

**MORMUGAO PORT AUTHORITY**  
**ENGINEERING MECHANICAL DEPARTMENT**

**Name of the tender: “Augmentation of firefighting facilities at berth no.8 of Mormugao Port Authority on turnkey basis”.**

**TENDER NO. : CME / PD / II / 2024**

**ADDENDUM - I**

**CORRECTIONS / ADDITIONS / DELETIONS, ETC...**

**[Total Number of Pages: 13]**

NOTE :

1. This “Addendum” should be read in conjunction with Tender Document reference no. CME / PD / II / 2024
2. All other terms and conditions of the Tender Document will remain unchanged.
3. One set of this “Addendum”, along with one set of Tender Document, shall be submitted along with the Tender (in Cover-I), duly signed and stamped, as token of acceptance.

**REPLY TO PREBID QUERIES RAISED BY THE BIDDERS****Name of the tender: Augmentation of firefighting facilities at berth no.8 of Mormugao Port Authority on turnkey basis****Tender No.: CME/PD/II/2024**

<b>Sr. No.</b>	<b>Page No.</b>	<b>Clause No.</b>	<b>Tender Condition</b>	<b>Bidder Queries</b>	<b>Clarification</b>
1	32/211	3.80 GCC	TERMS OF PAYMENT	We request you to kindly accept material/ equipment supply milestone payments on prorata basis to aid in cash flow for execution of the project.	Tender condition prevails
2	142/211	Sr. No. 1 to 9 Table - A	450 NB, Sch.40, ERW, IS 3589 with Poly glass coating with paint & fittings.	Referring to the pipe specification it looks mixed one, however we are going ahead with Pipe sizes 150 NB and below confirming to IS 1239 and pipe 200 NB and above conforming to IS 3589 pipes. Kindly confirm. Kindly provide thickness of pipes for size 200 NB & above.	<ul style="list-style-type: none"> <li>• Heavy Class Pipe sizes 150NB and below confirming to IS 1239.</li> <li>• Heavy Class Pipe sizes 200NB and above confirming to IS 3589.</li> <li>• Heavy Class Pipe thickness of 200NB and above shall be min. 6.35 mm.</li> </ul>
3	149/211	Sr. No. 11 Table - E	20Mtrs height MS Tower Structure For Tower Monitor TW-1 & 2 with access Ladders (Ladder shall be staircase type). Cost including civil foundation works. The tower shall be applied with fire paint UL listed for 2hr fire rating, Min. 7mm thick. The cost shall also include Pile/Open/Raft Foundation as suitable for the given soil load bearing capacity. Price for Civil including the following work. Excavation and back filling, Civil foundation and operating platform and strainer case with hand rail	As per OISD 164 Clause 4.2.1 call for fireproofing to be minimum 1.8 meters and API API 2218 (3rd Edition) requires fire proofing to be carried out upto 6 meters of tower monitor structure height. However, tender calls for full 20 meters height in this regard kindly confirm whether we have to follow OISD, API standard or tender requirements.	Tender condition prevails. Fire proofing shall be carried out for entire tower structure.

Sr. No.	Page No.	Clause No.	Tender Condition	Bidder Queries	Clarification
4	149/211	Sr. No. 3 Table - E	Supply and Installation of '300Mbps or more wireless bridge for LAN and Telephone connectivity' for connecting MPA head office building to firefighting pump house building, remotely, including supply of POE surge Suppressor, STP Cat-6 cables, 12Mtrs MAT of triangular GI pipes, Network 9U rack, 24 Port POE based switch, Single ox i/o boxes, UTP cables and all consumables to complete the works.	<p>1. Kindly clarify bandwidth required is 300 mpbs or 30 mbps. As point to point wireless bridge for 300 mbps is not readily available.</p> <p>2. Kindly inform the bandwidth that should be provided for the following.</p> <p>a) CCTV b) LAN connectivity c) Telephone connectivity.</p> <p>3. Please provide details of the existing free wireless bandwidth available between MPA building and railway signal building, also the frequency in which it is currently operating.</p> <p>4. Power supply point for CCTV Screen in the control room of MPA head office building shall be provided by client.</p>	<p>1. Bandwidth required is 2 x100mbps.</p> <p>2. a) CCTV band width required is minimum 30 Mbps. b) LAN connectivity bandwidth required is minimum 100Mbps. c) Telephone connectivity minimum 10Mbps.</p> <p>3. Contractor to provide 2 pairs of wireless bridges (with required mounting arrangement to get the line of sight) between MPA A. O. building and Pump house building. The wireless devices should have data rate of 1Gbps in the frequency range of 3.9Ghz to 5.8Ghz</p> <p>4. Agreed</p>
5	9/211	1.2.2 SALIENT FEATURES OF THE PROJECT	The firefighting pumps and other equipment were installed in the year 1996. Subsequently, repair/refurbishment/replacement works were carried out in the year 2018. Mormugao Port Authority (MPA) has decided to augment existing firefighting facility at Berth no. 8 of Mormugao Port to meet latest edition requirements of OISD-156/PESO, on Turnkey basis. The Project for augmentation of existing firefighting facilities at Berth No. 8 of MPA involves 'Design, Engineering, Supply, Installation, Testing and Commissioning of the firefighting facilities on turnkey basis to handle POL products, Edible Oil, Ammonia, Oil & Chemicals and to make the firefighting system OISD-156 / PESO Compliant' (the "Project").	Tender calls for Lumpsum turnkey basis contract as well as mentioned with BOQ - items with quantities and which shall be invariably supplied irrespective of actual BOM derived after approval of engineering documents i.e. drawings and hydraulic calculation. In this regard we request you to delete this statement mentioned in tender as " Note: The Contractor shall invariably supply all the quantities indicated in Bill of Quantities (BOQ) and any other additional required quantities of labour, materials and equipment as necessary which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents as being furnished herewith, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, without any extra cost to MPA."	Tender condition prevails.

Sr. No.	Page No.	Clause No.	Tender Condition	Bidder Queries	Clarification
6	55/211	5.3.2 TECHNICAL SPECIFICATIONS	The firefighting system at berth no:8 of MPA was commissioned in 1996 with some repair/refurbishment/replacement works in 2018. However, there is severe corrosion of the structure and reduction in the efficiency of the equipment like pumps, engines, etc. MPA therefore intends to augment the firefighting facility for which Contractor shall carry out the Design, Engineering, Supply, Installation, Testing and Commissioning of the new system, to meet the latest edition of OISD-156/OISD-149/PESO guidelines & requirements. Accordingly, an indicative design layout drawings of fire hydrant and monitor system (FLS-E6-MPA-FHMS-PID-0001) and PI&D for fire water pump house (FLS-E6-MPA-FWPH-PID- 0001) are attached herewith.	Bidder understand that the contract is turnkey and the tender design layout & P&ID in terms of pump sizing, pipe sizing, equipment sizing is indicative. Hence bidder has to design the system in compliance to OISD 156 and bidder is allowed for sizing the pipe and equipment based on the hydraulic calculation at actual. Please confirm our understanding.	Tender condition prevails.  The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines. Further, contractor has to invariably supply all the quantities indicated in Bill of Quantities. However, in case of any other additional requirements which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, shall be carried out by the contractor, without any extra cost to MPA.
7	56/211	5.3.12 TECHNICAL SPECIFICATIONS	Contractor shall execute the work of Augmentation of Fire Fighting Facilities at MPA Berth No. 8 including Mechanical, Civil and electrical works on Turnkey basis. The indicative Design and layout drawings of fire hydrant and monitor system (FLS-E6-MPA-FHMSPID-0001) and PI&D for fire water pump house (FLS-E6-MPA-FWPH-PID-0001),prepared by the consultant is attached herewith for perusal.		

Sr. No.	Page No.	Clause No.	Tender Condition	Bidder Queries	Clarification
8	63/211	5.5.1 TECHNICAL SPECIFICATIONS	<p><b>MAIN FIRE WATER PUMPS:</b> The contractor shall carry out design and supply suitable pumps of reputed make for fire protection service with specific drives, controls, and pump accessory items. It is the contractor's responsibility to obtain necessary approval for the pump and control. The pumping equipment shall be installed as per OISD 156 norms, latest edition for the installation of End suction Fire Pumps. Also, all the Pumps inside shall be coated with corrosion protection coatings and Foot valves shall have Ceramic coating to avoid marine growth. The selected pump shall be capable of meeting the specifications.</p>	As pumps MOC is suitable for Sea Water application, bidder understand that the corrosion protection coating for pump is not required. Kindly confirm.	Tender condition prevails.
9	64/211	5.5.1 TECHNICAL SPECIFICATIONS	r) Independent priming tank of 2000 liters each shall be provided for each pump.	<p>1. Referring to the P&amp;ID for Fire Water Pump House FLS-E6-MPA-FWPH- PID-01, Notes : 11) The priming tank capacity shall be at least 3 times that of suction pipe volume from the pump to the foot valve subject to minimum of 2000 liters. Considering the length of suction pipe length of 6 meters, capacity of 2000 liters is not sufficient.</p> <p>2. Accordingly, bidder has to consider higher capacity tank. Also, confirm if the space for the required tank capacity is available.</p> <p>3. MOC of priming tank will be plastic.</p> <p>4. MOC of piping upto pump will be PVC. Please confirm above points.</p>	<p>1 &amp; 2 The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines. Further, contractor has to invariably supply all the quantities indicated in Bill of Quantities. However, in case of any other additional requirements which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, shall be carried out by the contractor, without any extra cost to MPA.</p> <p>3. MOC of Priming tank PVC.</p> <p>4. MOC of piping between pump and Tank is CPVC/UPVC.</p>

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10	64/211	5.5.1 TECHNICAL SPECIFICATIONS	s) Subject to area classification Flame Proof materials to be selected. The Consumables, and accessories with in the pump house shall be of flameproof and suitable for gas group IIA/IIB.	Referring to BOQ, B Fire Pump room-Mechanical & Electrical works. (2) It is mentioned that Jockey Pump motor shall be non-flameproof and (13) It is mentioned that MCC panel is Non flameproof. Please note that the referred BOQ reference and clause 5.5.1 is contradicting the area classification for pump room. Please confirm if the pump room requires flameproof equipment and accessories.	Tender condition prevails. The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines.
11	64/211	5.5.1 TECHNICAL SPECIFICATIONS	u) The pump capacities and head provided in BOQ is tentative. Bidder to validate the same as per OISD guidelines and select the flow and head of the pumps based on hydraulic calculations. This design calculation shall be submitted to the consultant for approval. A document proof to be submitted.	As the firefighting system is to be designed according to OISD 156, and the maximum ship size is 49999 DWT. For Fire Water Design Requirement, the applicable table and clause specified in OISD 156 is Table 1 S. No.(3). Hence, the maximum system demand is 844.80 m3/hr as per OISD 156. In addition, it is mentioned in the P&ID (FLS-E6-MPA- FHMS-PID-01) that an additional spray system demand of 2040 lpm is to be considered in the pumping capacity, which will result in a total pump capacity of 987 m3/hr and head as per hydraulic calculation. However, tender calls for capacity as 1320 m3/hr and head 14 bar in this regard, kindly clarify whether we have to consider capacity and head as per hydraulic calculation or as mentioned in tender.	The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines. Further, contractor has to invariably supply all the quantities indicated in Bill of Quantities. However, in case of any other additional requirements which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, shall be carried out by the contractor, without any extra cost to MPA.
12	64/211	5.5.2 TECHNICAL SPECIFICATIONS	SPECIFICATION OF FIRE WATER PUMPS (FOR SEA WATER APPLICATION ONLY) End suction centrifugal type (ENGINE DRIVEN)	Based on the flow rate and head requirement of pump mentioned in the tender, End Suction pumps for the duty point mention will not be available in market. Hence Bidder is required to consider Horizontal Split case pumps.	Tender condition prevails.
13	64/211	5.5.2 TECHNICAL SPECIFICATIONS	Stage: Multistage	Bidder understand that single stage pump can provide required flow and pressure. Hence the same can be considered. Please confirm.	Tender condition prevails.

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14	68/211	5.5.7 TECHNICAL SPECIFICATIONS	f) Other accessories / Equipment's which shall be provided are: - ii) Directional double acting spool type valve with 7kg/cm <sup>2</sup> maximum operating pressure. iii) Relief valve at 7kg/ cm <sup>2</sup> . iv) Power pack tubing of copper/SS. v) 10 mm male hydraulic connection with 6 nos. 10 x 1 M long, Teflon tube with SS braid, tested at 70kg/cm <sup>2</sup> .	We are providing monitors as per UL listing and same shall carry the component as per vendor listings.	Tender condition prevails.
15	69/211	5.5.7 TECHNICAL SPECIFICATIONS	g) Remote Control Station for Tower Monitor ix) Hydraulic oil supply is in scope of contractor xi) Adequate Lines of tubing for interconnection from the monitor to hydraulic power pack to be supplied, (i.e., if kept more than 1.5 meter away from the monitor)		
16	70/211	5.5.8 TECHNICAL SPECIFICATIONS	SPECIFICATION OF TOWER MOUNTED MONITORS Accessories: Electrical /electro hydraulic equipment's for horizontal and vertical rotation.		
17	75-76/ 211	5.5.18 5.5.19 5.5.20 5.5.21 TECHNICAL SPECIFICATIONS	Valves	The Pump having working pressure of 14 Bar. In case of churning / shut off the pressure will reach to pump's 110% to 140% rated head i.e. 15.4 Bar to 19.6 Bar. The PN 16 Valve can withstand max. 16 Bar pressure only. Kindly confirm the rating of the valves.	Tender conditions Prevail.  The shut off pressure for pump is short time during the testing of pumps inside the pump room. The valves shall be designed as per API standards with Class 150.

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18	76-77/ 211	5.5.23 TECHNICAL SPECIFICATIONS	Foot valves shall be installed below the sea water as per pumps PID. The foot valves shall be of Flange end type with internal ceramic coating, Duplex Stainless Steel (ASTM A890 GR. 5A-CE3MN), Lift type Foot Valve having Rubber Molded Disc Seat for 100% leak proof design with SS Strainer, Conforming to IS: 4038 P.N.0.2. Flange ends drilled to ANSI B 16.5. The Valve Hydro tested to 06 Kg/Cm2 for Body & 02 Kg/Cm2 for Seat. Existing suction depth shall be maintained.	Please clarify the purpose of ceramic coating as MOC of valve is duplex and the same is suitable for sea water application. Kindly confirm if the same can be avoided.	Tender conditions Prevails.
19	85/211	5.5.36 TECHNICAL SPECIFICATIONS	ALARM VALVE: MOC : Suitable for Sea Water Application	Alarm valves are available in Ductile Iron and Cast Iron MOC. Kindly confirm MOC to be considered.	Tender conditions Prevails.
20	101/211	5.5.46.22 TECHNICAL SPECIFICATIONS	i. All insulated copper, multi strand, ATC, FRLS, FS, Twisted Pair, mylar tape Shielded Armoured / Unarmoured cables, over all outer sheath shall be RED in colour, shall be 650V grades and shall generally confirm to IS – 8130, IS – 5831 & IS –694 and meet the signal cabling requirement of the system manufacturer. The cable conductor shall be of 48/ 0.2 mm size with 1.64 mm dia. with at least 10- 12 Twist per meter.	We understand that FRLS cabling need to use in this project. Kindly confirm our understanding.	Bidder may refer cable specifications provided in the Tender document, for power and communication cables. The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines
21	94/211	5.5.46.7 TECHNICAL SPECIFICATIONS	o) Public Address System (PA system): Public address system industrial with two-way communication at 4 places shall be provided. (1 – Control Room, 2 – Engine Room, 3 & 4 at Berth). The PA system must use for marine applications, weatherproof	1. Please clarify if PA system required for IP based or Analog.  2. Any interfacing required with Fire Alarm System  3. Bidder understand that the equipment in control room and engine room will be non-flameproof & equipment in Berth will be flameproof. Please confirm our understanding.  4. Kindly share the technical specification or datasheet for the PA system.	1. PA system shall be Analog system  2. Not required  3. The bidder may refer tender terms & conditions. The contractor shall comply with latest OISD-156 guidelines.  4. Contractor to design the Analog PA system as per latest OISD 156 guidelines and submit for approval.

Sr. No.	Page No.	Clause No.	Tender Condition	Bidder Queries	Clarification
22	-	FLS-E6-MPA-FHMS-PID-01 (Layout of Fire Hydrant and monitor system)		<p>1. As per the P&amp;ID we are considering operation of water curtain will be by manual valve only.</p> <p>2. We assumed that the water curtain to be installed at only one level (1st floor of the pump room)</p>	<p>1. Tender conditions Prevails.</p> <p>2. The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines.</p>
23	-	FLS-E6-MPA-FHMS-PID-01 (Layout of Fire Hydrant and monitor system)		As per OISD the control room shall be 100 m from the hazardous area. However as per the drawing the control room is 91.39 m from the manifold area. During PESO approval any modification or any additional requirement suggest by the PESO the same shall be paid as extra items.	The contractor shall design the firefighting system, taking into consideration the existing Port facility and obtain PESO approvals for the same, at his own cost.
24	55/211	5.3.3	Before execution of the subject work, the Contractor shall obtain preliminary approval from PESO	Ok. However, any deviation from contract scope of work shall be paid as extra.	Tender Conditions Prevails. The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines. Further, contractor has to invariably supply all the quantities indicated in Bill of Quantities. However, in case of any other additional requirements which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, shall be carried out by the contractor, without any extra cost to MPA.

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25	56/211	5.3.10 TECHNICAL SPECIFICATIONS	Any part or whole of the system which require the approval of the PESO, or any other statutory body, should be arranged by the contractor at his own cost. All required Liaison work in relation to subject scope, including getting the PESO approvals shall be contractor's scope. All the certificates/licenses of the statutory authorities shall be however in the name of MPA. The total system shall be designed as per OISD (Oil Industry Safety Directorate) 156, 149 or other applicable guidelines of latest edition as per PESO requirements	Official Fees towards statutory approvals shall be paid by the client.	Tender Conditions Prevails. However, if it is mandatory to release the payment towards Statutory approval by MPA, then the amount shall be paid by MPA and subsequently deducted from the contractor's bill.
26	59/211	5.3.27 TECHNICAL SPECIFICATIONS	(3) Provide the Remote operated tower water cum foam monitors with construction of 20Mtrs height steel tower to reach the throw to cover manifold area of the deck of the largest tanker and loading arm in the lightest condition at high tides at the jetty.	Tower Monitor Steel structure height shall be designed and finalized during execution as per OISD 156. Please confirm.	The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines. Further, contractor has to invariably supply all the quantities indicated in Bill of Quantities. However, in case of any other additional requirements which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, shall be carried out by the contractor, without any extra cost to MPA.
27	186/211	ANNEXURE – IV (C) (Specifications of existing equipment installed inside the pump house)	Jumbo Curtain Nozzles : 6 nos. Jumbo curtain nozzles are with motorized valve and orifice plate, which are capable to produce dense water curtain of 20-meter radius, through 180 degree angle in vertical plane discharging at 250 LPM at an inlet pressure of 7 Kg/cm <sup>2</sup> .	As per OISD 156 Table No. 1 Tanker berth at a wharf or Jetty Handling ships of 20,000 tonnes and above but less than 50,000 tonnes. Two nos. Jumbo curtain nozzles of capacity 3000 lpm (180 M <sup>3</sup> / hr)) each is to be considered.	Tender Conditions Prevails.

<b>Sr. No.</b>	<b>Page No.</b>	<b>Clause No.</b>	<b>Tender Condition</b>	<b>Bidder Queries</b>	<b>Clarification</b>
28	60/211	5.3.27 TECHNICAL SPECIFICATIONS	(8) Provide isolation valve at all the existing and new loop junction.	We understand existing system to be removed, hence isolation valve not required.	All existing valves shall be replaced with new isolation valves. Further, new isolation valves to be provided wherever required (new loop junctions, etc.), to meet the latest OISD 156 guidelines.
29	60/211	5.3.27 TECHNICAL SPECIFICATIONS	(11) Design and provide internal hydrant point along with hose box and hose reel at each floor of pump house building.	Ground floor will be covered by External hydrant point, hence Internal Hydrant and Hose reel not required at ground floor also. Please confirm our understanding	Tender Conditions Prevails.
30	61/211	5.3.27 TECHNICAL SPECIFICATIONS	(24) Design and provide Foam diesel pumps (Main and Standby) with 600 LPM capacity and foam lines, valves, cables & fittings, etc.	As per OISD 156, Table 4, "Tanker Berth at a wharf or jetty handling ships of 20,000 tonnes & above but less than 50,000 tonnes dead weight" Total foam requirement is 6750 liters, Hence foam pump size shall be 405 lpm. Kindly share the design basis for foam pump capacity.	The Contractor shall design firefighting system, so as to comply with latest OISD-156 guidelines. Further, contractor has to invariably supply all the quantities indicated in Bill of Quantities. However, in case of any other additional requirements which may not have been specifically mentioned herein or installed or noted in the tender Drawings/Documents, but which are necessary and customary to be performed under this contract, for satisfactory commissioning and operation of fire protection system, shall be carried out by the contractor, without any extra cost to MPA.

Sr. No.	Page No.	Clause No.	Tender Condition	Bidder Queries	Clarification
31	-	-		<p>In the subject tender no: CME/PD/II/2024, we, Discern Engineering Pvt. Ltd. are very keen to participate and for that reason we tried to participate via Joint Venture with WPIL a pump manufacturer to match the PQ criteria. Although we will be the sole responsible fire contractor in this joint venture and WPIL will only supply pumps of required capacity. But unfortunately as vertical turbine type of pump is not accepted by the purchaser they (WPIL) are not in a position to venture with us.</p> <p>We could take pumps from other manufacturer of required specification for this project and could do the firefighting job successfully as we have the required set up and infrastructure, if you could accept our own credential which is 3.59 cr. at IDCO. Apart from that currently we are executing various projects with BHEL-Hyderabad, BHE-TBG, NTPC, PGCIL, IOCL, NHPC etc. If you require we may submit those order copies also.</p> <p>It is our humble request to accept it and kindly allow us to participate in the subject tender.</p>	Tender Conditions Prevails.

**AMENDMENT TO CLAUSES**

**Name of the tender: Augmentation of firefighting facilities at berth no.8 of Mormugao Port Authority on turnkey basis  
Tender No.: CME / PD / II / 2024**

<b>SR. NO.</b>	<b>CLAUSE NO.</b>	<b>PAGE NO.</b>	<b>TENDER CONDITION</b>	<b>AMENDMENT</b>
1	5.5.7 (a)	67	Long Range Water cum Foam Tower Monitors in SS316 construction UL Listed shall be Tower Mounted with fixtures, clamps, SS Fasteners etc. The Long Range water cum foam monitor shall be suitable to discharge 3000 LPM of water at a horizontal range of 70 m and vertical range 30-40 m and 3000 LPM foam water solution with a horizontal throw range of 65 m and vertical range 30-40m. The existing system is of 3000 lpm capacity. However, as per the requirements of OISD-156/PESO, if it is required to design the system for more than 3000 lpm, then the bidder shall design and provide the same, at his own cost. The electrical/electro-hydraulic equipment's for horizontal and vertical rotation, with base operation control. The operation of the tower monitor shall be remote-controlled, electrically operated from the control tower as well as from the Local flameproof Control panel.	Long Range Water cum Foam Tower Monitors in SS316 construction UL Listed shall be Tower Mounted with fixtures, clamps, SS Fasteners etc. The Long Range water cum foam monitor shall be suitable to discharge 3000 LPM of water at a horizontal range of 70 m and vertical range 30-40 m and 3000 LPM foam water solution with a horizontal throw range of 65 m and vertical range 30-40m. The existing system is of 3000 lpm capacity. However, as per the requirements of latest OISD-156/PESO, if it is required to design the system for more than 3000 lpm, then the bidder shall design and provide the same, at his own cost. The electrical/electro-hydraulic equipment's for horizontal and vertical rotation, with base operation control shall be provided by the contractor. The operation of the tower monitor shall be remote-controlled, electrically operated from the control tower as well as from the Local flameproof Control panel.
2	-	-	Mandate Form -MPA	Mandate Form is attached herewith.

**ELECTRONIC PAYMENT SYSTEM MANDATE FORM**

The details for processing the payment through NEFT/RTGS/Net Banking as below:-

1	Name of the Beneficiary	<b>MORMUGAO PORT AUTHORITY</b>
2	Address of the Beneficiary with PIN Code	<b>Administrative Office Building, Headland Sada, Goa – 403804.</b>
3	PAN Number	<b>AAALM0293P</b>
4	Name & Mobile Number of responsible person	<b>Sanjay Kulkarni, (Chief Cashier) 9765617087, 2594417</b>
5	Name of the Bank & Branch	<b>STATE BANK OF INDIA, Mormugao Harbour Branch</b>
6	Bank Telephone Number	<b>0832-2520212</b>
7	Address of the Bank	<b>STATE BANK OF INDIA, Mormugao Harbour, Goa-403803.</b>
8	MICR Code of the Bank	<b>403002024</b>
9	IFSC Code No.	<b>SBIN0002164</b>
10	Type of Account and Branch Code	<b>Current Account / Branch Code:-002164</b>
11	Account number of the Bank	<b>10438017048 (MPA General Account)</b>
12	Beneficiary E-mail ID	<b>cashmpt@mptgoa.gov.in</b>