



केन्द्रीय रेशम प्रौद्योगिक अनुसंधान संस्थान

केन्द्रीय रेशम बोर्ड

(वस्त्र मंत्रालय- भारत सरकार)

बी.टी.एम. लेआउट मडिवाला बेंगलूरु- 560068

CENTRAL SILK TECHNOLOGICAL RESEARCH INSTITUTE
CENTRAL SILK BOARD

(Ministry of Textiles - Govt. of India)

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No.CSB/CSTRI/35(1)/2019-Stores Vol.III

Date : 03.12.2021

To

Sir,

Sub: Inviting Quotations for procurement of **Silk Reel Permeation chamber & Two Window Re-Reeling machine (closed type)** - Reg.

With reference to the subject cited above, I am to inform that this Institute invites quotation for supply of **CSTRI Reel Permeation Chamber & CSTRI Silk Two Window Re-Reeling Machine (Closed Type)** as mentioned below:-

#	NAME OF THE EQUIPMENT	QTY
1	CSTRI REEL PERMEATION CHAMBER (Specification enclosed)	1 No.
2	CSTRI SILK TWO WINDOW RE-REELING MACHINE(CLOSED TYPE) (Specification enclosed)	1 No.

TERMS & CONDITION :

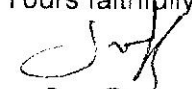
1. The quotation in **two bid (Technical Bid & Financial Bid)** system should be uploaded in e-procurement portal only. (**website www.eprocure.gov.in**). The last date for upload the bid is **29.12.2021 upto 11.30 A.M.** and the bid will be opened on **30.12.2021 at 12.30 P.M.**
2. The rates quoted should be valid for 180 days. The equipment should be supplied within **60 days** from the date of purchase order.
3. The equipment should be supplied to **DIRECTOR, CENTRAL SILK TECHNOLOGICAL RESEARCH INSTITUTE, CENTRAL SILK BOARD COMPLEX, BTM LAYOUT, BANGALORE-560068**
4. The Other Important Documents (OID) as sought in the e-procurement portal site should be submitted along with technical bid.

P.T.O.

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5. The bidder has to furnish the basic rate, excise duty (if any), GST (if any), Freight Charges including Insurance (if any), Packing & forwarding charges (if any) Erection & Commissioning charges(if any) any other taxes/duties/levies (if any) in the financial bid.
6. The bidder should submit the duly filled **Bid Securing Declaration** form alongwith the quotation (as per the format enclosed) in lieu of EMD.
7. The Supplier shall provide Warranty/Guarantee valid for a minimum period of 12 months from the date of installation of the equipment / machineries. Any defects noticed in the equipment /machineries which is unintentional shall be set right by the supplier at free of cost for good performance of the equipments.
8. The equipment should be supplied strictly in conformity of the enclosed specifications, failing which, the equipment has to be taken back at your own cost.
9. For delay & non supply of the item within the stipulated time, liquidated damages @ 0.5% per week will be deducted from the bill subject to a maximum of 10% of the total cost of the equipment..
10. The performance security equivalent to 3% of the total contract value in the form of Bank Guarantee issued by any Nationalized Bank which shall be valid till three months after the expiry of the Warranty period should be furnished to this Institute within 10 days from the date of receipt of purchase order in the prescribed format.
11. No advance payment will be made. The payment will be released only after delivery of the equipment in good condition as per our specification, Erection and commissioning
12. **The bidders should submit the Bank Details i.e.Bank A/c.No., Bank Name, Branch, IFSC code. Mobile No. eMail ID Etc. along with quotation**
13. The Director, CSTRI, Bangalore reserves the right to accept any quotations or reject all the quotations without assigning any reason. The decision of the Director is final and no correspondence will be entertained from any party in this regard.

Yours faithfully,


(डॉ.सुभास वी नायिक / Dr.SUBHAS V NAIK)
निदेशक \ DIRECTOR

BID SECURING DECLARATION FORM

Tender No. CSB/CSTRI/35(1)/2019-STORES

Date:

To
The Director,
CSTRI,
BANGALORE

I/We, The undersigned, declare that :

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am/We are in a breach of any obligation under the bid conditions, because I / We

- a) have withdrawn / modified/amended, impairs or derogates from the tender, my / our Bid during the period of bid validity specified in the form of Bid , or
- b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or reuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid securing Declaration shall cease to be valid if I am / We are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my / our Bid.

Signed:

(Insert Signature of person whose name and capacity are shown)

In the capacity of

(Insert legal capacity of person signing the Bid Securing Declaration)

Name

(Insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (Insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

SPECIFICATIONS FOR CSTRI REEL PERMEATION CHAMBER

a. VACUUM TANK:

- a) The chamber shall be made of 2.5 mm thick stainless steel sheet.
- b) Flanges shall be made of 50 X 12 mm thickness stainless steel flat or 25mm X 25mm stainless steel flange. The bottom chamber flange shall have a groove of 25 mm width X 6mm depth or 12mm radius groove.
- c) Reel permeation chamber bottom portion plate shall be made of 3mm stainless steel sheet along with 25mm X 6mm stainless steel angle reinforcement.
- d) The tank shall be of 625mm height X 750mm diameter to hold 20 reels per batch.

b. WATER:

- a) 13 mm (1/2") collar for water inlet and 13 mm SS Ball valve for controlling the water flow shall be provided.
- b) Capacity of water tank shall be about 260 litres
- c) 13mm (1/2") stainless steel ball valve for draining out water at the bottom of the tank shall be provided.

c. LID

- a) The top lid shall be made of 3mm thick stainless steel sheet and attached with a ring made of 50mm X 12 mm stainless steel flat (machined) or 25mm x 25mm SS flange. The depth of the lid curvature shall be minimum 75mm (3"). The rings seating shall be machined to avoid air leakage.
- b) The opening of the lid shall be supported by 50mm X 12 mm SS flat.
- c) A rubber gasket shall be used with dimensions of 25mm width and 12 mm thickness or ½" round rubber.
- d) The chamber shall be fitted with a vacuum gauge 50mm diameter, 0 ~ 700 mm Hg and a brass / Stainless steel air inlet ball valve of ½ " or 1" valve.

d. VACUUM PUMP:

- a) Direct drive rotary water ring vacuum pump / Oil vacuum pump / diaphragm vacuum pump with ½ HP, 3-phase motor having air displacing capacity 100/150 litres per minute and negative pressure of 500 mm Hg (20 psi) shall be provided.
- b) Permeation chamber and vacuum pump shall be inter connected by 13mm (1/2") braided hose pipe with air expansion chamber of size 100mm diameter and 458mm height with inlet collar and outlet brass wheel valve or 13mm stainless steel ball valve.

e. REEL IMMERSION STAND:

- a) 4 Nos. Stainless steel stands to accommodate 5 reels each shall be provided for immersing reels in reel permeation chamber with aluminum base plate.

SPECIFICATIONS OF CSTRI SILK RE-REELING MACHINE(TWO WINDOW)

The main specifications of the silk re-reeling machine shall be as follows:

FRAME:

- a) The bottom frame of the re-reeling machine shall be made from 16-gauge 40 mm square M.S. Tubes, Flats etc.
- b) The top frame shall be fabricated by 16 gauge 25 mm square M.S. Tubes, Flats etc.,
- c) Height of reel axel from the floor shall be 980 mm.

2. BODY STRUCTURE:

- a) The reel shall be covered with 20 gauge M.S sheet covering all sides, top and bottom. Inside of the re-reeling machine to be insulated with 1 mm CAF Gasket sheet for insulation (sides and bottom). At the bottom of the frame 24 gauge stainless steel sheet (strengthened with M.S Flat strips on the inside) shall be used to cover the legs of the re-reeling machine completely.
- b) Tilting spherical transparent windows shall be made of 2.5 mm acrylic sheet cover, fabricated on M.S. or FRP moulded flat structure, fitted above each reel with rubber bush stoppers at rear end to avoid loss of temperature.
- c) 40mm x 14 G M.S. Sq. pipe guard shall be provided at the end of the machine for safety purpose.

3. HUMIDITY EXHAUSTERS:

- a) The humidity vent shall be provided to each window of re-reeling machine.

4. MOUNTING OF THE MACHINES:

- a. The entire silk re-reeling machine shall be mounted on 75mm X 40mm X 6mm, M.S. Channels.
- b. Base for small reels keeping shall be made with cement platform in such a way that small reels can be placed at an inclination to the central axis of balloon control rings so that silk can be unwound smoothly.

5. MOTOR AND DRIVE ARRANGEMENT:

- a. The Drive arrangement structure shall be fabricated by 50 X 50, 6mm M.S. Angle and suitably covered by 20 gauge M.S. Sheet.
- b. 1 H.P 960 RPM, 380 / 440 volts, 3 phase, 50 cycles induction Motor preferably from ISO 9000 certified companies shall be provided with the machine.
- c. The motor shall be provided with DOL (Direct on line) starter.

6. TRANSMISSION:

- a) Fitted with V belt, 5/8" pitch chain, M.S. Sprocket, with 3 module 50 Teeth (156 mm diameter) M.S. Gears, EN-8 Metal shaft fitted with 25 mm pillow block bearing.
- b) All moving parts in the machine such as gears, 'V' pulleys are tightened by high tensile fasteners.

7. MAIN SHAFT:

The main shaft shall be of 25 mm diameter M.S. bright rod with self aligned pillow block bearings. The drive is transferred through 480mm diameter, 25 mm width, and cast iron drum wheel.

8. REELS:

- a) The reels shall be of 1.5 meter in circumference, which shall be fixed on 6 way LM6 Aluminium material hubs having 12mm 4 fixed spokes and 2 collapsible spokes with brass wing nuts. The re-reeling aluminium hubs shall be fixed on central shaft groove using bolt arrangement. The collapsible spokes shall be 12 mm diameter. The brass wing nut shall have 25 mm thread length. The reel shall weigh a minimum 11 Kg.
- b) The wooden battens shall be made of good quality seasoned teak wood smoothly polished of size 50 X 25 X 600 mm with single groove in the middle of the batten of size 4 mm square.
- c) The reel shaft shall be made of M.S. 20 mm diameter fitted with both sides sealed ball bearings of 15 mm inner diameter on both sides of the shaft. The bearings shall be fitted on open type cast iron housings on left side and self aligned U block on the right side.
- d) Friction wheel shall be of 150 mm diameter and 25 mm width made of compressed hard wood/Nylon / rubber band with C.I. Flange with hub fastened with M6 bolts and nuts.

9. TRAVERSE:

- a. The Traverse bevel gear shall be made of nylon – 6 material having 16 T X 25 T of 3 modules.
- b. The thread distribution shall be connected with 100 mm disk to achieve eccentric drive and provided with curved shape traverse connecting rod using 6mm M.S. round/flat rod at edges bushed. The traverse pipe shall be welded and drives to avoid wobbling. The traverse pipe shall be of size 12/20 mm 24 gauge square stainless steel tube mounted on 2 sets of nylon square bushes /nylon rollers and having 5 ends / window. The distance between guide to guide is 115 ± 2 mm. The weight of the distribution pipe with thread guides shall be 400 g.
- c. Pigtail type thread guides of enamel coated - single spiral having smooth finish shall be fixed in the vertical position and the thread shall pass on stainless steel tension tube of 24-gauge 15 mm diameter. Use of 3 mm diameter stainless steel wire for double spiral thread guide is preferred.
- d. Balloon control rings shall be fixed on flat frame or side sheet and shall be made from 5 mm thickness stainless steel wire having 35 mm inner diameter and length of 5.25" (3 numbers) & 4.25" (2 numbers).
- e. 16 mm X 24 G, stainless steel pipe used for yarn path.

10. REEL SPEED VARYING DEVICE:

The machine shall be provided with step pulley arrangement to enable to run the machine at three different speeds viz., 150 rpm, 180 rpm and 210 rpm.

11. REEL BRAKE:

The brake wheel shall be fixed on reel shaft. The U shape brake shoe fitted on long lever and loaded with effective springs at the rear end to achieve the following objectives:

- i. The reel shall come to a halt with minimum rotations and should not rotate backwards.
- ii. The engaging and disengaging drive shall be very effective.

12. STEAM PIPES FOR CIRCULATION OF HOT AIR:

- a) 5 rows of steam pipe lines to be drawn shall be of 40 mm dia 'B' class MS pipe, one between the 2 reels, one each at the top & bottom and each side of the reels. Out of the five rows, two rows of the steam pipes shall be of fin tube type of 20mm diameter B Class, which will be placed at the bottom of the reels.
- b) The main steam header pipe shall be of 90mm diameter and the condensed water drain of 50 mm diameter with float type steam trap shall be provided for smooth and equal distribution of steam in all five steam pipes. 50 mm MS flange shall be provided for maintaining steam trap along with blow off cock.
- c) Steam pressure gauge of 4 inches diameter, capacity $0 \sim 7 \text{ kg per cm}^2$ with siphon pipe shall be fitted on the steam header.
- d) All the steam pipes and connected fittings shall be of MS to resist 35 kg/cm^2 (500 lb/inch^2) hydraulic test pressure.

2. ELECTRICAL CONTROL:

Suitable starter with relay system for one HP motor shall be provided.

3. PAINT:

- a) The entire machine shall be painted with primary paint. Then the machine shall be neatly spray painted by suitable enamel paint.
- b) Primary black dull paint shall be neatly sprayed inside the re-reeling machine.
- c) Yellow passivity material is used to avoid corrosion.
- d) All bolts, nuts and washers are electro plated.
- e) Steam pipes shall be painted with heat resistant aluminium paints.