



Government of West Bengal
Irrigation & Waterways Directorate
Office of the Executive Engineer
Metropolitan Drainage Mechanical Division
Jalasampad Bhawan (4th floor), Salt Lake City, Kolkata-91
Telephone No-03323345768, Email Id: ee-metromecdvn@wbiwd.gov.in

EoI No.: WBIW/EE/MDMD/EoI-07/2018-19

NOTICE INVITING

EXPRESSION OF INTEREST (EoI)

For

EOT crane inside pump house and Electrically operated monorail crane with supporting MS structure for bar screen / trash rack lifting lowering in connection with the work

“Supply, installation, testing and commissioning including trial run and one (1) year successful operation and maintenance(with spares) of (water lubricated) vertical turbine mixed / axial flow pump sets four (04) nos. 50 cusec with allied electrical (HT & LT) and mechanical works complete for the proposed dumdummy park pumping station at the confluence of cantonment khal and Bagjola khal , dist- 24 PGS(N) ,West bengal .”

(For Work of EOT crane inside pump house and monorail crane with motorised lifting of trash rack/bar screen.)

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**NOTICE INVITING EoI FOR FOR MOST SUITABLE TECHNICAL
SPECIFICATIONS, BOQ AND BUDGETARY QUOTES**

Offline bids are hereby invited by the Executive Engineer, Metropolitan Drainage Mechanical Division, Irrigation & Waterways Directorate on behalf of the Irrigation & Waterways Department of West Bengal through single stage offline sealed bid for obtaining most suitable Methodology, Technical specifications, BOQ and Budgetary quotes from all interested bidders/agencies/contractors within the country having Original Equipment Manufacturer of V.T. Pump Pre-Qualification (eligibility) credential for execution of works of similar nature and financial capabilities. The technical bid and the financial bid will determine the final selection and acceptance of price schedule, items of work, ToR, Specifications and even scope of work for framing of a DPR of the project mentioned later.

The participants may submit their bid with all necessary documents along with the covering letter duly signed by an authorized signatory **on or before 22.01.2019 by 15.00 Hrs** at the following address:

Office of the Executive Engineer
Metropolitan Drainage Mechanical Division
Jalasampad Bhawan (4th floor), Salt Lake City, Kolkata-91
Telephone No-03323345768, Email Id: ee-metromechdvn.wbiwd@gov.in

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SECTION – I

NOTICE INVITING EXPRESSION OF INTEREST (EoI)

EoI No.: WBIW/EE/MDMD/EoI - 07/2018-19; Dated: Jan 09, 2019

Subject: *EOT crane inside pump house and Electrically operated monorail crane with supporting MS structure for bar screen / trash rack lifting lowering in connection with the work*

“ Supply, installation, testing and commissioning including trial run and one (1) year successful operation and maintenance(with spares) of (water lubricated) vertical turbine mixed / axial flow pump sets four (04) nos. 50 cusec with allied electrical (HT & LT) and mechanical works complete for the proposed dumdum park pumping station at the confluence of cantonment khal and Bagjola khal , dist- 24 PGS(N) ,West bengal .”

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Telephone No-03323345768, Email Id: ee-metromechdvn.wbiwd@gov.in**

Offline Expression of Interests (EoIs) are invited by **Executive Engineer, Metropolitan Drainage Mechanical Division, Irrigation & Waterways Directorate** from eligible registered firms for obtaining **Methodology, Specifications, BOQ and (Proposed) Budgetary Quotes** for *EOT crane inside pump house and Electrically operated monorail crane with supporting MS structure for bar screen / trash rack lifting lowering in connection with the work*

“ Supply, installation, testing and commissioning including trial run and one (1) year successful operation and maintenance(with spares) of (water lubricated) vertical turbine mixed / axial flow pump sets four (04) nos. 50 cusec with allied electrical (HT & LT) and mechanical works complete for the proposed dumdum park pumping station at the confluence of cantonment khal and Bagjola khal , dist- 24 PGS(N) ,West bengal .”

1.	EoI Document	The EoI document can be downloaded from www.wbiwd.gov.in from 09.01.2019 onwards
2.	Last date and time for bid Submission	22.01.2019 at 15:00 Hrs.
3.	Bid Security	NIL
For any queries , bidder may contact this office before submission of offline bid at 033-23345768 , E-mail : ee-metromechdvn@wbiwd.gov.in		

SECTION - II

1.0 INTRODUCTION TO THE PROJECT

It is experienced from past few year that a vast area adjoining of B.S.T. plant and Cantonment khal were inundated for a substantial period during rainy season. It is also observed that the gravity flow of cantonment khal is inadequate due to higher H.W.L/H-F.L of Bagjola Khal and compounding with tidal flooding at Bagjola Khal. To get relieve of the inhabit ants of that area, it is proposed for a lifting drainage pumping station at Dumdum park, Dist.24 Pgs (N). During non monsoon period i.e. October to June, gravity flows are sufficient to remove the drainage water from cantonment canal. But the pumping is required for monsoon period i.e., June to October, at the time of flood flow or back water from storm run off. This canal carries high volume of drainage water with municipal debris, fibers and silts.

1.1 LOCATION

The proposed Pumping Station is located at the outfall of cantonment khal at Dumdum park , Kolkata, Dist- 24 PGS(N) ,West Bengal.

1.2 OBJECTIVE

Objective of setting up the proposed Pumping Station is to provide intended extent of relief to the command areas of the proposed Pumping Station from water logging. This will lead to significant improvement of environment quality in the area as also the economic improvement of the community. Construction of Pumping Station of adequate capacity at out fall locations of the canals to reduce the frequency and extent of flooding thereby improving the level of service provided by the canals.

2.0 SALIENT DESIGN DATA(S) OF THE PUMPING STATION

2.1 Civil & Hydraulic Data

Sl No	Particulars	Data
1.2.1	(a) inlet arrangement	
1.2.2	Canal Bed Level at inlet to the sump	-1.82 M. (U/S of canal)
1.2.3	F.D.L.	+21.35 M(GTS)
1.2.4	(b) Hydraulic Parameter of Pumping Station	
1.2.5	Pump Floor Level	+6.625 M(GTS)
1.2.6	Pump Suction Level	-3.0 M(GTS)

1.2.7	H.W.L	+2.9 M(GTS)
1.2.8	Sump Bottom Level	-4.0 M(GTS)
1.2.9	Canal Bed Level at delivery side	+1.82 M(GTS)
1.2.10	(c) Outlet arrangement	
1.2.11	C.L. of Discharge pipe(above H.W.L.)	+5.1 M(GTS)

2.2 V.T. Pump Design

Sl No	Particulars	Data
01	Service	Drainage/Clear water
02	Type	Axial/ Mixed Flow Vertical
03	Designation	SWF Pumps
04	Duty	Continuous
05	Location	Indoor
06	Design Capacity	150 Cusec & 50 Cusec
07	Nos. Required	5 nos. & 2Nos.
08	Static Head in Mtr	4.90 Mtr & 6.3 Mtr.
09	Speed	<600 r.p.m.
10	Min Bowl efficiency required at design capacity,%	85
13	Nos. of pumps working in parallel	Not Applicable
14	Range of Operation	Between 70% and 130% of rated capacity
15	Suction specific speed	7500<S<11000 ,US unit S=8500 (preferred)
16	Design & Constructional feature	As per Technical Specification
17	Material of Construction	As per Technical Specification
18	Supply of accessories and service	As per Technical Specification
19	Tests and Inspection	As per Technical Specification

2.3 BRIEF SCOPE OF THE PROJECT :

The scope of work under this estimate includes the Supply, installation, testing and commissioning including trial run and one (1) year successful operation and maintenance(with spares) of (water lubricated) vertical turbine mixed / axial flow pump sets four (04) nos. 50 cusec with allied electrical (HT & LT) and mechanical works complete for the proposed dumdummy park pumping station at the confluence of cantonment khal and Bagjola khal , dist- 24 PGS(N) ,West bengal .

The works include all Mechanical, electrical, instrumentation, control and other related work as per as details scope of this estimate. The works are to be executed as per technical specification enclosed a separate part of this estimate. The part of specification shall be read in conjunction with other parts such as specifications, drawings and appendices which provide further information and details.

The contractor shall confirm of having visited site and collected and verified the data relating to site condition. The contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility. The contractor shall be responsible for overall verification of equipment under the scope of work eg. Make, Model, specifications and responsible for detailed design of mechanical and electrical works of the proposed pumping station. Compliances with these specifications does not limit the responsibility of the contractor for the overall performance of the pumping station. Contractor can offer changes in design for better performance. Justification of such changes shall be provided by the contractor. such changes are subject to approval by E.I.C.

2.0 ELIGIBILITY CRITERIA/PRE-QUALIFICATION

While submitting the proposal, the bidder shall ensure that the bidder meets the conditions of eligibility as described below:

Sl. No.	Eligibility criteria	Capability Assessment Documents
1.	Should be registered in India	<ul style="list-style-type: none">• IT Return• GST No. (If applicable)
2.	Should be a original equipment manufacturer of VT Pumps	<input type="checkbox"/> Authorization of manufacturer, if any

4.	Technical Credentials	<ul style="list-style-type: none"> • It is desirable to firm have experience in similar nature of works in drainage / lifting water pumping station • Completion certificate, If any
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4.0 INSTRUCTIONS TO BIDDERS

Submission of Application

The EoI document can be downloaded from www.wbiwd.gov.in from 09.01.2019 onwards. **Last date & time of submission of bid manually in drop box at office of Executive Engineer , Metropolitan Drainage Mechanical Division, is on 22.01.2019 till 15:00 Hours (IST).**

No processing fee or bid security (EMD) is required during submission of the bid.

The applicant bidders/contractors are advised to carefully read all the ‘Terms & Conditions’ contained in this EoI. They should particularly go through the minimum desired Pre-qualification (PQ) works credential & financial eligibility criteria and satisfy them for all the mandatory eligibility requirements. Bidders desirous of participating in the EoI and should submit bids only if they fulfill the minimum PQ eligibility criteria and are in possession of all the required PQ Credential documents “in original”

This EoI is not an agreement and is neither an offer nor invitation by ‘The Authority’ to the prospective Bidders or any other person to allot the project. The information contained in this EoI or subsequently provided to Bidder, whether verbally or in documentary or any other form by or on behalf of the ‘Authority’ or any of its employees or advisors, is provided to Bidder on the terms and conditions set out in this EoI and such other terms and conditions subject to which such information is provided. The purpose of this EoI is to provide interested parties with information that may be useful to them in making their financial offers (Bids) pursuant to this EoI. This EoI includes statements, which reflect various assumptions and assessments arrived at by the ‘Authority’ in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This EoI may not be appropriate for all persons, and it is not possible for the ‘Authority’, its employees or advisors to consider the objectives, financial situation and particular needs of each party who reads or uses this EoI. The assumptions, assessments, statements and information contained in the Bidding Documents, especially the Project Report/data may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this EOI and obtain independent advice from appropriate sources.

Information provided in this EoI to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The 'Authority' accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The 'Authority', its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant or Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this EoI or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the EoI and any assessment, assumption, statement or information contained therein or deemed to form part of this EoI or arising in any way for participation in this Bid Stage.

The 'Authority' also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this EoI.

The 'Authority' may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this EoI.

The issue of this EoI does not imply that the 'Authority' is bound to select a Bidder or to appoint the Selected Bidder/Consortium or Contractor, as the case may be, for the Project and the 'Authority' reserves the right to reject all or any of the Bidders or Bids without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of their Bid including but not limited to preparation, documentation, scanning uploading, expenses associated with any demonstrations or presentations which may be required by the 'Authority' or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and the 'Authority' shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the e-Bid, regardless of the conduct or outcome of the e-Bidding Process.

I&WD reserve the right to verify all statements, information and documents submitted by the applicant in response to the EoI Document. Failure of the I&WD to undertake such verification shall not relieve the applicant of its obligations or liabilities hereunder nor will it affect any rights of I&WD there under.

The EoI document shall be submitted by the bidder duly signed on each page of the document. In case the proposal is submitted on the document downloaded from official website, the applicant shall be responsible for its accuracy and correctness as per the version uploaded by I&WD and shall ensure that there are no changes caused in the content of the downloaded document. In case of any discrepancy between the downloaded or photocopied

version of the EoI document and the original EoI document issued by the I&WD, the latter shall prevail.

The right to suspend the short-listing process or part of the process to accept or reject any or all applications at any stage of the process and / or to modify the process or any part thereof at any time without assigning any reason therefore is reserved by I&WD without any obligation or liability whatsoever.

The bid document should be sealed in single envelope marked with the address, Name of work and EoI notice No., Last Date and Time of submission, Date and time of opening, name and address of the applicant.

The bid document should contain the following documents attached as annexure:

1. Cover Letter (as per Annexure-A/1)
2. Details of Representative from Bidder/Lead Member of Consortium (as per Annexure-A/2)
3. Technical Credentials of the Bidder and / or Consortium (Form-1)
4. Approach and Methodology being adopted by the Bidder and / or Consortium (Form-2)
5. BOQ details with Estimated cost in item rate (as per Form-3)

If the envelope is not sealed and marked as instructed above, this office assumes no responsibility for the misplacement or premature opening of the contents of the Proposal submitted. This office is not responsible for the non-receipt or delayed receipt of bid document send through courier or post.

Note: -

The envelope shall contain EoI document, signed copy of budgetary quotes along with Annexure in the prescribed format.

The Proposal shall be made in the Forms specified in this EoI Document. Any attachment to such Forms must be provided on separate sheets of paper and only information that is directly relevant should be provided. This may include photocopies of the relevant pages of printed documents.

EoIs received by this office after the specified time on the due date shall not be eligible for consideration and shall be summarily rejected.

Executive Engineer is not bound to accept any EoI and reserve the right to accept or reject any EoI, and reserve the right to annul the selection process and reject all EoI at any time prior to the award of the selection without assigning any reason(s) whatever and without thereby incurring any liability towards the affected participant(s) on this ground.

5.0 SCOPE OF THE WORK

The Basic scope covers the design, manufacturing, supply and inspection, testing, delivery, installation and commissioning of 04 nos. 50 cusec VT pump for the proposed pumping station at Dumdum park, Kolkata with bell mouth, column assembly, discharge elbow, motor stool, thrust bearing , non reversing device & lubricating system .

Each Vertical Turbine pump shall be capable of developing the required total head at rated capacity for continuous operation at the required total head at low water level in the sump. The pump will be required to work with / without parallel operation satisfactorily over the head requirements as per system resistance curves. Supply and installation of E.O.T. crane of 15 MT with 5 MT auxiliary hoist, MS Gratings, Bore well with submersible pump and centrifugal pump for cooling and lubrication purpose are also in the scope of work.

The design, drawing, manufacture, fabrication, erection, testing/ inspection of 11 KV indoor substation shall be carried out strictly as per Indian Electricity Rules , Latest BIS code of practices and prior approval of Directorate of Electricity , Govt of West Bengal.

Supply, installation, testing, commissioning of 1 nos. power transformer (1250 KVA, 11/415 V , ONAN) , Consumer 1 panel ACB at Sub Station (433 V), 1 set LT panel at Pump House ,Capacitor Bank , HT < Cabling , Earthing, , Internal illumination and allied electrical works ,Lightening conductor, instrumentation and communication system, Batter bank with charges also in the scope of work.

6.0 DECLARATION

I/We have completely read and hereby accept the scope of work, requirements, terms & conditions.

Signature of bidders authorised

Representative with seal:

Full address:

SECTION - III

ANNEXURE – A/1

Cover letter for Expression of Interest

To,
The Executive Engineer
Metropolitan Drainage Mechanical Division,
Jalasampad Bhawan (4th floor), Salt Lake City, Kolkata-91
Telephone No-03323345768, Email Id: ee-metromechdvn.wbiwd@gov.in
I & WD, Govt. of West Bengal

Sub: Submission of bid for obtaining Methodology, Technical Specification, BOQ and Budgetary Quote for the proposed: EOT crane inside pump house and Electrically operated monorail crane with supporting MS structure for bar screen / trash rack lifting lowering in connection with the work

“ Supply, installation, testing and commissioning including trial run and one (1) year successful operation and maintenance(with spares) of (water lubricated) vertical turbine mixed / axial flow pump sets four (04) nos. 50 cusec with allied electrical (HT & LT) and mechanical works complete for the proposed dumdum park pumping station at the confluence of cantonment khal and Bagjola khal , dist- 24 PGS(N) ,West Bengal” .

Dear Sir,

In response to the Invitation for Expressions of Interest (EoI) published on _____ bearing Ref. No. _____ “Supply, installation, testing and commissioning including trial run and one (1) year successful operation and maintenance(with spares) of (water lubricated) vertical turbine mixed / axial flow pump sets four (04) nos. 50 cusec with allied electrical (HT & LT) and mechanical works complete for the proposed dumdum park pumping station at the confluence of cantonment khal and Bagjola khal , dist- 24 PGS(N) ,West bengal .”

I / We acknowledge that Executive Engineer will be relying on the information provided in the Bid and the documents accompanying the Bid for recommendation of the most suitable Methodology, Technical Specification, BOQ and Budgetary quotes for the aforesaid Project, and we certify that all information provided therein is true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the Bid are true copies of their respective originals.

I / We shall make available to the Executive Engineer any additional information it may find necessary or require to supplement or authenticate the Bid.

I / We acknowledge the right of the Executive Engineer to reject our Bid without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.

I / We declare that:

- a) I / We have examined and have no reservations to the Bidding Documents, including any Addendum issued by the Authority; and
- b) I / We do not have any conflict of interest in accordance with the EoI document; and

I / We understand that you may cancel the Bidding Process at any time and that you are neither bound to accept any Bid that you may receive nor to invite the Bidders to Bid for the Project, without incurring any liability to the Bidders.

In the event of my / our being declared as the Recommended Bidder, I / we agree to enter into an Agreement in accordance with the documents that has been provided to me / us. We agree not to seek any changes in the aforesaid documents and agree to abide by the same.

I / We agree and understand that the Bid is subject to the provisions of the Bidding Documents. In no case, I / we shall have any claim or right of whatsoever nature if the Project / Agreement is not awarded to me / us or our Bid is not opened or rejected.

The estimated budgetary price has been quoted by me / us after taking into consideration all the terms and conditions stated in the EoI documents, our own estimates of costs including all direct and indirect tax liabilities and after a careful assessment of the site and all the conditions that may affect the project cost and implementation of the project.

I / We agree and undertake to abide by all the terms and conditions of the EoI document.

In witness thereof, I / we submit this Bid under and in accordance with the terms of the EoI documents.

Yours faithfully,

(Signature, Name & Designation of the Authorized Signatory)

Date:

Place:

Name & Seal of Bidder

ANNEXURE – A/2

Details of Representative from Bidder/Lead Member of Consortium

Part A : General Information of Bidding Companies/Agency		
1	Name of the Company/Agency	
2	Type of Organization	
3	Address of the registered office of the company/Agency	
4	Year incorporated	
5	Address for communication	
6	Contact person: Name Designation Phone No. Fax No. Mobile No. Email address	
General Information Subsidiary and Associated Companies (wherever applicable):		
1	Name of the company	
2	Address of the registered office of the company/Agency	
3	Nature of Business	
4	Brief description of company (not more than 100 words)	
5	Any other information the bidder would like to include:	
Part B - Details of GST		

1	GST Registration No.	
2	LUT No. for zero rated supply	

(Form-1)

Technical Credentials of the Bidder and / or Consortium

Name of Client (End User) :	
Name of the Work :	
Nature of Work :	
Description of services performed by the company :	
Project Location :	
Name, e-mail ID, telephone no. and fax no. of client's	
Project Cost (Rs. in lakh)	
Start date and finish date of the services (month and year):	
Brief description of the Work:	

Notes:

- ☐ Use separate sheet for each Eligible Assignment.

(Form-2)

DESCRIPTION OF APPROACH AND METHODOLOGY, RESPONDING TO THE EOI SCOPE

A description of the approach, methodology and work plan for performing the assignment, including a detailed description of the proposed methodology and staffing for the assignment.

- ❖ **Technical Approach and Methodology.** {Please explain your understanding of the objectives of the assignment as outlined in the scope mentioned in the Expression of Interest (EOI) document, the technical approach, and the methodology you would adopt for implementing the tasks to deliver the expected output(s), and the degree of detail of such output. Please do not repeat/copy the EOI in here.}

Project name: **Supply ,installation, testing and commissioning including trial run and one year successful operation and maintenance of external water lubricated Vertical turbine pump sets of four(04) nos. 50 cusec with electro-mechanical installation complete for the proposed Dumdum Park Pumping Station at the confluence of Cantoment khal and Bagjola Khal, Dist. North 24pgs.**

Schedule for EOT crane inside pump house and monorail crane with motorised lifting of trash rack/bar screen.								
Sl. No	Description of work as per preliminary assessment	Qty.	Unit	Description of work proposed by the bidder (for budget quotes)	Quantity (for budget quotes)	Unit (for budget quotes)	Rate (Rs.) (budget quotes)	Amount (Rs). (budget quotes)

1 **EOT crane inside pump house**

<p>Supply, delivery, storing at site, installation, testing & commissioning of 15 M.T. capacity EOT crane having hoisting motion electrical and CT and LT motion manual to be operated from floor by hand chain. The crane shall be suitable for Class II (M-5) duty, indoor operation as per IS: 807, IS: 3177 and IS: 3938 or equivalent at its latest revision for span length(cross travel) of 7000 mm and lift 7500mm. This work also includes manufacture, supply & fixing of MS long travel girder with square rail with sole plate and holding down bolts to be fitted on the existing concrete beam for the LT motion of 12100 mm length and maximum gap between two concrete beam is 3000 mm and power feeding arrangement along the longitudinal travel of the crane comprising of 4 line PVC shrouded type GI conductor with supporting brackets. The crane should be marked with safe working load (SWL) and the purpose for which they are intended, the down shop conductors should be fully insulated shrouded bas bar type, including all sundries as per direction of E.I.C.</p>	1	set
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2 **Electrically operated monorail crane with supporting MS structure for barscreen/trashrack lifting lowering.**

Supply, delivery, storing at site, installation, testing & commissioning of 5 M.T. capacity electrically operated monorail crane (02 nos monorail with structure) having both hoisting and LT motion electrical. The crane shall be suitable for outdoor operation as per IS: 807, IS: 3177 and IS: 3938 or equivalent at its latest revision for long travel length of 14000 mm(approx.) and lift 7000mm. This work also includes design, manufacture supply & fixing of MS long travel monorail with supporting MS structure to be fit on the existing concrete floor and power feeding arrangement along the longitudinal travel of the crane. The crane should be marked with safe working load (SWL) and the purpose for which they are intended, the down shop conductors should be fully insulated shrouded bar type, including all sundries as per direction of E.I.C.

1 set

The motorized lifting arrangement of bar screen shall be of the following components and specification :

Bar screen width 2600 mm

- Drive unit coupled to the reduction gear unit.
- Reduction Gear unit of adequate reduction ratio complete with coupling.
- Shafting arrangement.
- Electromagnetic brake / hydraulic brake system.
- Limit Switch arrangement for safety of the system.
- Capacity- 5 tons.
- Height of lift (Total lift) -7 mtrs.
- Hoisting speed - **provided by the bidder**
- Cross Travel speed – **provided by the bidder**
- Power supply - 415 v I 10% 50 cycles 3-phase AC.
- Control voltage – 110V for pendant push button unit.
- Power feeding arrangement – By PVC shrouded type GI conductor with suitable current collector.
- Class & Duty – Class II medium duty as per IS: 3938.
- Supporting structures – 6 nos. MS Galv Post with 2 nos. monorail structures duly covered with sheet on top.
- 2 nos. isolating switches to be provided at 2 ends of the monorail for power supply

