प्रतिभूति कागज कारखाना, नर्मदापुरम - 461005 (म.प्र.)

सिक्योरिटी प्रिंटिंग एंड मिंटिंग कॉरपोरेशन ऑफ इंडिया लिमिटेड की इकाई (भारत सरकार के पूर्ण स्वामित्वाधीन)
मिनीरत्न श्रेणी-I सीपीएसई एवं आई.एस.ओ. 9001:2015, 14001:2015, 45001:2018, 50001:2018 एवं आईईसी 17025:2017 प्रमाणित

सूचना का अधिकार RIGHT TO INFORMATION

SECURITY PAPER MILL, NARMADAPURAM – 461005 (M P)

A Unit of Security Printing & Minting Corporation of India Limited (Wholly owned by Government of India)
Miniratna Category-I CPSE & ISO 9001:2015, 14001:2015, 45001:2018, 50001:2018 & IEC 17025:2017 Certified
CIN:U22213DL2006GOI144763, GSTIN: 23AAJCS6111J3ZE

Tel. No.: 07574-255259, E-mail: gm.spm@spmcil.com, Website: http://spmnarmadapuram.spmcil.com

INVITATION FOR EXPRESSION OF INTEREST (EOI)

1.	Name of the organization	:	Security Paper Mill,Narmadapuram Madhya Pradesh 461005.
2.	Type of the organization	:	A Miniratna Category-I CPSE and Wholly owned by Government of India
3.	EOI Reference No.	:	**EOI/DRUMHOUSE/VACUUMDRUM/FILTER/26-27/ 125**
4.	EOI Title	:	**Expression of Interest (EOI) for Construction of Drum House Building and Re-Installation of Rotary Vacuum Drum Filter for Cotton Based Pulp Sludge Removal**
5.	Category	:	Non-Security, Non Transferable
6.	Sub-category	:	R&D (CAPEX)
7.	Date of Annoucement	:	06.05.2026
8.	Last date for submission	:	05.06.2026 before 11.00 hrs(AM).
9.	EOI Open Date	:	05.06.2026, 03.00 PM
9.	Technical Specifications and Quality Requirement	:	Attached As Anneuxre I & Annexure-II
10.	Budgetary Quotation	:	Firms who have experience in execution of civil and structural works for similar projects are invited to submit their budgetary quotation as per the attahced Scope of Work & Quality Control Requirement(Annexure I & II)
11.	Procurement Process	:	Open
12.	Specimen Response letter to EOI	:	Mr. Biplab Basak (Manager (Material) & Material Head) Email Id:- biplab.basak@spmcil.com, 07574-28-6766
13.	Submission of EOI	:	Tenderer shall ensure that their EOI tender, duly sealed and signed. Complete in all aspects as per instructions contained in the EOI tender, are dropped in the tender box located at the address given below on or before the closing date and time indicated in the tender, failing which the EOI tender will be treated as late and rejected. The bid is to be submitted in single sealed envelope duly superscribed with our EOI reference No. with date and due date on the top of the sealed envelope and be addressed to - The Chief General Manager, Security Paper Mill, Narmadapuram -461005 (M.P.) The EOI tender duly prepared as per requirement, should reach this office by Registered Post/ Courier Services/ Drop box only, on or before the due date prescribed. EOI Tenders received by Fax/Email will not be accepted and summarily be rejected.

(Biplab Basak)
Manager (Material) & Material Head
For Chief General Manager

BIPLAB BASAK
Narmadapuram (M.P.)-461005

Annexure-I

Technical Specifications/Scope of Work

- Removal of RVDF:- Taking out Old Drum, Machinery, Pumps etc from the Old Drum Building and material and placing the items safely in another place as directed by site Engineer.
- Design and Drawing of Structural Members:- Drawing and Design of complete RCC structure as per code of practice and duly certified by any reputed Govt. agencies like NIT's, IIT', Government Engineering College etc. including approval of design and drawing (NOC) from Factory Inspector.

The successful bidder should prepared and submit all civil related drawings duly certified by any reputed Govt. agencies like NIT's, IIT', Government Engineering College etc. before start of construction activities for approval of competent authority of SPM. Subsequently, the bidder shall obtain the approval of design & drawing (NOC) from Factory Inspector as per rule 3A under subsection 1 of section 6 of M.P. Factory rule 1962 as per following:
1. Plans in triplicate drawn to scale showing –
(i) The site of factory and immediate surrounding including adjacent building and other structures, road, drain etc. drawn to a scale not less than 1cm equal to 500 cm.
(ii) The plan, elevation and necessary cross sectional elevation of the various building and structures including all relevant details relating to natural lighting, ventilation and means of escape in case of emergency. The plans shall also clearly indicate the lay-out of the plant and machinery, position of airless and passage-ways, the latrines and urinals and other sanitary provisions and shall be drawn to a scale not less than 1 cm equal to 100 cms.
(iii) Materials to be used for construction of building and roofing.

- Construction of Building:- 1. Construction of Drum Building-

Construction of two floor new Drum Building similar to the existing Old Drum building (G+1) of Size 9.15M X 9.15 M with 6.1 M floor to floor height. Complete in all respect as per approved drawing and design.

Scope of Work for Civil Construction-

1. Soil test/ Pile Test- Vertical load testing of piles in accordance with IS 2911(PartIV).

2. Design Standard- The design of RCC structure shall be carried out as per code of practice for plain and reinforcement concrete for building construction IS 456 and National building code. The design of steel structure shall be carried out as per IS800.

All design shall to conform to relevant Indian Standard

All structures should be earthquake resistant.

3. Excavation - All excavation work shall be carried out by mechanical equipment unless in opinion of the SPM. The excavation work shall be carried out to be minimum dimensions as required for safety and working facility. Necessary working space as stipulated by the relevant IS code shall be included in the excavation work.

4. Foundation- RCC (1:1.5:3) pile foundation with pile cap and plinth beam or as per structural design based on soil investigation.

5. Plinth Filling- At places backfilling shall be carried out with sand in layer not exceeding 230mm. The sand shall be clean, medium grained and free from impurities.

6. Superstructure- RCC framed structure with brick wall shall be constructed conforming to relevant IS standard.

7. Cement- 43 Grade Ordinary Portland cement conforming to IS 8112.

8. Aggregates- Aggregates shall consist of naturally occurring stone and gravel (crushed or uncrushed) and Sand. They shall be chemically inert, strong, hard, clean, durable against weathering, of limited porosity, free from dust/silt/organic impurities/deleterious material and conform to IS 383.

9. Water- (a) Water used for both mixing and curing shall conform to IS456. Potable water is generally satisfactory. Water containing any excess of acid, alkali, sugar or salt shall not be used
(b) The pH value of water shall not be less than 6.

10. Centering and shuttering including removal of form from all height-
(a) The design and engineering of formwork as well as its construction shall be the responsibility of contractor.

(b) The formwork may be of lined timber, plywood, laminated plywood, steel depending upon the type of finish specified. The face of formwork coming to contact with concrete shall be cleaned and two coats of approved mould oil applied before fixing reinforcement.

(c) Contractor shall provide adequate props of adjustable steel pipes carried down to a firm bearing without overloading any of the structures.

11. Steel reinforcement for R.C.C. work- (a) Thermo-mechanically Treated bars of grade Fe-500D or more for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.

(b) Reinforcement bars shall conform to IS; 432 and/or IS 1786 and welded wire fabric to IS 1566

(c) All reinforcement shall be clean, free from pitting, oil grease, paint loose mill scales, rust, dirt, dust or any other substance that will destroy or reduce bond.

12. Concrete- (a)Concrete in the works shall be DESIGN MIX CONCRETE OR NOMINAL MIX CONCRETE. All concrete works upto grade M15 can be NOMINAL MIX CONCRETE whereas all other grade, M20 and above, shall be DESIGN MIX CONCRETE.

(b) The minimum grade of concrete shall be as per Table 5 of IS 456 for various exposure conditions of concrete. For various environmental conditions, refer Table 3 of IS 456.

(c) The minimum cement content for Design Mix Concrete shall be as per Table 5 of IS 456.

It shall be CONTRACTOR's sole responsibility to carry out the mix design at his own cost.

Curing period : As per IS 456.

13. Masonry- Brick work (1:4) with non-modular/modular fly ash bricks conforming to IS:12894 class designation 10 avg. compressive strength.

14. Flooring- 62 mm thick cement concrete flooring with concrete hardener topping under layer 50 mm thick cement concrete (1:2:4) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6mm nominal size) by volume hardening compound mixed @ 2 liter per 50 kg of cement or as per manufacture's specifications including fixing of glass strip.

15. Plaster- 12 mm cement plaster of mix 1:6 on smooth face of brickwork and 15 mm thick cement plaster of mix 1:6 on rough face of brickwork with mixing of water proofing materials.

16. Rain water pipe- U-PVC rainwater pipe and accessories of 110 mm diameter conforming to IS:13592 type A, including jointing with seal ring conforming to IS 5382.

17. Sheet Roofing- Pre coated, galvanized iron profile sheet 0.50 mm (+0.05%) total coated thickness with zinc coating of 120 grams per sqm as per IS:277 , in 240 MPa steel grade, 5-7 microns epoxy primer on both side of the sheet and polymer top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length of 12 m or as desired by SPM. The sheet shall be fixed using self-drilling / self-tapping screws of size 5.5 X 55 mm with EPDM seal.

18. Structural steel work including fabrication & fixing of main gate- Structural steel work riveted, bolted or welded in built up sections, trusses, prefab structure and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer and paint of approved colour all complete. All structural members should conform to applicable IS codes.

19. Windows & Ventilation- Providing and fixing aluminium work for windows and ventilators with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket, etc. Aluminium sections shall be smooth, rust free, straight,

mitered and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings as per the standards. Turbo roof-extractors (without motor) should be installed in sufficient numbers to ensure minimum 15 air changes.

19.1 Aluminium Section- 1.5 mm thick Powder coated aluminum section (minimum thickness of powder coating 50 micron).

19.2 Glass- Float glass panes of 5.00 mm thickness.

19.3 Hardware- Builder's hardware of fittings & fixtures shall be of the best quality from approved manufacturers.

20. Painting

20.1 Internal- Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer of required shade and colour complete, as per manufacturer's specifications.

20.2 External- Finishing wall with acrylic smooth exterior paint two or more coats applied @1.43 ltr/10 sqm and including primer coat of exterior primer applied @2.20 Kg/ 10 sqm.

21. Site development- Bidder should provide suitable arrangement for drain/rain water and drinking water line in the shed building.

22. Plinth protection- Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, leveling & dressing & finishing the top smooth.

23. Anti-termite treatment- Supplying, diluting and injecting CHLORPYRIPHOS/LINDANE emulsion for post constructional anti termite treatment of soil, floor and external wall as per direction of SPM on each stage.

24. Miscellaneous- Fabrication of lifeline on roof, handrail, pipe supports, staircases, supports etc as per finalized drawing are to be designed and constructed by the firm.

Work Proposed:

The following works are proposed in the construction of drum filter house building
a. Provision of design and drawing of structural members.

b. Provision of construction of building (G+1) of Size 9.15M X 9.15 M with 6.1 M floor to floor height.

c. Provision of precoated galvanised iron profile roof sheets with MS truss.

d. Provision of RCC framed structure including beams, columns with brick work in superstructure.

e. Provision of CC floors.

f. Provision of door, door frames, shutters etc. with all fittings complete.

g. Provision of Finishing of walls with cement plaster and painting with distempering of acrylic distemper for internal side walls & acrylic smooth exterior paint on external side walls.

h. T & P : Shall be arranged by contractor if required

i. Quantity of work: SPM authority reserve the full rights to decrease the quantities of item, at the time of award tender and any time during execution of contract period or extended period of contract as per its actual requirement.

j. Specifications: The civil work shall be carried out as per relevant IS Code, CPWD specification 2019 Vol. I & Vol. II with up to date correction slips.

k. Records: The Firm shall maintain complete official records like material brought at site register, site order book, cement register, test register, hindrance register etc. SPM have rights to see these records time to time and firm shall submit all records as mentioned in this point to SPM after completion of the work.

l. Any defect in quality of work or deviations from drawings / specifications pointed out during inspection shall be made good by the contractor in the same way as if pointed out by the representative of SPM, without any cost implication to SPM.

m. The contractor shall himself engage an authorized all time incharge on the work capable of managing and guiding the work and understanding the specifications and contract conditions. A qualified and experienced Civil Engineer shall be provided by the contractor for technical matters. Site engineer can also be designated as an incharge of the contractor. Incharge will take orders as will be given by the Engineer in charge or his representative and shall be responsible for carrying them out. This incharge shall not be changed without prior intimation of the Engineer in charge and his representative on the work site. The Engineer-in-charge has the unquestionable right to ask for changes in the quality and strength of supervisory staff of contractor and to order removal from work of any of such staff. The contractor shall comply with such order and effect replacements of the satisfaction of the Engineer-in-charge.

Quality Control Requirement-

The successful bidder shall submit the manufacturer test certificate of cement, reinforcement, structural steel and aluminium before start of work for each lot/batch. The list of mandatory tests as mentioned in below table and is also in the scope of work of successful bidder. Test shall be

carried out at any IIT/NIT/Government Engineering College and its test certificates shall be submitted to SPM. The testing charges shall be borne by the firm.

MANDATORY TESTS-

1. Water-
Min. quantity of material for carrying out the test- One
Test Frequency- Water from each source shall be got tested before the commencement of work and there after once in every three months till the completion of the work. Water from municipal source need be tested only once in six months. Number of test for each source shall be 3.

Test performed by Laboratory IS 3025
i. pH Value
ii. Limits of Acidity
iii. Limits of Alkalinity
iv. Percentage of solids
(a) Chlorides
(b) Suspended
(c) Sulphates
(d) Inorganic
(e) Organic

2. Cement-
Min. quantity of material for carrying out the test- Each lot
Test Frequency- Every 50 tonnes or part thereof. Each brand of cement brought to site shall be tested as per this frequency.
Test procedure by Laboratory
IS 4031(Part II)
IS 4031 (Part III)
IS 4031(Part V)
IS 4031(Part VI)
IS 4031 (Part IV)

Physical requirement
(i) Fineness
(ii) Soundness
(iii) Setting time (Initial & Final)
(iv) Compressive strength
(v) Consistency of standard cement paste.

3. Sand and aggregates-

Test name- (A) Organic impurities
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 20 cum.

Test Frequency- Every 20 cum or part thereof or more frequently as decided by Engineer-in-charge)

(B) Silt Content-
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 20 cum.
Test Frequency- Every 20 cum or part thereof or more frequently as decided by Engineer-in-charge)

(C) Particle size distribution-
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 40 cum.
Test Frequency- 40 cum. or part thereof

(D) Bulking of Sand-
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 20 cum.
Test Frequency- Every 20 cum or part thereof or more frequently as decided by Engineer-in-charge)

4. Bricks-

Test- Testing of Brick for dimensions, Compressive strength, Water absorption and efflorescence.(at Laboratory)
Test Procedure- As per CPWD Specification.
Min. quantity of material for carrying out the test- As per Table 6.3 and 6.4 of CPWD Specification.
Test Frequency- As per Table 6.3 and 6.4 of CPWD Specification.

Note:
• The laboratory tests of other construction materials shall be carried out as per frequency mentioned in CPWD Specification 2019 Vol-I & Vol-II with up to date correction slip.
• The test register of material shall be maintained by the Firm.

- Overhauling of Old Machinery:- Overhauling of old machinery including painting as per requirement.

Re-Installation of RVDF:- Reinstallation and Fixing of all machinery and Drum, vacuum box, agitator, piping, filtrate receiver, vacuum pump, sheet scraper, Conveyor/felt for sheet removal etc. in the same condition as before including testing complete.

Mechanical Work-

1. Re-Installation following parts:

Drum, vacuum box, agitator, piping, filtrate receiver, vacuum pump, sheet scraper, Conveyor/felt for sheet removal etc.

2. Mechanical Accessories
Sludge feed tank with stirrer
Isolation valves, pressure gauges, flow meters

3. Firm has to submit the existing mechanical system of Drum filter with accessories, pipeline Lay out drawing & accordingly new installation of the same Lay out drawing:

3.1. Drum filter lead screw 2nos to be changed.

3.2. Plummer bearing (08 no's) to be changed.

3.3. Mould shower pipe (04 no's) to be changed according to drum filter length

3.4. All water supply valve i.e.25mm, 40mm, 50mm, 150mm to be changed.

3.5. Drum filter inlet ,outlet & water supply i.e. back wash & Felt wash G.I. line i.e. 6",2",1''and 8'' completely to be changed .

3.6. Drum filter wire mesh screen and grid need to be done with new.

3.7. All the vacuum gauge & pressure gauge to be changed.

3.8. Both small tanks which is connected from drum filter to be changed.

3.9. Rubber bellow of drum filters to be changed.

3.10. Both counter shaft bearing of high vacuum pump & tyre coupling, belt to be changed.

3.11. High vacuum pump overhauling and painting work (including base) to be done.

3.12. High vacuum pump silencer & line (8") to be changed.

3.13. Felt wash & filtration pump & line to be changed.

3.14. Agitator drives system overhauling.

4. Firm has to provide suitable pipeline for transfer of sludge from Thickeners to RVDF along with necessary fittings.

5. After completion of the re-installation firm has to ensure the Operation the drum filter plant.

Scope of Service:

a. Erection, testing & commissioning of all equipment with all machinery & accessories supplied under this contract.

b. All other allied works in connection with the above work whether specifically mentioned in the specification or not but necessary to complete the work shall be deemed to be included under the scope of this specification.

c. All testing equipment as required for testing & commissioning of equipment system shall be arranged by the bidder.

d. During dismantling/reinstallation work if any item is damaged, it should be replaced free of cost by the successful bidder.

- Piping & Ducting:- SS/HDPE piping for feed sludge and filtrates Vacuum lines and filtrate discharge pipelines Agitator drive system (motorized) including Sludge feed tank with stirrer Isolation valves, pressure gauges, flow meters
- Supply and Installation of Cable:- Supply and underground laying of 120 Sq mm 3½ core XLPE Aluminium Armoured cable from PSS to Newly constructed building. Length of the cable will be 300 meter approx.
- Electrical Work:- 1. Dismantling & shifting of MCC Panel and all Electrical equipment i.e. Motors, starters, Light fixtures, Ceiling & exhaust fan from the building safely & without damage and fixing the same after completion of building construction.

2. Overhauling and repairing of MCC panel, all motors & starters with necessary spares.

3. Supply and Fixing of all the cables including incoming power cable to MCC panel.

4. Supply and installation of appropriate copper armoured cable required to connect motors from MCC panel & starters.

5. Providing remote control station for all motors to operate from different locations.

6. Suitable 01 no. PDB panel at first floor for controlling the motors, Power DB & lighting circuit.

7. Provision of 02 nos. GI Earthing for proper earthing of electrical equipment like motors, panels, cable and all electrical conducting part connecting by suitable GI Wire / GI Strip.

8. Lightening arrester protection for the buildings.

Electrical & Panel Work-

A. Description of work for Drum filter System:

1. Dismantling & shifting of MCC Panel and all Electrical equipment's .i.e. Motors, starters, Light fixtures, Ceiling & exhaust fan from the building safely & without damage.

2. After completion of building construction, the firm will have to carry out maintenance overhauling and repairing of MCC panel, all motors & starters. The necessary spares (i.e. MCCB, MFM, CT, indicating bulbs etc.) required for said work are in the scope of successful bidder.

3. Supply and installation of appropriate copper armoured cable required to connect motors from MCC panel & starters.

4. To provide remote control station for all motors to operate from different locations.

5. To provide emergency stop to each motor.

6. Suitable 01 no. PDB panel should be provided at first floor for controlling the motors, Power DB & lighting circuit.

7. 02 nos. GI Earthing should be provided with riser to be installed for proper earthing of electrical equipment /conducting part. In all motors, panels, cable tray and all electrical conducting part double GI earthing to be provided.

8. Lightening arrester protection for the buildings will be in the bidder's scope of work. Separate earth pits for the lightening arrester shall be provided by the firm.
Make for switchgears and Panels: Siemens, L&T, ABB.

B. Cables and Wires-

1. All the cables including incoming power cable to MCC panel will be in the scope of bidder.

2. All control and instrument wiring shall be with stranded copper conductor PVC insulated wire of cross section of 2.5 mm2 . For control and instrumentation circuit and crimping/compression type lug termination is to be used. The wires shall be identified at both ends using plastic numbering ferrules.

3. Power Cable: XLPE armoured Copper Cable & XLPE armoured Aluminium Cable

4. Wires: FRLHS copper wires for control wirings and for lighting supply.

5. Make: Polycab, CCI, Finolex, RR Kable, KEI.

C. Other Requirements-

1. Local Emergency Stop to be mounted in various areas so that in case of any emergency, plant may be shut off.

2. All structures, steel attachments, embedded components etc. are required for complete electrical work.

3. A qualified electrical supervisor must be deputed during installation and commissioning.

4. All final as built drawings shall be provided in hard and soft copy.

5. Indoor/ Outdoor illumination Work:- The equipment and materials within the scope of supply under indoor/outdoor illumination shall include but not limited to:

a. Lighting fixtures with LED lamps and accessories.(inside & outside of the building.

b. Lighting panels such as MLDB, PDB and LP etc.

c. Ceiling fans, Wall mounting fans, exhaust fan receptacles, switches and switchboards.

d. Cables, wires, splicing/termination/connection accessories including 4 way/3 way/2 way cable junction boxes with disconnecting devices on Conduit and accessories, junction and pull boxes, terminal blocks.

e. All fittings, supports, brackets, anchors, clamps and connections.

f. Receptacles for special purpose like for welding machine, drill etc.

6. To carry out of detail engineering including design calculations, preparation of lighting layouts showing location of fixtures according to lux level of 300.

7. The electrical installation shall meet the requirements of Indian Electricity Rules, relevant IS code of Practice for respective equipment and National Electrical code of India.

8. Make of items
i. LED Lighting fixtures – PHILIPS, CROMTON, BAJAJ, WIPRO.
ii. MCCB, MCB – ABB, L&T, LEGRAND, HAVELLS, SCHNEIDER.
iii. Switches & Sockets - HAVELLS, L&T, SIEMENS, CGL
iv. Fans - CGL, BAJAJ, HAVELLS, ORIENT, USHA
v. Distribution Board—LENGARD, SIEMENS, ANCHOR, SCHNIEDER ,HAVELLS

9. Receptacles of 63 Amps. to be provided inside periphery of the plant.

10. Exhaust fans for complete installation room will be in the scope of bidder as per requirement.

11. The firm may visit the site to understand the requirement with prior permission.

D. Scope of Services :-

a. Erection, testing & commissioning of all equipment with all fittings & accessories supplied under this contract.

b. Erection, testing & commissioning of all motors under this contract

c. Supply, laying, termination, testing & commissioning of all Power & Control Cables.

d. Erection, testing & commissioning of PMCC and MCC supplied under this contract.

e. Erection, Testing & Commissioning of all local panel/distribution board, junction box etc. supplied under this contract

f. All other allied works in connection with the above work whether specifically mentioned in the specification or not but necessary to complete the work shall be deemed to be included under the scope of this specification.

g. All testing equipment as required for testing & commissioning of equipment system shall be arranged by the bidder.

h. During dismantling/reinstallation work if any item is damaged, it should be replaced free of cost by the successful bidder.

Overall Work:

1. Taking out Old Drum, Machinery, and Pumps etc from the Old Drum Building and material and placing the items safely in another place as directed.

2. Construction of two floor new Drum Building similar to the existing Old Drum building complete in all respect as per scope of work.

3. overhauling of old machinery including painting as per scope of work.

4. Reinstallation and fixing of all machinery and Drum as per scope of work including complete test run.

V. PPE Compliance
Helmets, gloves, safety goggles, boots for all workers.

VI. Fire Safety

Deployment of ABC fire extinguishers installed at key points.
Firm shall provide Fire proof electrical conduits

VII. Structural Safety

Load bearing design of RCC flooring for heavy equipment
Non slip flooring finish.

VIII. Mechanical Safety

Emergency stop for all motorized units
Mechanical guarding on rotating components

IX. Operational Training

On site operator training on RVDF handling and maintenance to the Operators during the FAT Period.

X. Implementation Timeline-

Activity	Tentative Duration
Detailed Design & Procurement	2 month
Civil Construction	5 months
Mechanical Installation	1 month
Electrical and Instrumentation Works	1 month
Testing & Commissioning	1 month
Total Duration	10 months

However project should be completed in all respect within 10 months.

XI. Deliverables-

- Approved drawings for building (with electrical and instrumentation setup)
- State of the Art fully constructed RVDF housing structure as per approved drawing.
- Removal of RVDF from old building and its Overhauling.
- Installed and commissioned Rotary Vacuum Drum Filter.
- Functional electrical and instrumentation setup.
- Complete Spare parts list.

XII. Final Acceptance Test-

• RVDF system shall have minimum of 2MT of sheet production per 8 hr of shift with 18hr running per day (including cleaning and maintenance) for 7 days. Total production of sheet at the end of FAT should be 45MT or more.
• If the plant does not meet any of above criteria for some reason on any day, the FAT day shall start afresh and continue for next 7 days.

Annexure-II

Quality Control Requirement

LIST OF MANDATORY TESTS

Quality Control Requirement-

The successful bidder shall submit the manufacturer test certificate of cement, reinforcement, structural steel and aluminium before start of work for each lot/batch. The list of mandatory tests as mentioned in below table and is also in the scope of work of successful bidder. Test shall be carried out at any IIT/NIT/Government Engineering College and its test certificates shall be submitted to SPM. The testing charges shall be borne by the firm.

MANDATORY TESTS-

1. Water-
Min. quantity of material for carrying out the test- One
Test Frequency- Water from each source shall be got tested before the commencement of work and there after once in every three months till the completion of the work. Water from municipal source need be tested only once in six months. Number of test for each source shall be 3.

Test performed by Laboratory IS 3025
i. pH Value
ii. Limits of Acidity
iii. Limits of Alkalinity
iv. Percentage of solids
(a) Chlorides
(b) Suspended
(c) Sulphates
(d) Inorganic
(e) Organic

2. Cement-
Min. quantity of material for carrying out the test- Each lot
Test Frequency- Every 50 tonnes or part thereof. Each brand of cement brought to site shall be tested as per this frequency.
Test procedure by Laboratory
IS 4031(Part II)
IS 4031 (Part III)
IS 4031(Part V)
IS 4031(Part VI)
IS 4031 (Part IV)

Physical requirement
(i) Fineness

(ii) Soundness
(iii) Setting time (Initial & Final)
(iv) Compressive strength
(v) Consistency of standard cement paste.

3. Sand and aggregates-

Test name- (A) Organic impurities
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 20 cum.
Test Frequency- Every 20 cum or part thereof or more frequently as decided by Engineer-in-charge)

(B) Silt Content-
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 20 cum.
Test Frequency- Every 20 cum or part thereof or more frequently as decided by Engineer-in-charge)

(C) Particle size distribution-
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 40 cum.
Test Frequency- 40 cum. or part thereof

(D) Bulking of Sand-
Test Procedure- As per CPWD Specification
Min. quantity of material for carrying out the test- One for 20 cum.
Test Frequency- Every 20 cum or part thereof or more frequently as decided by Engineer-in-charge)

4. Bricks-

Test- Testing of Brick for dimensions, Compressive strength, Water absorption and efflorescence.(at Laboratory)
Test Procedure- As per CPWD Specification.
Min. quantity of material for carrying out the test- As per Table 6.3 and 6.4 of CPWD Specification.
Test Frequency- As per Table 6.3 and 6.4 of CPWD Specification.

Note:
• The laboratory tests of other construction materials shall be carried out as per frequency mentioned in CPWD Specification 2019 Vol-I & Vol-II with up to date correction slip.
• The test register of material shall be maintained by the Firm.

PRICE SCHDEULE

Sr. No.	Description of Item	Qt.	Unit	Amount Rs.
1.	Taking out Old Drum, Machinery, Pumps etc from the Old Drum Building and material and placing the items safely in another place as directed by site Engineer	1	Job	
2.	Drawing & Design of complete RCC structure as per code of practice and duly certified by any reputed Govt. agencies like NIT's, IIT', Government Engineering College etc. including approval of design & drawing (NOC) from Factory Inspector.	1	Job	
3.1	Construction of two floor new Drum Building similar to the existing Old Drum building (G+1) of Size 9.15M X 9.15 M with 6.1 M floor to floor height. Complete in all respect as per approved drawing and design.	1	Job	
3.2	Provision of pre coated galvanised iron profile roof sheets with MS truss.	1	Job	
3.3	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth. Including anti termite treatment of soil, floor and external wall	1	Job	
4	Overhauling of old machinery including painting as per requirement.	1	Job	
5	Reinstallation and Fixing of all machinery and Drum, vacuum box, agitator, piping, filtrate receiver, vacuum pump, sheet scraper, Conveyor/felt for sheet removal etc. in the same condition as before including testing complete	1	No.	
6	SS/HDPE piping for feed sludge and filtrates Vacuum lines and filtrate discharge pipelines Agitator drive system (motorized) including Sludge feed tank with stirrer Isolation valves, pressure gauges, flow meters	1	Job	
7	Supply and underground laying of 120 Sq mm 3½ core XLPE Aluminium Armoured cable from PSS to Newly constructed building. Length of the cable will be 300 meter approx.	1	Job	
8	<u>Electrical Work:</u> 1. Dismantling & shifting of MCC Panel and all Electrical equipment.i.e. Motors, starters, Light fixtures, Ceiling & exhaust fan from the building safely & without damage and fixing the same after completion of building construction. 2. Overhauling and repairing of MCC panel, all motors & starters with necessary spares 3. Supply and Fixing of all the cables including incoming	1	Job	

	power cable to MCC panel. 4. Supply and installation of appropriate copper armoured cable required to connect motors from MCC panel & starters. 5. Providing remote control station for all motors to operate from different locations. 6. Suitable 01 no. PDB panel at first floor for controlling the motors, Power DB & lighting circuit. 8. Provision of 02 nos. GI Earthing for proper earthing of electrical equipment like motors, panels, cable and all electrical conducting part connecting by suitable GI Wire / GI Strip. 9. Lightening arrester protection for the buildings			
		GST @ …..		
			Total	

Note: Kindly go through scope of work for detail.