal)

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## 6.Technical Specifications & Scope of supply

#### <u>Technical Specifications & Scope of Supply for 60 KL Vertical Milk Silo For Vihar</u> <u>Chilling Centre – Vihar Unit</u>

#### (A) FUNCTIONAL REQUIREMENT:

The milk silo for storage of chilled / processed milk at 2° to 4° C temperature.

#### (B) DESIGN REQUIREMENTS:

<u>Working Capacity</u>: 60 KL. The volume of the silo should be such that after filling it up to the rated capacity the level would be at least 100 mm below the line where cylindrical shell joins the conical top.

#### Quantity: 01 Numbers

**Type:** Vertical insulated milk silo with 60 KL capacity and shall be suitable for outside installation

Process Fluid: Milk

Sp. Gravity of Product: 1.03

Norma working Temp.: 4 Deg C.

Design Temp.: 95 Deg C.

- (C)<u>CONSTRUCTIONAL FEATURES:</u> Double walled, insulated and welded construction of sanitary design.
  - Slope: The bottom of the silo should have 1:15 slope towards inlet and outlet for free and complete drainage of liquid.
  - Metal contact: The only metal to metal contact between the inner and the outer shells should be at the places where fittings for the tank are provided. At the places where mild steel stiffeners are provided insulated padding should be fixed between the inner stainless steel shell and stiffeners.
  - Finish: Original mill finish with band polishing of 150 grit, sheet of SS –304 to be provided for inner & outer cladding
  - Joint curvature: The radii of all welded and permanent attachment joints should be at least 6 mm. where the conical top and flat bottom join the cylindrical shell; the radii should not be less than 25 mm.
  - Installation: It should be outside installation. The accessories mounted on top should be weatherproof.
  - Drawing: You will submit a detail drawing (GA Drawing) with all technical specifications (03 Jumbo Copies) along with acceptance letter of PO if issued to vendor. DSD will approve the Final GA Drawing of 60 KL Milk Silo and after approval, vendor has to start the Fabrication job.

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#### (D) SCOPE OF SUPPLY:

- Inner Cylindrical Body: The inner shell, conical top and inner sloping bottom should be fabricated from 3 mm, 3 mm and 4 mm thick stainless steel plates respectively conforming to AISI 304.
- Outer cylindrical body: The outer shell and conical top of outer shell should be fabricated from 2 mm and 3 mm thick stainless steel plates respectively conforming to AISI 304. Stiffeners between inner and outer shells and supporting structure for bottom of mild steel to be provided. <u>Appropriate bottom supporting structure should be spray</u> <u>galvanized.</u>
- > Material:
  - 1. The inner and the outer shell and other parts except light and sight glasses and sealing gasket, which come into contact with milk, shall be made of stainless steel conforming to designation X04Cr19Ni9 of IS 6911.
  - 2. The insulating material shall be of suitable type such as polyurethane foam and expanded polystyrene.
  - 3. Non-metallic material, neoprene or Nitrile rubber etc, may be used in product contact surfaces for sealing and gasketing, provided such material are non-toxic, nonabsorbent and corrosion resistant and shall not impart any objectionable odor or flavor when such material come into contact with the milk or the milk products in the tank.
  - 4. The Bottom Insulation closing plate shall be IS: 2062, 8mm Thick.
- Insulation: The entire inner shell conical top flat bottom should be insulated in three layers as follows:
- 1) <u>First layer</u>: Aluminum foil of 42 SWG (0.1 mm thick) to be applied with CPRX compound on the outer surface of inner shell.
- Second layer: 25-mm thick layer of LRB (Light Resin Bond) of density 100 130 kg / m<sup>3</sup> applied radially with chicken wire netting/Bitumen.
- 3) <u>Third layer & Fourth Layer</u>: 15 mm thick POLYURETHENE having density 30-35 Kg/m<sup>3</sup> each longitudinally and then radially.
- 4) <u>Fifth layer</u> : 50 mm thick Expanded Polystyrene Foam having Density 16-20 Kg/m<sup>3</sup> Longitudinally with Bitumen.
- 5) Finally Aluminum foil of 42 SWG (0.1 mm thick) will be covered the insulation.

The Insulation shall be applied in staggered joints. All joints shall be sealed with Bitumen.

## The insulation should ensure temp. rise does not exceed 1 Deg.C in 24 hours time in all seasons.

#### (E) ACCESSORIES:

- <u>Alcove</u>: MOC: SS-304, the alcove arrangement should be of existing alcove size. The alcove should accommodate thermometer pocket, inlet cum outlet, man way, level indicator cut out: 1 Number. (Vendor has to take the dimensions for Alcove fabrication during his site visit)
- Inlet cum Outlet: 101-mm O.D. Cup type inlet cum Outlet with butterfly valve type stainless steel (AISI 304) flanged valve ending in compete stainless steel SMS union: 1 Number. BFV with one end flanged and other with SMS union will be provided. Vendor

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has to provide the Eccentric Reducer of 4" X 2.5" for connecting milk line with outlet of silo.

- <u>Air vent</u>: Stainless steel (AISI 304) 450-MM I.D. & 3mm Thick. Air vent to prevent formation of partial vacuum during CIP and pressure during filling & also should be bird proof as per existing silo. -- 1 No. The cover of air vent should be bird proof type as per existing
- Man Way: Oval shape stainless steel (AISI 304) man way of dimension approximately 430 X 530 and 12 mm thick and provided with leak proof hinged insulated stainless steel (AISI 304) door with tightening and locking device & sanitary designed sampling cock. The man way door should open inward but at the same time it can be taken out when necessary. The gasket should be of neoprene rubber of food quality. -- 1 No. The sampling Cock should be provided on man way door only and location of sampling cock will be informed by user. Vendor has to use sanitary design sample cock only. Please note that the insulated manhole door is suggested by user. Vendor has to consider the existing flat gasket shall be fitted in manhole door of the new silo. The existing dimension of manhole gasket is MANHOLE GASKET, FLAT, 360X500X30MM.
- Sight Glass: Stainless steel (AISI 304) sight glass assembly should be provided with toughen glass. It should be provided in such a way that one could easily read from the lowest level up to the highest level marks. -- 1 No.
- Etching or Sand Blasted Level Mark: It should be calibrated at 1000 LITRS intervals and provided on the inner shell at opposite side of the sight glass.
- Light Glass: Stainless steel (AISI 304) light glass assembly should be provided with toughened glass and stainless steel lamp shade for mounting 24 volt and 100 watt bulb. The lamp holder should be made of brass only. -- 1 No.
- Agitators: Side mounted agitator shall be provided. Side mounted mechanical agitator to ensure uniform fat distribution without any adverse effect on the contents. It should be in stainless steel (AISI 304) construction completed with geared motor of adequate capacity and should be able to uniformly mix milk in the tank within 10 minutes. The agitator shaft should be a rod. Gear motor should be provided on backside of the silo with SS cover. DSD suggest to install Stelzer or Alfa-Laval make Agitator as per our other plant silos. Also provide working platform for agitator. Supplier can also consider the agitator motor make i.e. ABB, Crompton Greaves or SIMENS only.

The Seal mechanism of Silo Agitator must be such that in case of seal leakage, user can change the seal from inner side of silo without opening the entire Agitator Set with motor i.e. opening the flanges' bolt of Agitator motor.

- Level transmitter (Electronic): Electronic level indicator cum controller of hydrostatic type having accuracy of +0.25 % and should be of digital type, 24 volt DC, and 4-20 million outputs, 2-wire system. To be provided of Endress+Hauser make. --1 No. (Existing to be used)
- Level Probes: Suppler has to provide the High Level Probe Socket, Law Level Probe Socket and Agitator Cut off Level Socket with suitable dummies.
- Spray Ball: Easy Removable stainless steel (AISI 304) cleaning device located at the apex of the conical top to provide flooding of liquid over the complete interior surface during CIP. It should have stainless steel union at the outer end connection. --1 No. Stationary/Static/Fix Spray Ball is suggested. Vendor has to consider Suitable size of spray ball i.e. 63 mm connection. Spray ball installation shall be such that it can spray strongly and clean the entire inside of the milk silo.
- Thermo well: 200 mm long stainless steel (AISI 304) inclined pocket and 2 mm thick, suitable for mounting RTD (PT-100) sensor should be suitably located near manhole It should have 3/8" BSP Socket .

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- Drain Hole: The outer shell should be provided with one or more drain hole at the lowest point. Any aperture in the shell should be designed so as to prevent ingress of moisture.
- Lifting Lugs: Stainless steel (AISI 430) lifting lugs should be provided at top. --4 Nos.
- Appropriately designed top SS Railing considering safety aspect, at least three tired pipe structure is to be provided. ---1 Set.
- Anchor Points: Anchor Points, pipes and sockets should be provided on the top of the tank so that safety railings and platform could be welded to those points after installation. 1 Set.
- Joint Curvatures: The radii of all welded and permanent attachment joints shall be at least 6 mm. The radii where the conical top and flat bottom join the cylindrical shell shall not be less than 25 mm.
- Metal Contact: The construction shall be such that there should be no metal-to-metal contact between the inner and the outer shells except at the places where the fittings and mountings for the milk silos are provided. At the places where mild steel stiffeners are provided, insulated padding shall be fixed between the inner stainless steel shell and stiffeners.
- MARKING: The tank shall be provided with a stainless steel nameplate of size 150 mm x 100 mm fixed on a stainless steel bracket. Following particulars shall be marked legibly and permanently on the name plate:
- ≻
- a) Manufacturer's trade-mark, name and address,
- b) Manufacturer's identification,
- c) Capacity of the tank, and
- d) Month and year of manufacturing.
- Outer periphery on the top should be such that the rain water from the top doesn't spread at outer surface of the Silo. Outer periphery on the top of the silo should be connected with concealed or outside SS pipe of 38 to 51 mm size for drain, so that all water from the top directly go to the bottom.
- Silo Top Railing: Appropriately designed top SS Railing considering safety aspect, at least three tired pipe structure is to be provided. The Silo railing pipe diameter shall be 38 mm, MOC: SS-304 --- 1 Set. Vendor has to consider the 100 mm wide SS-304 Flat to be provided at silo top with railing.

#### (F) PAINTING

All the mild steel stiffeners used in the construction of the silo should be painted with two coats of epoxy primer after thorough de-rusting.

#### (G)TESTS

The following tests should be conducted by the manufacturer at its works.

- Dye penetration test for welding joints.
- Water fill-up test of inner vessels for water tightness.
- When man way is closed and cover tightened without gasket then the gap at any place between the man way neck and cover should not exceed 0.5 mm.

#### (H)ACCURACY LEVEL

The accuracy level of the level indicator should be + or -0.25%.

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#### (I)SHAPE AND DIMENSIONS

The silos for milk storage shall be of vertical cylindrical shape for the body with flat bottom sloping towards the outlet and conical (15° approx) top. The tank shall be directly supported on concrete plinth.

#### (J)ADDITIONAL NOTE

The outer Diameter of Silo shall be as per the existing available 60 KL silo of Vihar CC and diameter of Silo Foundation. Also the Alcove should be exactly similar dimensionally to 60-KL Silo to facilitate & accommodate erection at our site. You would be required to get the Drawings approved by us before manufacturing.

#### (K)SPECIAL TERMS AND CONDITIONS:

- Supplier should give net price of Milk silo after consideration buyback cost separately and clearly. {means Cost of new silo - Cost of old silo (Buyback offer)=Net payable amount}
- Supplier can give net price of Milk silo without consideration buyback cost offer of existing silo also but DSD will give preference to those who have submitted the buyback offer.
- Supplier has to provide the separate cost for dismantling, removing of existing silo as well as installation of new silo.
- Suppler has to provide the Bought out item list with make & other details.
- Supplier has to provide the Test Certificates of all bought out items. The Test Certificates of SS and MS materials to be used for Silo Fabrication must be submitted by Vendor without fail. Vendor has to provide the make of SS and MS materials to be used for Silo Fabrication in his quote.
- Supplier should verify at our site for pre-executed silo installation platform size and to check the dimension of Alcove, nozzle for level transmitter etc.
- For necessary installation of silos- Supplier has to dismantle the existing railing, platform & pipe lines. Same has to be fitted after installation of new silos.
- > Unloading & loading of new silos & old silos from/to vehicle is in Supplier scope.
- > All work to be carried out at Silo as per FSCCI norms.
- All insurance relate to execution of this job is in Supplier scope i.e. transport & shifting insurance.
- Supplier must have supplied milk silo (30 KL to 100 KL) at least three dairy plants. PO Copy of the same to be provided by Vendor.
- > Job completion period must me mentioned by Supplier in bid itself.
- Performance guarantee.
- Guarantee for leakage, malfunction of any leakage e.g. From Agitator, man way etc.
- Supplier has to visit the site before submission of bid without fail. DSD will consider only those parties who have visited the site.
- DSD will visit the suppliers' workshop for material inspection, for ongoing fabrication job and for final tests of silos as mentioned above.
- DSD will provide the electricity, water at site while supplier has to make arrangement for tools and tackles as well as lodging and boarding at outside the dairy campus for their employees.

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The outer and inner finishing of silo must be smooth finish. The joints shall be perfectly matched and welded. The workmanship at level transmitter, sampling cock and Agitators' V notch shall be perfect and smooth welding work at these areas is required.

Important Note: Vendor has to consider the Outer diameter and Height of the new silo as per existing 60 kl silos of Vihar Chilling Centre for giving uniform and good elevation of all three silos. At right hand side and left hand side of to be installed new silo, 60 KL Milk silos are already available at site. Vendor has to consider the dimensions of these installed silos.

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## 7.Tender Price Bid

00		DER		LINUT	TOTAL
SR. NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE	TOTAL RATE
A) Su	ipply Charges				
1.	SS 304 Milk Silo – 60 KL Capacity	1	Nos.	ONLINE	ONLINE
2.	Accessories for each Milk silo	1	Lots	ONLINE	ONLINE
	Total	Supply of	charges		ONLINE
(B) La	bour & service Charges				
1.	Design, loading-unloading and Installation of Milk Silo with all accessories	1	Job	ONLINE	ONLINE
2.	Transportation (FOR Vihar Milk chilling centre)	1	Job	ONLINE	ONLINE
2	Dismantling, removing of existing 1 no. 100 KL milk silo and shifting to site as per our instruction, within campus	1	Job	ONLINE	ONLINE
3.	of Vihar Milk chilling centre.				
3.		Service C	Charges		
	of Vihar Milk chilling centre. Total Labour&	,	TOTAL A (A) +		
NOTE : Option: SR.	of Vihar Milk chilling centre. Total Labour& ALL PRICE ARE INCLUDING P & F, GST, FRIEGHT ,TR ETC.	,	TOTAL A (A) +	E,LOADING	G-UNLOADIN
NOTE : Option: SR. NO.	of Vihar Milk chilling centre. Total Labour& ALL PRICE ARE INCLUDING P & F, GST, FRIEGHT ,TR ETC. al DESCRIPTION		TOTAL A (A) +	E,LOADING	G-UNLOADIN
NOTE : Option: SR. NO. (C ) B	of Vihar Milk chilling centre. Total Labour& ALL PRICE ARE INCLUDING P & F, GST, FRIEGHT ,TR ETC. al DESCRIPTION uyback charges for old Milk Silos- 1 no Optional	ANSIT IN QTY.	TOTAL A (A) + SURANG	(B) CE,LOADING UNIT RATE	G-UNLOADIN TOTAL RATE
NOTE : Option: SR. NO. (C ) B 1.	of Vihar Milk chilling centre. Total Labour& ALL PRICE ARE INCLUDING P & F, GST, FRIEGHT ,TR ETC. al DESCRIPTION uyback charges for old Milk Silos- 1 no Optional SS 304 Milk Silo – 100 KL Capacity	ANSIT IN QTY.	SURANC	UNIT RATE	G-UNLOADIN TOTAL RATE ONLINE
NOTE : Option: SR. NO. (C ) B	of Vihar Milk chilling centre. Total Labour& ALL PRICE ARE INCLUDING P & F, GST, FRIEGHT ,TR ETC. al DESCRIPTION uyback charges for old Milk Silos- 1 no Optional SS 304 Milk Silo – 100 KL Capacity Accessories for each Milk silo	ANSIT IN QTY.	ISURANC UNIT No. Lot	(B) CE,LOADING UNIT RATE	G-UNLOADIN TOTAL RATE

Note:

- 1. Supplier has to quote separate rates for (a) supply and (b) Installation and testing as above.
- Payment will be released as per payment terms specified in commercial terms which will be applicable only after full Delivery and Installation & commissioning. No payment will be released for part delivery or incomplete work.
- 3. Dudhsagar Dairy will provide Water, Electricity and storage for your material. Supplier will have to arrange for all necessary tools, tackles and consumables for testing & commissioning.

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- 4. All price quoted should be FOR our site at Vihar Milk chilling centre and as mentioned in the tender document.
- 5. VENDOR WILL BE RESPONCIBLE FOR ANY ITEMS REQUIRED BUT NOT MENTIONED IN TENDER TO COMPLETE THE SYSTEM IN WHOLE AND IT SHOULD BE INCLUDED IN THE PRICE QUOTED AND NO SEPARATE EXTRA PRICE WILL BE ELIGIBLE AFTERWARDS.

## ~ End of Tender Document ~