

**CLARIFICATIONS TO QUERIES RAISED BY PROSPECTIVE BIDDERS DURING PREBID MEETING HELD ON 16/09/2019**  
**AT 15.00 HRS IN CME'S CONFERENCE ROOM.**

QUERRY NO.	CLAUSE NO.	PAGE NO.	TENDER CONDITION	BIDDER QUERIES	CLARIFICATIONS
1.	NIOT & 3.10	5 & 23	The work shall be completed within 60 days from date of issue of LOA.	The completion period indicated in the tender is 60 days which is very less. The required equipments and material used for water curtain system are of special type to suit for sea water and are not readily available in the market. As such, minimum 4 months are required for supply and 1 month for installation and commissioning.	The work shall be completed within 150 days from the date of issue of LOA.
2.	2.1 a	17	Loading/unloading of dry bulk cargo is carried out at the Mooring Dolphin No 1 opposite to Berth No. 9/10 by anchoring the ship in between two Mooring Dolphins (Refer sketch enclosed at Appendix – IX). Barges are placed at both the sides of the ship and the cargo is loaded/unloaded with the help of ship cranes. Dust generated while handling the dry bulk cargo and spreads in the open air is to be mitigated.	Sketch enclosed at Appendix – IX indicates water curtain radius of 100 meters. Whereas, in technical specification it is mentioned 50 meters.	Mayura water curtain shall be of minimum 18 meters vertical height and 45 meters horizontal distance in both directions from the center of the water curtain nozzle.  Amended sketch is attached herewith as Annexure – D.

3.	2.1 d (i)	17	<p>As it is not possible to provide power supply at the Dolphin, the Mayura Curtain system shall comprise of 1 no. diesel engine driven marine sea water pump made of S.S. 316 body, suitable impeller with battery and control panel, necessary piping, valves, nozzles etc. The pump set along with the battery and panel shall be enclosed in a compact detachable box structure of mild steel to protect the system from rain water and saline weather conditions. The water pump shall be of Self-priming type.</p>	<p>Pump drive engine capacity is not specified.</p>	<p>As it is not possible to provide power supply at the Dolphin, the Mayura Curtain system shall comprise of 1 no. diesel engine driven marine sea water pump made of S.S. 316 body, suitable impeller with battery and control panel, necessary piping, valves, nozzles etc. The pump set along with the battery and panel shall be enclosed in a compact detachable box structure of mild steel to protect the system from rain water and saline weather conditions.</p> <p>The water pump shall be of Self-priming type.</p> <p>The capacity of the engine driven pump shall be minimum of 170 HP. However, the bidders should select appropriate capacity to ensure that water curtain of minimum 18 meters vertical height and 45 meters horizontal distance in both directions from the center of the water curtain nozzle is achieved.</p> <p>The water pump and drive engine mounting base frame should be provided with suitable 'vibration damper pads' so as to minimise vibration.</p>
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4.	2.1 d (ii)	17	The water curtain nozzle comprising of orifice plate shall be able to produce dense water screen of minimum 50 meters radius in a semicircle form (180 deg.) in vertical plane. The water curtain nozzle shall be of SS316 material of adequate size suitable for sea water use.	To achieve water curtain height of 50 meters is not possible	The water curtain nozzle comprising of orifice plate shall be able to produce dense water screen of minimum 18 meters vertical height and 45 meters horizontal distance in both directions from the center of the water curtain nozzle. The water curtain nozzle shall be of SS316 material of adequate size suitable for sea water use.
5.	2.1 d (iii)	17	Piping to be used for the system shall be of carbon steel material as per IS 3584 :2001 of adequate size to carry sea water, internally coated with corrosion resistant paint preferably Corrocoat, with bends, flanges, pipeline supports, gaskets, fasteners, accessories, valves etc. complete. Fabrication work shall be in accordance with BIS 9595, 814, 822, 4853 and 3703 .The outer surface of the entire system shall be thoroughly cleaned and painted with 2 coats of zinc rich primer and 2 coats of epoxy based paint to prevent the system from corrosion.	Requested to consider Copper-Nickel pipe which is anti-corrosive.	<p>A) <u>DELIVERY LINE:</u> Delivery pipeline shall be of Carbon steel 200 NB, 7.3 mm thick as per IS 3589:2001 with bends, flanges, pipeline supports, gaskets, fasteners, accessories, etc. complete. The pipeline shall be internally provided with cement coating of minimum thickness of 8 – 10 mm suitable to carry sea water.</p> <p>B) <u>SUCTION LINE:</u> Suction pipeline shall be of Copper – Nickel, 250 NB 5mm thick, with bends, flanges, pipeline supports, gaskets, fasteners, accessories, etc. complete along with adequate size S.S. 316 Foot valve and S.S. 316 strainer.</p> <p>Entire fabrication work of the system shall be carried out by a welder certified by an</p>

					approved agency. The outer surface of the pipes, welded joints and all the M.S. structures of the system shall be Sand/Grit blasted, cleaned and painted with 2 coats of epoxy primer of 75 micron DFT each and 2 coats of epoxy based paint of 50 micron DFT each to prevent the system from corrosion.
6.	2.1 (h)	-	Transportation of the raw material/equipment from the shore to the dolphin should be carried out by the successful contractor.	Floating crane shall be provided by Port free of cost.	The tender condition prevails. The cost towards hiring of cranes and all other expenses towards shifting shall be borne by the contractor.
7.	Item not indicated in the tender	-	-	Flow and head of the diesel engine driven pump is not indicated in the tender.	The suction head of the pump is about 8 meters approximately considering low tide. Contractor has to decide about the flow of the water to achieve water curtain of minimum 18 meters vertical height and 45 meters horizontal distance in both directions from the center of the water curtain nozzle.
8.	Item not indicated in the tender	-	-	Whether operation of the system will be Auto or Manual.	The system shall be operated in Manual mode.
9.	Item not indicated in the tender	-	-	Scope of fluids like diesel, engine oil and coolant is not clear	All costs towards servicing of engine & pump as per OEM's guidelines and any repair work to be carried out during the Guarantee period shall be in the scope of the contractor. Only consumables such as Diesel,

					engine oil, filters and coolant will be supplied by Port. <u>Also Diesel required during commissioning and trials should be provided by the contractor.</u>
10.	Section – V Price Schedule (Bill of Quantities) 1 (G) & 2 (G)	38	500 ltrs (HDPE) overhead water tank for storage of water for priming along with valves, Piping, structural stand complete as required	Priming water storage tank of 500 liters is not adequate.	Agreed. The storage tank shall be of 3000 liters capacity.
11.	Section – V Price Schedule (Bill of Quantities)	38	-	-	Based on the discussions held in the pre-bid meeting, the Revised price schedule (Section – V) is attached herewith as Annexure – A. Bidders are requested to offer their rates as per the revised Price Schedule.
12.	(Appendix III) List of approved makes	44	-	Following additional makes need to be considered:- a) Gate Valve – Sakhi b) NRV – Zoloto / Sakhi c) Engine – KOEL d) Coupling – Kartar e) Water curtain Nozzle – Ajit Fire / Sainath Fire f) Foot valve – Normex / Kirloskar g) Control panel – Tejas Fire & Safety	Revised list of approved makes is attached herewith as Annexure – B.

13.	Item not indicated in the tender	-	-	-	Bidders are required to indicate rate of Diesel consumption per hour of the drive engine as per the Performa enclosed at Annexure – C.
14.	3.51	35	<u>TERMS OF PAYMENT</u> Payment shall be released as per the following terms: I) Towards Supply of material as per sr. no.1 of Price schedule: a) 50% of the billed amount against supply of materials at site in good condition. b) 40% of the billed amount after successful installation of the system. c) Balance 10% of the billed amount after successful commission and taking over the system. II) Towards Installation ,Testing and Commissioning as per sr. no. 2 of Price Schedule: a) 80% of the billed amount on installation of the system. b) Balance 10% after successful commission and taking over the system.	-	<u>TERMS OF PAYMENT</u> 100 % payment will be made after completion of entire work and successful trials to achieve Mayura water curtain of minimum 18 meters vertical height and 45 meters horizontal distance in both directions from the center of the water curtain nozzle.

SECTION – VPRICE SCHEDULE (BILL OF QUANTITIES)

Name of the Work: e – Tender for “Design, Supply, Install, Testing & Commissioning of 1 no. Mayura Water Curtain System at Mooring Dolphin no.1 of Mormugao Port Trust”

Sr. No.	Description	Unit	Qty.	Rate (Rs.)	Total Amount (Rs.)
<b>1.</b>	<b>Supply of:-</b>	-	-	-	-
A	Pipeline including fittings, flanges, elbows, reducers, etc.	-	-	-	-
i)	Delivery pipeline of 200 NB complete as per the technical schedule of the tender.	Mtr.	6		
ii)	Suction pipeline of 250 NB complete as per the technical schedule of the tender.	Mtr.	12		
B.	200 NB gate valve, S.S.316, suitable for sea water	No.	1		
C.	200 NB NRV swing check type, S.S.316, suitable for sea water	No.	1		
D.	Mayura water curtain nozzle suitable for sea water of adequate capacity of S.S. 316.	No.	1		
E.	Diesel engine driven sea water pump-set with control panel, battery charger and battery, etc. as per the technical schedule of the tender.	Set	1		
F.	250 NB Foot Valve, S.S.316, with S.S.316 strainer suitable for sea water	No.	1		
G.	3000 ltrs (HDPE) overhead water tank for storage of water for priming along with valves, Piping, structural stand complete as required.	No.	1		
H.	Detachable compact Canopy of mild steel for Pump set.	No.	1		
<b>2.</b>	<b>Installation, Testing and Commissioning of:</b>	-	-	-	-
A	Pipeline including fittings, flanges, elbows, reducers, etc.	-	-	-	-
i)	Delivery pipeline of 200 NB complete as per the technical schedule of the tender.	Mtr.	6		
ii)	Suction pipeline of 250 NB complete as per the technical schedule of the tender.	Mtr.	12		
B.	200 NB gate valve, S.S.316, suitable for sea water	No.	1		
C.	200 NB NRV swing check type, S.S.316, suitable for sea water	No.	1		
D.	Mayura water curtain nozzle suitable for sea water of adequate capacity of S.S. 316.	No.	1		
E.	Diesel engine driven sea water pump-set with control panel, battery charger and battery, etc. as per the technical schedule of the tender.	Set	1		
F.	250 NB Foot Valve, S.S.316, with S.S.316 strainer suitable for sea water	No.	1		
G.	3000 ltrs (HDPE) overhead water tank for storage of water for priming along with valves, Piping, structural stand complete as required.	No.	1		
H.	Detachable compact Canopy of mild steel for Pump set.	No.	1		
<b>3.</b>	<b>Total Basic Price without G.S.T.</b>				

Note:

- The offered rates shall be inclusive of all taxes, duties except GST which will be extra as applicable. However, any new tax is imposed by State/Central Govt., same will be reimbursed on producing documentary proof.
- The prices offered should be firm.
- Evaluation will be done on basic price without any taxes.

**LIST OF APPROVED MAKES**

Name of the Work: e – Tender for “Design, Supply, Install, Testing & Commissioning of 1 no. Mayura Water Curtain System at Mooring Dolphin no.1 of Mormugao Port Trust”

Sr. No.	Description	Our Requirement	Make offered by Vendor
1.	Carbon Steel Pipes	Tata / Jindal / Zenith / Sail	
2.	Copper-Nickel Pipes	Confirming to ASTM B466UNS, Copper – Nickel 90:10 ratio	
3.	Steel	Sail / Jindal / Vizac / Tata	
4.	Gate Valve	H. Sarkar / Kirloskar / Zoloto / Leader / Sant / Sakhi valves india	
5.	NRV	Audco / BDK / Leader / Zoloto / Sakhi	
6.	Foot Valve	Audco / BDK / Leader / Normex / Kirloskar	
7.	Hose Pipe	Jayshree / Newage	
8.	Engine	AOL / Greaves / Cummins / Yanmar / KOEL / Any other makes certified by UL/IS etc.	
9.	Water pump	Kirloskar / Mather & platt / Flowmore, Any other makes certified by UL/IS etc.	
10.	Coupling	Shah Bhogilal / Winco / Kartar	
11.	Water Curtain Nozzle	Flowtech / S D Fire / AAAG / Newage / Ajit Fire / Sainath Fire	
12.	Starters/MCCB/MCB/switches	Siemens / L&T	
13.	Cables	Polycab / Havells / Electrocab / Phenolix	
14.	Pressure Switch	Danfoss / Infoss	
15.	Pressure Gauge	Fiebig / H. Guru / Gluck	
16.	Control panel	Arrow Engineering / MK Engineering / Zenith Engineering / Danco / DJ Electricals / Tejas Fire & Safety	
17.	Battery	Excide / Amaron / Luminous / Su-Kam	
18.	Paint	Jotun / International / Hempel	

All electrical cables and panels should comply with IS standards. All electrical installations/ Panels to be inspected and certified by Electrical Inspector.



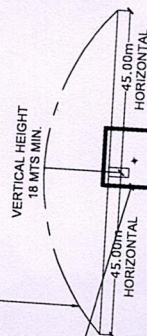
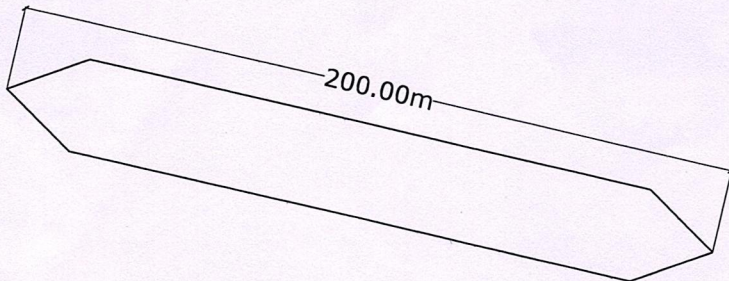
**PERFORMA FOR DECLARATION OF CONSUMPTION OF FUEL PER HOUR**

Name of the Work: e – Tender for “Design, Supply, Install, Testing & Commissioning of 1 no. Mayura  
Water Curtain System at Mooring Dolphin no.1 of Mormugao Port Trust”

THE RATE OF DESEL CONSUMPTION OF PUMP DRIVE ENGINE IS \_\_\_\_\_ LITERS PER HOUR.

**ANNEXURE - D**

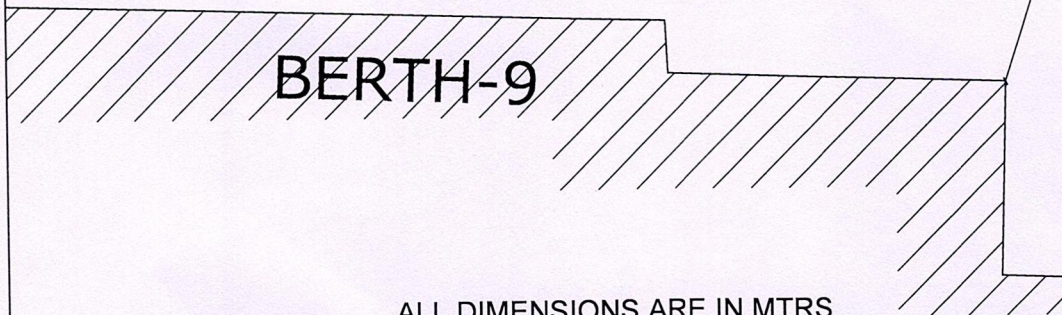
MD2



MD1

WATER CURTAIN

468.9m



**BERTH-9**

ALL DIMENSIONS ARE IN MTRS.



AN ISO 9001 : 2015 CERTIFIED & ISPS CODE COMPLIANT PORT

**MORMUGAO PORT TRUST**

ENGG. MECH. DEPT.

**PLAN SKETCH OF VESSEL POSITIONING AT MD**

DATE	23-09-2019	DRG. NO.	20190921-1	REV.	0	Sheet	1/1
SCALE	N.T.S						