



MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

FACE SHEET TO ACCOMPANY THE TENDER DOCUMENTS

- A. 1. Name and full address of the Contractor
to whom the Tender Documents are issued. :
2. Whether registered with Engineering (Civil)
Department, if so, class of registration. :
3. If not registered, reference to the letter of the Chief
Engineer authorising issue of the tender Documents. :
4. Date of issue of Tender Documents. :

Assistant Exec. Engineer (Account)

- B. 1. Name of work: **Supplying, Installing, Testing and Commissioning of Air
Monitoring Analyzers at Different Locations in Port Areas**
2. Cost of each set of Tender Documents : Rs. 10,000/-
3. Date of Sale of Tender Documents and : From : 22/08/2016
Extended upto : To 27/09/2016 upto
15.00hrs.
4. Date of receipt of tender and time : On 28/09/2016 upto
15.00 hrs
5. Amount of E.M.D. : Rs.1,31,500/-
6. Date of opening of tender and time : On 28/09/2016
(Extended) at 15.30 hours.
- 7 a) Whether E..M.D. received : Yes/No.
b) if so, in which shape : Demand Draft
8. Form of contract : Item rate
9. Whether tender received in duplicate : Yes/No
10. Whether rates have been quoted in : Yes/No.
the tenders both in words and figures.
11. Total No. of Tenders received for the work :

Dy. CAO (CWC)

EXECUTIVE ENGINEER(P&C)



MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/72/2016

**Name of Work :- Supplying, Installing, Testing and Commissioning of Air
Monitoring Analyzers at Different Locations in Port Areas.**

REVISED PRICE BID (S E C O N D C O V E R)

(TO BE SUBMITTED IN SEPARATE SEALED ENVELOPE / COVER)



An ISO 9001-2008 PORT

MORMUGAO PORT TRUST
SERVING THE NATION SINCE 1885
ENGINEERING (CIVIL) DEPARTMENT
www.mptgoa.com

NOTICE INVITING TENDER

TENDER NOTICE NO.CE/N-72/2016

TENDER No. CE/72/2016

Name of Work :- Supplying, Installing, Testing and Commissioning of Air Monitoring Analyzers at Different Locations in Port Areas.

Tenders in the prescribed form in sealed covers superscribing the Tender No. and due date and time are invited by the Chief Engineer for the above work as per the details given in the table below :

Cost of tender document	Estimated cost	Tender Sale From/To	Submission on	Opening on
EMD	Completion Time	Pre Bid Meeting		
Rs.10,000/- (Rupees Ten thousand only)	Rs. 1,31,50,000 /-	22.08.2016 To 27.09.2016 Upto 15.00 hrs.	28.09.2016 Upto 15.00 hrs.	28.09.2016 At 15.30 hrs. Technical Bid (Cover No.I)
Rs. 1,31,500 /- (Rupees One lakh Thirty One Thousand Five Hundred only)	Three (3) Months	30.08.2016 Upto 15.30 hrs.		

Detailed tender notice along with complete tender documents can be downloaded from our website www.mptgoa.com on or before the last date of sale of tender document. Tenders are also available for sale at the Civil Engineering Department of Mormugao Port Trust.

For further details and general enquiries, prospective bidders may contact the Executive Engineer (Planning), telephone no. 0832 2594611, mobile 09764006075 during working hours before the last date and time of sale of tender document.

[sd/-]
Chief Engineer



MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/72/2016

**Name of Work :- Supplying, Installing, Testing and Commissioning of Air
Monitoring Analyzers at Different Locations in Port Areas.**

PART IV

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MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT

TENDER No. CE/72/2016

REVISED PRICE BID

Name of Work :- Supplying, Installing, Testing and Commissioning of Air Monitoring Analyzers at Different Locations in Port Areas.

Part IV (i) - PREAMBLE

1. General

- 1.1** The Schedule of Quantities and Rates must be read with, Conditions of Contract and the Specifications and all relevant standards. The Contractor shall be deemed to have examined, Conditions of Contract and the Specifications and have acquainted himself with all the details of the work to be done and the way the works are to be carried out.
- 1.2** Notwithstanding that the work has been sectionalised every part of it shall be deemed to be supplementary to and complementary of every other part and shall be read with it or into it so far as it may be practicable to do so.
- 1.3** The detailed descriptions of work and materials given in the specification are not necessarily repeated in the bill of quantities.
- 1.4** The quantities given in the bill of quantities are approximate only and are given to provide a common basis for tendering. Payment will be made according to the actual quantities of work ordered and carried out, as measured by the Engineer and valued at the rates and prices quoted in the bill of quantities.

2. Rates and Prices to be Inclusive

- 2.1** The rates entered in the Schedule of Quantities by the tenderer shall include the provision of all supporting special equipment, labour of required skill, supervision, materials, overheads and profits, watch and ward, insurance charges, during execution and every incidental and contingent costs and charges, whatsoever, including sales tax on works contract, Excise Duty, VAT, Entry tax, Octroi, etc. if any, for compliance with conditions of contract and specification. Service tax if applicable shall be paid extra.
- 2.2** The Specification is intended to cover the supply of material and the execution of all work necessary to complete the works. Should there be any details of construction or materials which have not been referred to in the bill of quantities and drawings, but the necessary for which may reasonably be implied or inferred there from, or which are usual or essential to the

completion of all works in all trades, the same shall be deemed to be included in the rates and prices named by the contractor in the Bill of quantities. The rates or prices are to cover the item as described in the bill of quantities, specification or drawings, the description in the bill of quantities shall prevail.

- 2.3** Each individual item in the bill of quantities is to be priced or if any items are not priced it is to be indicated under which item or items the value of the work has been included. Items, the prices of which are the same shall not be bracketed. If the contractor omits to price an item the cost of the work of such item will be held to be spread over and included in prices given for other items. He is not to mark items 'included' when the rate is asked for.
- 2.4** Bidder has to enclose attested copy of the Service Tax Registration certificate along with the tender if applicable. Service Tax has to be claimed extra as applicable while submitting the bills.



**MORMUGAO PORT TRUST
ENGINEERING (CIVIL) DEPARTMENT**

TENDER No. CE/72/2016

REVISED PRICE BID

**Name of Work :- Supplying, Installing, Testing and Commissioning of Air
Monitoring Analyzers at Different Locations in Port Areas.**

SCHEDULE OF QUANTITIES AND RATES

Item No.	Description	Quantity	Unit	Rate in Figures and Words	Amount Rs.
1	Supply of new Continuous AAQMS Analyzers consisting of following units (i) SO2 Analyzer -Model T100 make: Teledyne or equivalent based on UV-Fluorescence principle for measurement range 0-50 ppb to 0-20 ppm Ambient Zero and Ambient span. (ii) NOx Analyzer-Model T200 make: Teledyne or equivalent based on chemiluminescence detection principle, ranges: 0-50 ppb to 20 ppm, Ambient Zero and Ambient Span. (iii) SPM Analyser PM 10 Measurement-Model: BAM 1020, Make: Met One or equivalent, SPM Analyzer with Beta gauge detection principle, long half life C-14 source, Range: 0-1000 microgram/m3, PM 10 Head. (iv) SPM Analyzer PM 2.5/TSP Measurement : Model BAM 1020 or equivalent. Make : Metone, SPM Analyzer with Beta gauge detection principle, long half life C-14 source, Range-0-1000 microgram/m3, PM 2.5 Head. (v) Calibrator & Zero Air Unit. (vi) Calibrated Gas cylinders with regulators. 10 ltr. water				

	<p>capacity Aluminium cylinder for SO₂, 10 ltr. water capacity aluminium cylinder for NO_x. (vii) 19" rack with power distribution arrangement, tubings, Rack ears and handles, teflon filter kits and other misc hardware. (viii) Gas Sampling System: Sampling hood arrangement with SS hood, Teflon manifold & moisture trap scrubber set. (ix) PC Based Data Logger with core i7 processor Intel make, 500 GB hard disk, 8 GB RAM, color LCD monitor 18.5" with CD & USB Port, Windows 10, Antivirus latest version including providing all consumables as per compatibility based on manufacturers specifications during warranty period except filter tapes. (x) Data Acquisition System: Software for data handling & archiving Historical, graphical reports & trends & statistical values. Providing earthing pits and earthing as per manufacturers specification if required. All labour, tools & plant, forwarding & freight, packing, transportation, loading/unloading, duties & taxes, etc. complete.</p> <p>NOTE: Cost shall also be included during free maintenance period. Sampling, analysis & reporting of monitored data shall be as per GSPCB/CPCB norms.</p>	1	Number		
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Item No.	Description	Quantity	Unit	Rate in Figures and Words	Amount Rs.
2	Supply of LED display board in single colour size (6x4 ft) for CAAQMS inclusive of nominal wiring work, labour, etc. complete. Cost shall be also cover necessary cost towards (data and power cables) including its protection in PVC pipes, laying and supplying, Protection of display unit in rainy season, and birds droppings, hardware and software, etc. complete. Providing earthing pits and earthing as per manufacturers specification if required. The rate shall be inclusive of cost of all tools and plants, loading, unloading, transport, labour, forwarding and freight, etc. complete.	2	Number		
3	Erection of display board 02 nos on ISMB 100 mm, providing each (Total two foundations) foundation in concrete M20 of size 75x75x40cms with 9Nos. of 10mm tor steel both sides, providing MS bolts of 16mm dia 30cms. Long to hold supporting structure with base plate of 8mm thickness of size 40x40cms. ISMB also shall be with base plate of 8mm thickness of size 40x40cms. Bracing shall be provided of ISMB 100mm at 1.5m level from foundation top and also at top and bottom level of display unit, welding, fixing at location, cost of fabrication, grinding, painting with two coats of enamel paint over a coat of zinc chromate primer. All labour, material, tools & plant, etc. complete. (Height of display board upto 3.0 m from pedestal top)	1	LUMP SUM		

Item No.	Description	Quantity	Unit	Rate in Figures and Words	Amount Rs.
4	<p>Supply of AAQMS Analyzers for existing Continuous air monitoring station at the Port Institute consisting of the following units (i) SO2 Analyzer -Model T100 make: Teledyne or equivalent based on UV-Fluorescence principle for measurement range 0-50 ppb to 0-20 ppm Ambient Zero and Ambient span. (ii) NOx Analyzer-Model T200 make: Teledyne or equivalent based on chemiluminescence detection principle, ranges: 0-50 ppb to 20 ppm, Ambient Zero and Ambient Span. (iii) Calibrator & Zero Air Unit (iv) Cal. Gas cylinders with regulators. 10 ltr water capacity Aluminium cylinder for SO2, 10 ltr water capacity aluminium cylinder for NOx. (v) 19" rack with power distribution arrangement, tubings, Rack ears and handles, teflon filter kits and other misc. hardware. (vi) Gas Sampling System: Sampling hood arrangement with SS hood, Teflon manifold & moisture trap scrubber set. Providing earthing pits and earthing as per manufacturers specification if required. All labour, tools & plants, forwarding & freight, packing, transportation, loading/unloading, duties & taxes, etc. complete including providing all consumables as per compatibility based on manufacturers specification for 1 year. Cost of regular maintenance of stations during free maintenance period. Sampling & reporting of monitored data as per GSPCB/CPCB norms. (All cutting of holes/openings, finishing in the room for</p>	1	Number		

	mounting sample handling hoods is in tenderers scope). The rate shall be inclusive of cost of all tools and plants, loading, unloading, transport, labour, etc. complete.				
5	Supervision of Installation, testing & commissioning charges for Item No. 1 & 4 above. The rate shall be inclusive of cost of all tools and plants, loading, unloading, transport, labour, etc. complete.	1	LUMP SUM		
6	Providing & Installation of New Ambient Air Quality Analyzers at different locations to monitor PM 10, PM 2.5, SO2, NOx consisting of the following units including Housing: (i) Heavy Duty Blower Flow Rate Sturdy Aluminium cabinet to house blower, filter assembly, time totalizer, programmable timer, Flow Controller & Flow Measurement device Respirable Dust Sampler with almost noiseless imported induction motor driven blower & Electronic Feedback Flow Controller (ii) Fine Particulate Sampler based on designs standardized by US-EPA (iii) Thermo Electrically Cooled Gaseous Sampling Attachment. (Detailed specification provided separately). Providing earthing pits and earthing as per manufacturers specification if required. All labour, consumables, sampling (one year period), analysis, reporting of monitored data as per GSPCB norms tools & plants, forwarding & freight, packing, transportation, loading/unloading, duties & taxes, etc. complete. (All cutting of holes/openings & finishing in the room for mounting sample handling hoods is in tenderers scope if applicable. M. S. Stands for placing equipments will be provided by the Port free of cost). (One set consists of	4	Sets		

	PM10, PM2.5, SO2 and NOx analyzers)				
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Item No.	Description	Quantity	Unit	Rate in Figures and Words	Amount Rs.
7	<p>Supply, Installation, Testing and commissioning of 5.5 KVA Offline UPS with 4 hours backup for the new CAAQMS including taxes Brand of Inverter: APC/UNILINE/Sukam/Microtek Brand of Batteries: Exide/Amaron. Suitable 2 Nos. MS stands to be provided for mounting the (i) battery in 2 tier (ii) UPS. Providing earthing pits and earthing as per manufacturers specification if required. The rate shall be inclusive of cost of all tools and plants, loading, unloading, wiring from source provided at the station, transport, labour, etc. complete.</p>	1	Number		
8	<p>Supply, installation, testing & commissioning of Air Conditioners (split type), 3 star energy efficiency, 1.5 tonne. Brand of AC: Llyod, Voltas, Blue Star brand inclusive of automatic changeover circuit to run both ACs alternatively, 01 Nos stabilizer of V guard or Everest brand. All labour, materials, tools & plant, taxes, transportation, placing, etc. complete.</p>	2	Number		

Item No.	Description	Quantity	Unit	Rate in Figures and Words	Amount Rs.
9	<p>Supply & installation of FRP Porta cabin of size 3.0 x 3.0 m x 2.4 m (LxBxH) of 3.0 mm thickness outer side, 3.00 mm thickness inner side, 30 mm wall thickness both side finish, including transportation, placing/fixing on site with necessary fixtures as per manufacturers specification, loading/unloading, one No of MS ladder of height 3.0m (50x50x5mm angles as main frame & 25x10 mm as rungs, width 0.40 m) fixed to porta cabin for roof top access. Porta cabin shall be kept on platform 30cms above adjacent ground level. Platform shall have C. C. block masonry in CM(1:5) along periphery 30cms below ground level, PCC (1:3:6) 10cms. thick and laterite rubble soling 20cms. Thick, plastering CM (1:5) 15mm thick in single coat. Rate shall be inclusive of excavation, soling, PCC, CC block masonry, plastering, etc. complete. All labour, materials, tools & plants, taxes, transportation, etc. complete.</p>	2	Number		
10	<p>Supply, Erection, Testing and Commissioning of wall mounted LT Main Distribution panel made up of 2mm thick CRCA sheet with 50 micron thick powder coating and neoprene gasket conforming to IS 54 with inbuilt :</p> <p>i) Four Pole, 440V, 100A incoming MCCB - 1no.,</p>				

	ii) Single Pole, 20Amps MCBs- 2nos. (For AC & one spare) iii) Single Pole, 15Amps MCB - 1nos. (For Inverter) iv) Analog Voltmeter - 1no. v) Analog Ammeter - 1no. vi) Voltmeter selector switch -1No. vii) Ammeter selector switch - 1no. viii) Three phase digital Energy Meter, MRT tested - 1No. ix) Indication lamps for all three phases. including termination and glanding of 4CX 16Sq. mm Aluminium armoured incoming cable and proper termination of outgoing circuits. Providing earthing pits and earthing as per requirement. All tools, plant, labour and materials, etc. complete.	2	Number		
	TOTAL				

Total amount of in Figures Rs.

Total amount in words Rupees

It is certified that I/ we have written the unit rates in figures and words

Name and Address of the Tenderer

SIGNATURE OF TENDERER

Note :Tenderers are advised to go through the Schedule of Quantities and Rates and sequence of work before submission of the tender. They are also advised to inspect the site, ascertain for themselves the nature and the extent of work involved and also obtain all clarifications they may require before filling in the tender.