

MORMUGAO PORT AUTHORITY
ENGINEERING MECHANICAL DEPARTMENT
MMS SECTION-BAINA

Ref. no.CME/XEN(M)/MMS/PUMPS/2023/

Dt. /06/2023

Sub: Budgetary Quotation for "Supply, Installation, Testing & Commissioning of 02nos 30HP water pumps along with motors, wiring, electrical starter panels and complete foundation including the suction line at Jetty well, near MPA Fire station, Head Land Sada".

Mormugao Port Authority (MPA) is intending to obtain Budgetary Quotation for "Supply, Installation, Testing & Commissioning of 02nos 30HP water pumps along with motors, wiring, electrical starter panels and complete foundation including the suction line at Jetty well, near MPA Fire station, Head Land Sada.

The detailed Scope of work and other salient terms and conditions of the contract are attached at Section-I.

You are kindly requested to submit your Budgetary Offer for the above wok as per the format attached at Section-II price Schedule (BILL OF QUANTITIES) BOQ.

Your Budgetary Quotation should reach to this office on or **before 21.06.2023 at 15:30hrs**

Thanking you,

Yours faithfully,

(Yashpal Singh Negi)
EXECUTIVE ENGINEER(M)

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SECTION-I

TECHNICAL SCOPE OF WORK:

1. INTRODUCTION

- 1.1 Mormugao Port Authority (MPA) intends to award the work on turnkey basis for the work of **"Supply, Installation, Testing & Commissioning of 02nos 30HP water pumps along with motors, wiring, electrical starter panels and complete foundation including the suction line at Jetty well, near MPA Fire station, Head Land Sada"**.
- 1.2 These pumps are mainly used for pumping the water received from Sump well located within the vicinity of the Port for drinking, tanker filling, supplying to the tugs and tankers for dust mitigation at ADANI/JSW and roads at B.No.8, 9, 10 & 11 etc.
- 1.3 **The detail specification of the pumps sets are given below :**
- (i) Location – Jetty well, near MPA Fire station, Head Land Sada.
 - (ii) Nos. of installed pumps – 02 nos.
 - (iii) Nos. of new Pumps required - 02 nos.

Sr.no	Particulars	Specifications
PUMP SIDE		
1	Model	DB - 65/20
2	Make	Kirloskar
3	Capacity	30 HP
4	Description	End Suction Type
5	Total Head (In Meters)	45
6	Discharge in m ³ /hr	80
7	Pump Input in Kw	19
8	Suction delivery size in mm	80 X 65
9	Speed in rpm	2900
11	Impeller material/dia	CI/190
MOTOR SIDE		
1	Make	
2	Motor Type	3 Phase Motor
3	Rating in (KW/HP)	22/30
5	Speed In RPM	2945
6	Voltage in (Volts)	415
8	Frequency in (Hz)	50
STARTER		
1	Make	
2	Starter Type	Star- Delta

2. SCOPE OF THE CONTRACTOR.

2.1 MECHANICAL AND CIVIL WORKS

- a. The existing available 2 nos. pumps, motors, starter panels, coupling and piping installed at jetty well should be dismantled and same shall be handed over to the Port in a phased manner as directed by the Ports representative.
- b. Supply of suitable pumps along with motors, starter panels, coupled with pin bush/ tyre coupling and mounted on base frame.
- c. Preparation of complete civil foundation for all the 2nos pumps in a phased manner to be replaced including foundation/grouting etc.
- d. Installation of new pumps, motors (prime movers), starter panels and coupling in a phased manner as directed by the Port's representative.
- e. The work also includes repairs/replacement of suction pipes line. Contractor shall modify the existing suction/delivery line if required.
- f. The pump set shall include discharge gauge to ascertain the pressure of flow and Coupling Guard for safety.
- g. The foundation should be sufficiently substantial to absorb any vibration and to form a permanent rigid support for the base plate. (Grade of concrete for foundation to be at least 1:1.5:3 or richer grade, where 1 is Cement: 1.5 Sand: 3 Aggregate).
- h. The foundation of the pumps must be capable of absorbing the forces and torque transmitted to it by the pump without shifting its position and also withstand forces transmitted by the associated drive and piping connected to the pump.
- i. A combined base plate for these pumps and its drives may be placed on a concrete foundation rest with a special anti-vibration elements to achieve optimal vibration insulation during pumping operation.
- j. Upon completion of complete foundation works as per requirement at site, the supplied new pump assembly frame is to be grouted in line with the existing line of suction and delivery with necessary modifications as required at site in consultation with the Port representative.
- k. The suction and discharge pipes should be supported independently with the help of pipe hangers or support blocks to prevent strain in the pump joints and casing.
- l. After successful replacement of each pump set, alignment of the pump with the motor, suction line and delivery lines, trial run of the pump has to be taken by the contractor for an hour to the satisfaction of the Port representative.
- m. Confirmation from the manufacturer that the product supplied complies with the requirements of the subject order.

2.2 ELECTRICAL WORKS

- a. Removal of existing wall mounted main distribution DB along with 02nos. ICTPN and Starters of both the pump motors (prime mover) in a phased manner so as not to hamper water pumping operations.
- b. Supply of surface mounted double door panel of size: 1.30 m x 1.30 m x 0.25 m (L X B X D), 2 mm thickness, made of MS sheet having bottom gland plate arrangement. The panel should be painted with one coat of red oxide and two coats of grey finish paint. The panel is to be mounted on MS angle frame of size ISA 40mmX40mmX5mm, of height at least 60cms from ground level.
- c. The panel should be incorporated with 1no. Main distribution 4 pole MCCB of rating 160 amps and 3 nos., 3 pole MCCB's of rating 63 amps one for each individual motor and one as spare, 5 connecting copper bus bars strips of size 25 mm (width) x 5 mm (thickness).
- d. Three of the connecting copper bus bars shall be connected to the output of the 160 amps MCCB using copper bus bars of similar size. The fourth bus bar shall be for Neutral and fifth for Earthing. The input to the 3 nos., 3 pole 63 amps MCCB's shall be from the connecting copper bus bars using copper cable jumpers of size 25 sq.mm.
- e. Suitable Star Delta starter panel for each individual motor should be provided. The connections from 63 amps MCCB to their respective starter panel should be made using armoured copper cable of size 3C x 25 sq.mm. The connection between the star delta starter panels to their respective motor shall be made using 2 runs of armoured copper cable of size 3C x 25 sq.mm. The total length of cable required will be approximately 50 mtrs., cable from starter panel to the motor should be laid along the wall by properly saddling with suitable saddles of GI at every 1 meter interval and laid in GI pipe on the ground.
- f. Necessary lugs, cable glands, insulators for mounting busbars, nuts and bolts required for execution of the above work shall be in the scope of the contractor.
- g. **Earthing:** Providing 4 nos (2 nos for motor & 2 nos for panel) GI pipe earthing using 40 mm dia 2.9 mm thick, 2.5 meter long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of 400 x 400 x 400 mm with a cast iron cover. The electrode shall have staggered holes of 12-mm dia., and the electrode should be covered 150 mm around with alternate layers of salt and charcoal from the bottom of the pipe to the bottom of the CC chamber the connection from the electrode is to be established through GI Flats of 25x3mm using GI bolts and nuts. Work includes supply & fixing of required GI flats for each earthing connection.

3. CONTRACTORS RESPONSIBILITY:

- a) The Contractor shall Supply, Install, Test & Commission both the 02 nos., 30HP water pumps along with motors and complete foundation including the suction line at jetty well, near Fire station at Head Land Sada.
- b) The contractor shall supply, install, test and commission new panels along with required MCCB's, bus bars, etc., cabling as detailed at 2.2 Electrical works.

- c) The contractor shall plan to replace the pump set in a phased manner in consultation with Port representatives so that the pumping operations and water supply to the Port areas are not hampered in any manner.
- d) Contractor shall submit a plan of action of each pump before start/replacement of pump set to the Port representative for approval.

4. MINIMUM ELIGIBILITY CRITERIA:

- a) Experience of having successfully completed a similar work during the last 7 years ending last day of month previous to the one in which quotations are invited. In support of this, a Work Order, TDS certificate and satisfactory work completion certificate issued by client shall be submitted.
- b) Similar works means "Supply, Installation, and Testing & Commissioning of water pump sets" at Central Govt. / State Govt. / Port Sector / PSU or any reputed organization.

5. COMPLETION PERIOD:

- a. The total work shall be completed within **120 days from the date of issue of LOA.** The detailed break up is given below :
- b. Supply of both 02 nos., pumps along with coupled motors and electrical panels and required accessories at MMS section – **60 days from the date of issue of LOA.**
- c. Installation, testing and successful commissioning of the 1st pump set- **30 days from the date of handing over of the site for installation.**
- d. After successful commissioning of the 1st pump set, installation, testing and successful commissioning of the 2nd pump set - **30 days from the date of handing over of the site for installation.**

6. TIME OF ACCEPTANCE

The supply, installation, testing and successful commissioning of both 02 nos pump sets shall be deemed to have been accepted by the Port after successful trials of the pump sets to the satisfaction of Port's representative.

7. TRAINING :

Training shall be provided to the maintenance and operational staff of the system as per OEM recommendations.

8. GUARANTEE PERIOD:

The pump sets installed by the successful contractor shall be guaranteed for 12 months for trouble free operations from the date of successful commissioning and handing over to the Port. The guarantee period shall start from date of acceptance of both the pump sets by the Port. If any defect is observed during the guarantee period, the same shall be replaced/rectified by the Contractor, free of cost under guarantee obligations.

9. MANUAL/ CATALOGUE :

- a. The contractor shall submit the manual/ catalogue/ Certificate of the pumps and motors (prime mover) to the Port within seven days from the date of supply of the pump sets.
- b. The detailed layout diagram and drawings of the pump sets to be installed is also to be submitted by the contractor before starting the installation/ civil works.
- c. All the drawings of Foundation, catalogues/Brochures of the pump sets and cable layout drawings, Test certificates of pumps and prime mover, routine Test certificates etc. should be submitted by the contractor.
- d. After the completion of the commissioning work of both the pumps to the satisfaction of the Port's Engineer, the above mentioned drawings in THREE sets to be submitted to the Port by the contractor.

10. PAYMENT TERMS:

Payment will be made within 30 days from the date of receipt of undisputed bill, after receipt of supply items / satisfactory testing & commissioning of system. Separate invoices shall be raised towards supply of materials and towards installation / execution works.

Following are the stages of Payment:

a. PAYMENT TOWARDS COST OF SUPPLY ITEM:

- i. 70% (Seventy percent) against receipt of material **(Mechanical & Electrical)** at site in good condition and after inspection of the same.
- ii. 30% (Thirty Percent) after successful completion of Installation, Testing and commissioning of both the pump sets and handing over to Port.

b. PAYMENT TOWARDS INSTALLATION:

- i. 100% (Hundred percent) after successful completion of Installation, Testing and commissioning of both 02 nos. pump sets and handing over to Port. Payment along with applicable GST will be released within 30 days subject to recoveries if any, from the date of submission of Tax Invoice after satisfactory completion of work in all respects.

11. OTHER TERMS AND CONDITIONS :

- a) Normal working hours are from 08:00 AM to 05:00 PM on Mondays to Fridays and 08:00 AM to 01:00 PM on Saturday. As such the contractor or his representative must obtain written permission to work outside the stated normal working hours at least 24 hours before such work is to be undertaken.

- b) Permission for working beyond the normal working hours of the Port or on Sunday and Public Holidays will be given to the Contractor subject to his agreeing to bear the cost of overtime, if any, which may have to be paid to the Port's supervisory staff.
- c) The contractor must ensure the safety of labourers engaged by him during the course of execution of work & the Port will not be responsible for any injury sustained by the labourer or for any fatal accident. The Contractor should bear all the loss & expenditure involved. Wherever necessary he should also provide necessary look out men.
- d) The Contractor will be held responsible for any damage to existing structures and surfacing caused by the Contractor during the execution of the contract, the contractor shall repair it to the satisfaction of the Ports representative on conclusion of the Works. For this purpose a joint inspection with the Ports representative may be carried out prior to occupation/handing over the site.
- e) The contractor may visit the site to determine the full scope of work under this contract and the working conditions before quoting. The contractor should quote the rate by taking into consideration all expenses till the successful trials and handing over of all pump sets to the Port.
- f) The required tools and tackles including manpower for installation, testing and commissioning of the pump sets required to complete the contract shall be in the scope of the contractor.
- g) All tests shall be carried in presence of the Port representatives, in case of power failure or any other unavoidable circumstances resulting in delay of the work, subsequent day shall be granted.
- h) Necessary RFID entry passes shall be obtained by the Contractor at their own cost with the approval of Port Officials for entry into Port area. The same can be obtained online from our website www.mptgoa.gov.in.**
- i) The technical scope of works (Section-I) and Price Schedule (Bill of Quantities) at Section II to be read in conjunction to ensure the actual works involved.
- j) Address for communication and submission of bid:

Executive Engineer (M)
Mechanical Maintenance Section (MMS)/Baina
Engineering Mechanical Dept.,
Mormugao Port Authority,
Baina work shop-Goa – 403802.
Phone: 0832-2594246.
Email: xenm.mpt@gmail.com

Further amendments if any, visit our website: <https://www.mptgoa.gov.in/>

**EXECUTIVE ENGINEER (M)
MORMUGAO PORT AUTHORITY**

SECTION-II

PRICE SCHEDULE (BILL OF QUANTITIES) BOQ

Sub: "Supply, Installation, Testing & Commissioning of 02nos 30HP water pumps along with motors, wiring, electrical starter panel and complete foundation including the suction line at Jetty well, Head Land Sada".

Sr. No	Description of work	Unit	Qty	Unit price (Rs.)		Total
				In Figure	In Word	
A	Supply of Items					
1.	Supply of 02 nos., 30HP pumps along with motors and couplings with base frame.	EA	2			
2.	Supply of double door panel made of MS sheet. With 4 pole MCCB of rating 160 amps as incomer and 3 nos., MCCB's of rating 63 amps along with 5 strips of copper bus bars and accessories.	LS	1			
3.	Supply of Star – Delta starter panel suitable for 30 HP pumps	EA	2			
4	Providing earthing as per the details given in scope of work	EA	4			
B.	Installation and commissioning					
1.	Installation, testing and successful commissioning of the of both pump sets including electrical and civil works	LS	1			
C	Total Cost (A + B)					

Note:

1. The subject work is on turnkey basis.
2. The offered rates shall be exclusive of GST.
3. Evaluation will be done on Basic Price (Total of price in the Price Schedule (BOQ) and shall be considered lowest among all Bidders.

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