

**COCHIN PORT TRUST**

Deputy Conservator's Office  
Cochin Port Trust  
W/Island , Cochin – 682009, KERALA  
Tele: 91-0484-2666417/0484-258-2521  
website: [www.cochinport.gov.in](http://www.cochinport.gov.in)  
Email: sajeev.va@cochinport.gov.in



No.MD/DM/UPGRADATION FFS/OTB/2022

Date: 11-02-2022

**NOTICE INVITING BUDGETARY OFFER- REPLIES TO THE QUERIES**

Sub: Request of Cochin Port Trust for Budgetary offer for upgradation of Fire Fighting Facilities of Oil Tanker Berths (NTB & STB) to OISD STANDARD 156 OF 2017 - Reg,

Ref:- This Office Notice Inviting Budgetary Offer of even number dated 27-01-2022.

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Please refer to the above. Replies to the queries received from various firms pertaining to the subject work is enclosed as Annexure-I. Based on the feed backs received, certain modifications in the Scope of Work has been made. Accordingly, a modified Bill of Quantities (BOQ) is attached as Annexure-II. A lay out showing the key dimensions of the Terminal is also attached as requested.

It is requested that the Budgetary quotes may be furnished as per the modified BOQ. The last date and time for submission of budgetary offers is hereby extended upto **17:00 hours on 17-02-2022.**

**Encl: Annexure-I & II**

Sd/-

**SUPDTG.ENGINEER(M)  
TANKER TERMINALS  
COCHIN PORT TRUST**

**ANNEXURE-I**

**REPLIES TO THE QUERIES IN RESPONSE TO COPT's REQUEST NOTICE  
No.MD/DM/UPGRADATION FFS/OTB/2022 DATED 27-01-2022 FOR BUDGETARY  
OFFER THE WORK OF UP-GRADADATION OF FIRE FIGHTING SYSTEM OF NTB  
& STB TO OISD STANDARD 156 OF 2017**

SL No.	Page No.	Heading & Clause No.	Clarification Sought / Change Suggested	CoPT's reply
1	--	General	<p>We understand that this is Design built Lump Sum project where Bidder need to Design the system in line with OISD - 156 (Edition 2017) requirement and to meet the project requirement given in the tender document.</p> <p>Kindly confirm our understanding.</p>	<p>The bidders are required to design the fire waterlines/fire fighting system considering the existing items that are continued to be maintained and also the additional items to be installed as described in the Notice Inviting Budgetary offer, in accordance with OISD - 156 (Edition 2017) requirement and should also meet the scope of work &amp; Technical specification Before commencing the work, the design of Fire waterlines/FF System shall be approved by any one of the Competent agency viz. any one of the IITs in India/EIL at the cost of the Contractor. Design duly approved as above shall be submitted for verification of CoPT.</p> <p>While inviting open tenders, Evaluation of the Price Bids shall be based on the rates quoted as per the BOQ.</p> <p>If it become necessary to use items which are not existing in the quoted BOQ, rate payable shall be determined by the methods described in the GCC of CoPT.</p>

2	3 4	<p><b>Existing Facilities,</b></p> <p><b>List of major additional Items to be provided (3 &amp; 4)</b></p> <p><b>Line modification repairs/replacement works</b></p>	<p>Kindly share the readable layout of Existing Pump House which showing all the dimensions.</p>	<p>A layout of Pump House showing the extension required to be constructed for accommodating the additional Fire Pump and Jockey Pump is attached. Additional area of 4.M X 5.38 M for accommodating new Pumps and 1.5 M X8 M for passage are required. Detailed specification and scope of work for the construction will be incorporated while inviting open tenders. The bidders are <u>not required to</u> indicate the rates for this component in the <u>budgetary offer</u>.</p>
3	3	<p>Existing Facilities</p> <p>Fire Waterlines and Foam pipe line with education (details as per the lay out drawing attached)</p>	<p>Kindly share the readable layout of Existing Firewater and Foam Piping which showing all the dimensions.</p>	<p>A lay out is attached for reference.</p>
4	4	<p>List of major additional Items to be provided.,</p> <p>Clause (1)</p> <p>The area of existing Fire Pump House needs to be extended for accommodating the new Fire Pump and Jockey Pump as per the lay out attached.</p>	<p>Kindly share the readable layout of Existing Pump House which showing all the dimensions.</p>	<p>Please refer to reply against Sl.No.(2)</p>
5	5	<p>Installation of Fire pump, Clause 1.2</p> <p>(i) Supply of one number diesel engine driven Vertical Turbine Fire pump of capacity 500M<sup>3</sup>/ Hr suitable for sea water intake and install the same on the foundation of the newly built structure.</p>	<p>Kindly share the following mentioned details for selection of V.T. Pumps</p> <ul style="list-style-type: none"> <li>- Low Water Level</li> <li>- Sea Bed Level</li> <li>- Maximum Wave Height</li> <li>- Pump Foundation Level</li> </ul>	<p>Maximum Wave Height: As the Terminal is located in the inner harbour, wave height is negligible.</p> <p>Low Water Level: (+) 0.30 M CD</p> <p>Depth below Pump House : (-) 6.9 M from Pump Foundation.</p> <p>Pump Foundation level: (+) 0.3 M from Pump House Floor level.</p> <p>Pump House Floor Level: (+) 0.35 M CD</p>

6	5	<p>Installation of Fire pump, Clause 1.2</p> <p>(iii) New 10" Fire pump delivery line of 300 # has to be internally cement lined, provided on proper supports</p>	<p>As per OISD -156 (Edition), the polyglass coating is also acceptable. Hence, we are requesting you to consider the polyglass coating (corrocoat) for internal coating of pipes / valves. Kindly accept our request.</p>	<p>Internal Polyglass coating as specified in OISD -156 (Edition) is acceptable brief description is given below:-</p> <p>Description: Two pack iso aliphatic polyester acrylic glassfake coating  Recommended DFT: 1000 micron  Colour: Off – White  Application: Spray/ Hand application  Spreading rate: 1.06 m2 / litre at 750 microns  <b>Warranty:</b> Bidder shall give 20 year warranty for poly glass coating.</p>
7	7	<p>Fire Alarm &amp; detection system, Clause 2.2</p> <p>(i) The gas detectors should be installed at Zone 1 of both berths to cover the full range of Zone 1.</p>	<p>Kindly share the Hazardous Area Classification Layout which showing Zones.</p>	<p>Four locations where the Gas Detectors are to be installed are indicated in the Lay out in Red Colour.</p>
8	7	<p>Fire Alarm &amp; detection system, Clause 2.2</p> <p>(iii) A smoke detection System has to be supplied and installed at Fire Control Room as per applicable standards and to be integrated to the Fire Alarm Panel.</p>	<p>Kindly share the Control Room dimensional layout with false ceiling / false flooring details (if any).</p>	<p>L 12 Ft. X B 11 Ft X H 10 Ft. No false ceiling and false flooring available.</p>

9	7	<p><b>Fire Alarm &amp; detection system, Clause 2.2</b></p> <p>(v) The work at NTB involves routing the cables through submarine conduits from NTB Jetty to Fire control room. The work at STB involves routing the cables through conduits from STB Jetty to Fire control room.</p>	<p>Kindly share the existing cable tray / cable rack / submarine conduits layout from where the conduit need to be laid.</p>	<p>Layout showing the locations and distances of both the jetties from the existing Fire Pump House is furnished. The Fire Control Room is located in the first floor of the Fire Pump House. The length of cabling required for the proposed Fire Alarm &amp; detection System can be worked out based on the distances marked in the layout. The existing conduits cannot be utilised for running the cables of the additional equipments /system. The bidders may consider the above aspects while arriving at the estimated cost of cabling.</p> <p>At end of Termination point of Fire Hydrant at the land side of NTB &amp; STB Jetties, exchange pits are located. 2 Nos. each Gas Detectors and IR Flame sensors are to be provided at both the exchange pits including Cabling. Accordingly total requirement of Gas Detectors will be 10 Nos. and IR Flame Sensors will be 12 Nos.</p>
10	7	<p><b>Fire Alarm &amp; detection system, Clause 2.2</b></p> <p>(vi) Present MCP alarm system at Fire Control Room has to be integrated to the new alarm panel.</p>	<p>Kindly provide the details of the Existing Fire Alarm System.</p>	<p>Existing Fire Alarm System (Make RAVEL- 4 ZONE RE- 700) consists of:</p> <ul style="list-style-type: none"> <li>(a) Break Glass MCPs (5 Nos. each at NTB and STB) with Hooter;</li> <li>(b) Talk-back System from Fire Alarm Control Panel Room to Fire Crew Rooms located at NTB and STB;</li> <li>(c) Public Address System (Make RAVEL) to pass information to the crew working at Jetty side.(existing PA system is not working and the renewal of the same is under the Scope of proposed up-gradation)</li> </ul>

11	9	<p><b>Line modification/repairs/replacement works at NTB (Clause 3.4)</b></p> <p>(iv) Two nos. existing defective actuator valves with Actuators in Tower monitor lines at NTB has to be replaced with Deluge Valves.</p> <p>(v) Two Nos. existing defective actuator of Foam line valve with actuator has to be replaced with new actuator.</p>	<p>Kindly share the size of the existing valve which need to be replaced.</p>	<p>(iv)Two nos., 6" existing defective actuator valves with Actuators in Tower monitor lines at NTB has to be replaced with Deluge Valves.</p> <p>(v)Two nos., 2" existing defective Foam line valve with actuator has to be replaced with new valve and actuator.</p>
12	11	<p><b>Line modification/repairs/replacement works at STB (Clause 4.3)</b></p> <p>(ii) Two nos. existing defective actuator valves with actuators in Tower monitor lines at STB has to be replaced with Deluge Valves.</p> <p>(iii) Two Nos. existing defective Foam line actuator valves with actuators has to be replaced with new ones.Two Nos. existing defective actuator of Foam line valve with actuator has to be replaced with new actuator</p>	<p>Kindly share the size of the existing valve which need to be replaced.</p>	<p>(ii) Two nos., 8" existing defective actuator valves with Actuators in Tower monitor lines at STB has to be replaced with Deluge Valves.</p> <p>(iii)Two nos., 2" existing defective Foam line valve with actuator has to be replaced with new valve and actuator.</p>

13	11	<p><b>Performance Testing of the Upgraded Fire Fighting System (Clause 5.1)</b></p> <p>Foam Compound and diesel required for testing and commissioning of the System will be supplied by Cochin Port Trust and cost of quantity consumed will be recovered from the Contractor's bill.</p>	<p>Kindly share the following details: -</p> <ol style="list-style-type: none"> <li>1. Rate of Diesel considered by CoPT</li> <li>2. Rate of Foam Compound considered by COPT</li> <li>3. Time / Duration need to consider for Testing of Hydrant / Monitor System</li> <li>4. Time / Duration need to consider for Testing of Foam System.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rate of Diesel : Rs.95/- per litre.</li> <li>2. Rate of Foam: Rs.120/- per litre.</li> <li>3. Hydrant System: 1 hr.</li> <li>4. Foam System: ½ Hr.</li> </ol>
14	12	<p><b>Performance Testing of the Upgraded Fire Fighting System - Clause 5.2 ( C )</b></p> <p>Tower Monitor Horizontal throw of water-Foam : 90 m (in still wind condition)</p>	<p>Maximum 60 mtr. horizontal throw of water in still wind condition will get for 750 GPM capacity Monitors.</p>	<p>Horizontal throw of water-Foam is corrected as :60 m (in still wind condition)</p>
15	13	<p><b>Testing and Commissioning- Clause 5.4 (4)</b></p> <p>Public address system needs to be tested.</p>	<p>As the details of this system is neither given in tender document nor in Tender BOQ, we understand that this is not in Bidder scope.</p> <p>If P.A. System testing will be in Bidder scope, then please share the details of the system.</p>	<p>Existing Fire Alarm System (Make RAVEL- 4 ZONE RE- 700) consists of:</p> <ol style="list-style-type: none"> <li>(a) Break Glass MCPs (5 Nos. each at NTB and STB) with Hooter;</li> <li>(b) Talk-back System from Fire Alarm Control Panel Room to Fire Crew Rooms located at NTB and STB;</li> </ol> <p>Public Address System (Make RAVEL) to pass information to the crew working at Jetty side.(existing PA system is not working and the renewal of the same is under the Scope of proposed up-gradation)</p>

16	15	<p><b>Specification of Fire Water Pump Clause 2 (i) (a)</b></p> <p>Delivery Pressure : 14 Kg/cm<sup>2</sup></p>	<p>As per Section - 1 (Scope of Work), the Existing Pumps having head of 160 mwc. We understand that the new pump also of the same head will be required for balancing the system hydraulically.</p> <p>Kindly confirm our understanding.</p>	<p>New pump should match with existing system. Performance parameters should be satisfactorily met.</p> <p>(Details of the existing 2 Nos. Fire Pumps are: (1) Capacity 500 M<sup>3</sup>/hr. each @ 1500 rpm, (2) Head 160 mwc at 15 kg/cm<sup>2</sup> (3) Type VT Pump (4) Suction 10" (5) Length of suction line upto stainer bottom:4750 mm. for the reference)</p>
17	16	<p><b>Specification of Fire Water Pump - Clause 2 (ii)</b></p> <p>The Vertical Turbine Jockey Pump shall be capable of delivering min.43M3/ Hr and total head shall be 85 Mtrs.</p>	<p>The Jockey pump with higher head than Main Fire Pump will be required to maintain the system pressure. We understand that Jockey Pump with 185 mwc Head will be required in this project.</p> <p>Kindly confirm our understanding.</p>	<p>The Vertical Turbine Jockey Pump delivering greater than 43 M3/ Hr required and head may be designed to suit the performance requirement of the entire Fire fighting System.</p>
18	17	<p><b>Clause (2) Material of construction &amp; specifications Sub-Clause (v), Valves</b></p> <p>For all the Ni-cast iron valves body shall be so designed that at point, wall thickness is greater than the minimum specified in the various standards.</p>	<p>As per OISD -156 (Edition), the Cast Steel valves shall be required. We understand that Bidder need to follow the OISD requirement.</p> <p>Kindly confirm our understanding.</p>	<p>Cast Steel valves are required.</p>
19	28	<p><b>Section 3- Important Terms &amp; Conditions - Sub-clause 3- Payment Terms.</b></p>	<p>We are requesting for following mentioned payment terms: -</p> <p>(a) 70% against supply of material on Pro-Rata basis.</p> <p>(b) 20% against installation on Pro-Rata basis.</p> <p>(c) 10% against testing and commissioning.</p>	<p>Request to accept the payment terms proposed by CoPT</p>



20		<p><b>Bill of Quantities- Sl. No.1.1</b></p> <p><b>Construction of a masonry platform (Total area: 35 M2) supported on new marine pile foundation</b></p>	<p>We understand that as per Remark given in Tender BOQ, this is not in Bidder scope.</p>	<p>The bidders are <u>not required</u> to quote the rate for this line item in the <u>Budgetary offer</u>. Estimate for this work will be worked out departmentally. Construction will be under the Scope of the Contractor.</p>
21		<p><b>General</b></p>	<p>The Warrantee / Guarantee of Existing Fire Protection System will not be in Bidder's scope.</p> <p>Kindly confirm our understanding.</p>	<p>a)For all materials/ items/equipments/systems supplied/installed by the bidder shall be under Warranty for one year from the date of acceptance of the entire system by CoPT.</p> <p>b) For all existing equipments/systems /components specifically requiring repairs/servicing and mentioned in the scope of work/Bill of Quantities of bidder (eg. Fire Monitors) shall be under Warranty for 6 months.</p> <p>c) For all existing equipments/systems/components /lines which are fit to use and not requiring any repairs/servicing under the present upgradation work will not be under Warranty obligations of the Bidder.</p>
22		<p><b>General</b></p>	<p>Kindly share the List of Makes.</p>	<p>List of existing important items/components which need to be continued to use along with its make is attached separately.</p> <p>As far as the new items /materials/equipments to be supplied under the present upgradation work shall meet the technical specifications/scope of work mentioned. Specific list of vendors of such items are not included.</p>

SL No.	Page No.	Heading & Clause No.	Clarification Sought / Change Suggested	CoPT's reply
23	BOQ	Note (3) of BOQ	We have noted that the Upgradation works and the Tanker operations at the Terminal are to go concurrently & Hot works are not permitted while tanker is at berth. We need clarity on timings available / time schedule for us to do Upgradation works.	<p>The bidders are advised to carry out the preparatory works to maximum extent possible at their yard before transporting the materials to the work site.</p> <p>Execution of work at the Jetty are normally permitted during day time only considering the safety aspects.</p> <p>Berth occupancy of NTB based on the current traffic is about 41% and STB is meagre.</p> <p>If the contractor is unable to carry out work due to occupancy of the vessels, such period will not be reckoned for the purpose of calculating the completion period of the contract.</p>
24	BOQ	<p><b>1.3 (ii) of BOQ</b> Supply and installation of 3 Nos. individual diesel tanks SS 316 grade and 3 mm thick having 500 M<sup>3</sup> capacity for three Nos. Diesel Engines of Fire Pumps with connected diesel lines.</p>	Kindly reconfirm capacity of the Tank is 500 L & not 500 M3	The Diesel Tank Capacity is 500 Litres.
25	BOQ	<p><b>1.4.1, of BOQ</b> 4" Gate Valve 300#</p>	Please provide Valve MOC	<p>SS Super Duplex Gate Valve With Rising Spindle ,as per API 603 with falnge end connection as per ANSI B 16.5 300 # and SS 316 Nut and Bolt as per ASTM A 193 Gr.B8M . The valve shall be tested as per API598. MOC of valve Body, cover &amp; bonnet shall be as per A890GR.F5A, Trim, Body seat, disc shall be UNS J93404.</p>

26	BOQ	<b>1.4.2 of BOQ,</b> 4" NRV 300#	Please provide Valve MOC	SS Super duplex valve as per A890GR.F5A with double flanged connection as per ANSI B 16.5 Class 300 , Swing type Non-return valve including SS 316 nuts, bolts, as per ASTM A 193 Gr.88 M & 15mm thick compressed asbestos gasket including matching flanges complete as per requirement
27	BOQ	<b>2.2 of BOQ</b> Supply and installation of automated control panel for all the 3 Nos. Fire Pumps & 1 No. Jockey Pump including cabling works as per the Scope of Work & Technical Specification.	1. Kindly confirm Fire alarm system has to be Intrinsically safe or not ? 2. Kindly confirm Class of Zone I. 3. Kindly confirm Fire alarm & detection system has to be addressable or not ?	1. All the electrical installations/equipments/control panels to be supplied under the contract should be intrinsically safe and should be complying to the requirement of OISD 156 STD of 2017. 2. Class A Petroleum products. 3. Should be addressable.
28		4.1 Fixed Water Curtain System at STB as per the Scope of Work & Technical Specification. Sub-Cl. (iii) 6" dia of 300 # Gate Valve	Please provide Valve MOC	SS Super Duplex Gate Valve With Rising Spindle ,as per API 603 with falnge end connection as per ANSI B 16.5 300 # and SS 316 Nut and Bolt as per ASTM A 193 Gr.B8M . The valve shall be tested as per API598. MOC of valve Body, cover & bonnet shall be as per A890GR.F5A, Trim, Body seat, disc shall be UNS J93404.
29		Sl. No. 2.2 of BOQ Sub-Cl.(vii) & (viii) Supply and laying of FRLS Electrical Cables including conduiting, supply and installation of cable trays etc. as required.	For cabling works please provide us the Plot plan or Area details (distance between STB & Fire Control room). This is required for us to work on Cabling.	Layout showing the locations and distances of both the jetties from the existing Fire Pump House is furnished.(Please refer reply to Query No.(9)

30	(i)	<p><b>Sl. No.4.3 of BOQ</b> Line modification repairs/replacement works at STB</p> <p><b>Sub-clause (iv):</b> Supply and installation of two nos. Foam-line actuator valves with actuator.</p>	Kindly provide us the size/specification of Actuator	<p>Size of Actuator Valve: 2” Ball Valve, Material: Gun Metal</p> <p>Motor shall be Flame Proof and intrinsically safe to operate in Hazadous Area Zone 0 for Class A products, IP 68 for Switches, FLP IIA/IIB for enclosure of Actuator Duty Cycle S2-15 minutes at 1/3 rd rated Torque. RPM/Torque: 72/38 Kgm, Rated Voltage: 230VAC, 1 Phase, 50 Hz.,</p>
30	(ii)	<p><b>Sub-Cl.(v)</b> Servicing and repairing of Two Nos. remotely operated Water Foam Tower Monitors at STB to make it fully operational.</p>	Kindly provide us the size/specification.	<p>Make: AKRON Brass Company, Type: Remotely operated Water Foam Tower Monitors with Jumbo nozzles with jet/spray Capacity : 3000 LPM, Throw : 60 M</p>
30	(iii)	<p><b>Sub-Clause (vii)</b> Rectification of electrical line faults, if any, from the Fire control room to STB berth.</p>	Distance between STB & Fire Control room	Layout showing the locations and distances of both the jetties from the existing Fire Pump House is furnished.(Please refer reply to Query No.(9)
30	(iv)	<p>Sub-Cl.(ix) Overhauling/repairing of 2 Nos NRVs in Fire water lines and Foam lines at STB.</p>	Please provide Valve MOC & size	

**DETAILS OF MAJOR ITEMS REQUIRING REPAIRS TO MAKE IT FULLY  
FUNCTIONAL**

Sl. No.	Name of the Item/System/Installation with specification/Description	Quantity	Location
1	Water Foam Tower Monitors	2	NTB
	Make:AKRON Brass Company Year of Installation: 2013 Model No.Style 5097 Specifications: 3000 LPM capacity		
2	Water Foam Tower Monitors	2	STB
	Make:AKRON Brass Company Year of Installation: 2013 Model No.Style 5097 Specifications: 3000 LPM capacity		
3	Ground Water Monitors	2	NTB
	Make: SKUM Svenska Skum AB Year of Installation:2003 Model No. FJM 100 KEL with 360 Degree rotation and remotely operated control panel, composite for both the Monitors, which operates on 415 V AC 3 Phase		
4	Ground Water Monitor	1	STB
	Make:AKRON Brass Company Year of Installation: 2013 Model No.OMEGA XP Style 3528 Flow: 3030 lpm @ 8 bar.		
5	Fire Pumps ( <b>Repairs/overhauling of existing Pumps are not included under the scope of bidders</b> )	2	Fire Pump House
	1) Make: Kirloskar Pumps Year of Installation: 1990 Model No. Type: Vertical Turbine Discharge : 500 M <sup>3</sup> /Hr. Head: 160 MWC 2) Make: Mather & Platt Pumps Ltd., Pune Year of Installation: 2005 Model No.CNE-22 Type: Vertical Turbine Discharge: 500 M <sup>3</sup> /Hr. Total Head:160 Mtrs.		
6	Non-Return Valves - 10 “	2	NTB
7	Non-Return Valves -4 “	1	NTB

8	Non-Return Valves- 2 “	2	NTB
9	Non-Return Valves- 2 “	2	STB
10	Public Address System (Make RAVEL)		