NEW MANGALORE PORT AUTHORITY MARINE DEPARTMENT

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PANAMBUR, MANGALORE – 575 010.

Date: 03-05-2023

Karnataka

NMPA/DM/OSR/2023/09

To.

Sir,

Sub: Tender for "Supply of 650 Mtr Non inflatable oil spill Containment boom with its accessories to be deployed at sea along with certification, demonstration & trial at NMPA" – Realistic Budgetary offer requested – Reg.

With the reference to the subject cited above, kindly provide Realistic Budgetary offer for "Supply of 650 Mtr Non inflatable oil spill Containment boom with its accessories to be deployed at sea along with certification, demonstration & trial at NMPA" as per the following terms and conditions and the scope of works as follows.

Sl. No.	Item Description	Amount in Rs (Excluding GST)
1	Supply Of 650Mtr Non inflatable Oil Spill Containment Boom with accessories to be deployed at sea. Scope of supply included testing, certificate, demonstration and trail at NMPA.	

TERMS AND CONDITIONS:

1 Rate to be quoted excluding GST GST will be paid extra as applicable.

2 COMPLETION PERIOD

Entire scope of supply, as per contract, are to be completed within **90 DAYS** from the date of issue of Supply order.

3 PAYMENTS

- a. 100 % payment shall be made after completing the entire scope of supply except performance security.
- **b.** The bill in complete shape to be submitted to the office of the Deputy Conservator and payment will be made within 21 days from the date of submission of bill.
- c. The bill / Invoice should clearly indicate the contractor's PAN, GST Registration Number etc.
- **d.** GST will be paid extra as applicable.
- e. Taxes such as INCOME TAX etc. as applicable will be deducted from the contractor's bill.
- f. No interest on account of delayed payments.
- g. Any claim for interest will not be entertained by the NMPA with respect to any payment or balance which may be in their hands owing to any disputes between themselves and the Contractor or with respect to any delay on the part of the NMPA in making payment. Further No interest will be paid on Retention money of Performance Security.

h. Payment will be made only in INDIAN RUPEES

4 Technical specification of the 650Mtr Non inflatable Oil Spill Containment Boom with accessories to be supplied as per "Annexure- A"

5 PASS for Port Entry:

Free Port Entry Passes will be issued for the personnel & vehicle of the firm. However, RFID card to be purchased from Pass section at bidder's cost. The cost of each card is Rs.150/- appx

6 PERFORMANCE SECURITY PAYMENT

Please note that neither any type of advance/partial payment will be made nor document through bank will be accepted. Only 97% payment will be made within 20 days after the completion of supplies of all ordered materials & accepted by the user department along with all relevant document-Guarantee/Warranty certificates/ Invoices etc. Balance 3 % of the total Tax Invoice value will be retained as Security deposit and will be released without interest after completion of Guarantee/Warrantee period. Alternatively 100% payment will be made against submission of Bank Guarantee for equivalent value towards security deposit from any Nationalized Bank en-cashable at Panambur Mangalore. The BG should be valid for a minimum period of 24 months from the date of supply of Non inflatable boom, with claim period of 3 months thereafter.

7 GUARANTEE PERIOD

Guarantee period is **02 years** on handing over equipment - 650Mtr Non inflatable Oil Spill Containment Boom with accessories after satisfactory completion of all trials. During the Guarantee period, contractor shall be responsible for any defects that may develop under proper use, arising from faulty material workmanship in the work, but otherwise and shall at his own cost rectify such defects, when called upon to do by the competent authority.

8 BASIC REQUIREMENT OF OIL CONTAIMENT BOOM

- a) The Non inflatable oil Containment boom shall meet all the requirements of NOS-DCP guidelines and standards specified in ASTM F1523-94(2018) or latest edition.
- b) Boom shall be made of flame retardant material.
- c) The boom is to be light weight and resistant to abrasion. The material should be Polyurethane (PU) coated polyester material.
- d) The colour of the boom should be International Orange with distinct florescent marking to provide high visibility.
- e) The boom shall properly curtain in the water for combating the oil and shall not be sinking at intermediate and also at the point of anchored position
- f) The boom shall be so designed that it floats vertically without twisting.
- g) A strong point to be provided at each section of the 25 mtrs boom to hold the anchor so that the boom is able to deploy as per the required length.
- h) The required oil boom shall be compatible with the all types of oil/chemical so that in case of oil pollution incidents at sea, boom does not get damaged.
- i) All required certificates for the oil boom and its accessories, the cost shall be borne by the successful bidder.
- j) The successful bidder shall provide the original test certificate mentioning Make, Brand name, country of origin, name & seal of the Govt. approved laboratory with the license number.

- k) The Non inflatable oil containment boom shall be light -weight so that easy to use and store.
- 1) The boom shall simultaneously easy to deploy and should not twist during the deployment or in inclement weather due to relative stiffness of the fabric and the weight of the ballast.

10 | TEST CERTIFICATE:

The stage wise certified to be submitted by the bidder as per Annexure-II is enclosed.

11 Details of Stage wise Inspection to be carried out with respect to scope of work with reference to Quality Assurance Plan (QAP).

Once the work order issued to successful bidder, the bidder has to manufacture the boom as per the specification attached **Annexure-I** and stage wise Inspection & Certification are to be carried out as given below:

1st Stage: (Before Manufacturing)

- (a) Provide details of original Manufacturer name & address and Manufacturer Test report of PU fabric with batch number.
- (b) Same batch number sample Polyurethane (PU) coated polyester fabric to be tested at Govt. NABL laboratory. Following Test Parameter like elongation, tongue tear, warp tensile strength (N/mm) and Boom Fabric Tensile strength as per ASTM D-751-2006(2011) or latest edition shall be carried out and test to be witnessed by IACS Class Surveyor.
- (c) Same batch number sample Polyurethane (PU) coated polyester fabric to be tested as per NFPA- 701, ISO- 3795 or other flame redundant test procedure internationally followed. Test to be witnessed by IACS Class Surveyor.
- (d) Fabric shall be compatible with all POL cargo and chemical cargo.
- (e) Boom fabric shall be chemical retarded as ASTM D-1308 & ASTM D-6943.
- (f) Fabric boom shall be carried out by Standard Test Method for Deterioration of textiles by Exposure to Light, Moisture, and Heat as ASTM D- 4355.

All test above are to be witnessed & certified by the any member of International Association of Classification Societies (IACS) Class Surveyor.

- (g) Drawings of general arrangement (GA) and Design Compliance Report to be submitted duly as per specification given in Annexure -I.
- (h)Model Quality Assurance Plan (QAP) is attached in Annexure-III for the compliance and shall certified by International Association of Classification Societies (IACS) Class Surveyor after completing all stages.

2nd Stage: (after completion of Stage I)

- a) Compliance report for minimum Buoyancy ratio as per ASTM F-1523-94 (2018)
- b) Boom engineering design shall comply with the standard design so that boom materials and the joints formed in the boom etc. does not giveaway while handling the boom on deployment or while deployed at the weathering rough sea conditions.

- c) Closed cell Polyethylene foam manufacturer certificate to be provided. The polyethylene foam is encapsulated in the heavy duty high tensile strength fabric to ensure there is no water impregnation and robustness of the boom. Tested to be carried out as per the ASTM D-3574(19).
- d) The Buoyancy material as per the ASTM D 2842 and shall be carried out as per standard Test Method for Water Absorption and has to be it shall certified by the IACS Class Surveyor.
- e) Dimensional check of Non inflatable oil boom (free board, draft, total Height, section length) shall be verified by IACS Class Surveyor.
- f) Boom Flotation as per standard guide for determining the Buoyancy to weight ratio of oil spill containment Boom and as per ASTM F-2682-07 (2012) standard. Same shall be Witnessed and Certified by the class surveyor.

3rd Stage:

- a) To provide Towing bridles load test of minimum 2 ton witnessed by any member IACS Class Surveyor so that the boom shall towed by the tug upto 8 knots speed.
- b) To provide load test Certificate of Anchor Strong point at the boom by any member of IACS Class Surveyor to ensure the boom is capable of holding the boom and the anchor even in rough sea conditions.
- c) To provide Certificate of Universal Sliding Connector as per ASTM standard F-962.
- d) To provide galvanized steel ballast chain test certificate certified by the ICAS Class Surveyor and as per the standards ASTM A-413, ASTM 123, ASTM A 90.(IS 269, IS 6745 & IS 4759).
- e) The ballast short link chain size of minimum 10 mm shall be reviewed by the IACS Class Surveyor.
- f) The minimum 2 nos. lifting handles to be provided in each section.

4th Stage:

- a) Compliance Report of the manufacturer for deployment of the boom in open sea conditions, the optimal performance of boom can be expected upto sea state 5.
- b) At final stage, Performance Test of the non inflatable oil containment Boom with accessories shall be witnessed and certified by the IACS Class Surveyor.

5th Stage: (At the time of Delivery)

- a) The Guarantee Certificate, free dispatch inspection certificate, original manufacture quality certificate shall submitted before delivery.
- b) The successful bidder has to submit Quality Assurance Plan of the boom before manufacturing. The Quality Assurance Plan shall be certified by the IACS Class Surveyor and shall be provided at time of delivery.

12 Operating Condition

The boom should withstand the following Operating conditions

a. Wave height : Maximum 3 mtrs

b. Wind : 25 knotsc. Tidal range : 1.6 m (max)

d. Current velocity : 2.5 to 3 knots e. Nature of harbour : Land- sand slit

f. Sea temperature : 25°C to 35°C

13 DRAWINGS AND MANUALS:

Drawings, Manuals and manufacturers catalogue of Boom and its Accessories to be provided by the Contractor at the time of delivery. Maintenance Manual, Spare Parts Catalogue, Working procedure drawing of the equipment, showing all the parts of equipment, each shall supplied in four sets at the time of delivery.

14 DEMONSTRATION and TRIAL

After the installation and commissioning of the oil boom shall undergo field trials in the presence of NMPA officer at the site at cost of successful bidder.

The demonstration and trail of the non inflatable boom with its accessories at the NMPA site shall be carried out at the cost and risk of the successful bidder.

Boat will be arranged by the NMPA at FREE OF COST for demonstration and trial of the non inflatable boom with its accessories.

15 INSURANCE:

The transport insurance shall be arranged by the Contractor at his own cost.

No insurance charges are payable by the Port and the goods are to be Dispatched to New Mangalore Port Authority, Panambur Mangalore (Karnataka State) at the risk of successful bidder. Any loss or damage in transit will have to be borne by the successful bidder.

The insurance for the staff and their vehicle shall be arranged by the Contractor. The Contractor shall take the insurance policy covering all type of risks of all employees engaged by them. In other words, NMPA will not be liable for any accident damage or compensation payable to any workman in the employment of the contractor.

TRANSPORTATION:

The Transportation of goods to be arranged by the Contractor and the cost for transportation shall be borne by the Contractor. The goods to be delivered at NMPA inside wharf near berth No.13.

17 TOOLS AND PLANT:

The required tools and plant, labour, materials, transport etc. should be arranged by Successful bidder at his own cost.

18 MOBILIZATION & DEMOBILIZATION

The contractor shall bear all expenses for mobilization /de-mobilization for the staff.

19 | JOINT INSPECTION

A Joint inspection will be carried out for verification of all the relevant certificates, Drawings, Manuals, Spares, Accessories etc. at New Mangalore Port Authority during Demonstration and Trial of oil boom and its accessories at sea.

- 20 Employer Liability Insurance: The Contractor shall indemnify and keep indemnified the Employer i.e. NMPA against all damages or compensation payable at Law in respect of or in consequence of any accident or injury to any workman or other person in the employment of the contractor or Sub-Contractor against all claims, demands, proceedings, costs, charges and expenses whatsoever in respect thereof on in relation thereto and the Employer shall be at liberty to deduct or adjust from the Contractor's bills an amount that employer may be called upon to pay towards claims, demands, proceedings, costs, charges and expenses whatsoever in respect of or in relation to any accident or injury referred to above without any reference to the Contractor.
- The Contractor shall comply with the Central State and Municipal Laws and Rules and shall be solely responsible for complying with the provisions of the Contract "Labour (Regulations & Abolition) Act, 1970 & the contract labour (Regulation & Abolition) Karnataka Rules 1974 and rules there under and the enactments that may be applicable including ESI Act, the payment of wages act, Provident Fund Act, the Minimum Wages Act, the Factory's Act. The Workman Compensation Act or any other applicable legislation and the Municipal by-laws or other statutory Rules and Regulations whatsoever in force of these are applicable. Any obligations finding or otherwise missed under any statutory enactments, rules & regulations there under shall be the responsibility of the Contractor and the NMPA will take no responsibility for the same. The Contractor should take Workmen's Compensation Policy for his workers, who are not covered under ESI and submit the same to the EIC immediately after commencement of the work.
- The Contractor is liable to pay all Statutory Compensation of the Labourers /persons engaged by him for the satisfactory execution of the works. If any claim is made against New Mangalore Port Authority on this work, the Port Trust shall have the right to deduct the same from the bill amount payable to the contractor after verification of the validity and if admissible as per rules.
- 23 PERSONAL PROTECTIVE EQUIPMENTS

The Contractor shall be solely responsible for the supply of required PPE to his workers at his own cost and he shall also ensure the use of PPE such as helmets, nose masks, hand gloves, Boiler suits, safety shoes, rain coats by his staff at site.

- a) Hot work: Hot work if any to be carried out with prior approval/hot work permit from PORT FIRE SERVICE.
 - b) **Protection of Environment**: All measured and aspects to be adopted to protect the environment.
 - c) Safety Regulations: Working personnel should wear proper PPE and follow the port safety regulations.

It is requested to submit the Realistic Budgetary offer by email to dvconservator@nmpt.gov.in and gaurav.m@nmpt.gov.in on or before <a href="mailto:10.05.2023

Yours faithfully,

Dock Master

New Mangalore Port Authority

TECHNICAL SPECIFICATION OF THE NON INFLATABLE OIL CONTAINMENT BOOM:

Sl.No.	TECHNICAL PARAMETERS	TECHNICAL SPECIFICATION
1	Boom length	650 meters
2	Overall height	600mm
3	Freeboard	200mm
4	Draft (skirt)	400mm
5	Boom material (fabric)	Polyurethane (PU) coated polyester as per ASTM D-751-2006
6	Boom type and floatation	Cylindrical water repellant closed cell polyethylene foam
7	Segment/ section length	25 Metres
8	Floatation chambers	All floats encapsulated in individual chambers
9	Ballast chain	Galvanized steel chain size 10 mm
10	End connection	ASTM F-962 quick slide connectors
11	Mode of connection of section connectors	Toggle pins and bolts
12	Maximum towing speed straight line mode	8 knots
13	Maximum towing speed sweep mode	2 knots
14	Tensile strength	310 N/mm
15	Fasteners	SS 316 Fasteners
16	Colour of boom	International orange

The boom and its accessories should be as the ASTM standards and NOSDCP guidelines.

TECHNICAL SPECIFICATION OF THE ACCESSORIES OF NON INFLATABLE OIL CONTAINMENT BOOM:

S.No	ACCESSORIES	DESCRIPTION	Quantity
1	Spare kit	Spare kit comprising of 2 m2 poly	1+1
		urethane fabric, tool set, repair glue and	
		fasteners.	
2	Anchor set	Comprising of 15 kg certified danforth	10+10
		anchor by IACS Class Surveyor along with	
		polypropylene rope (18mm diameter of	
		minimum 25 mtrs long) and chain and	
		indicating floats.	
3	Towing bridle	Comprising of heavy duty sling/stainless	2+2
		steel wire rope with shackle fittings for	
		securing one end to connector and securing	
		other end to tow post or for easy holding by	
		operator with a indicating ball float. Towing	
		bridle shall take load to tow the boom at	
		minimum 8knots. The load test should be	
		carried out witnessed and certified by the	
		IACS Class Surveyor class surveyor	

ANNEXURE-II

The Test and certificates to be required

Sl	Description	Applicable	Test method	Material	Certificates
no		Standard			
1	Boom fabric	ISO3795 NFPA701 ASTMD751- 06(2011)	Standard Test Methods for Tensile Strength Characteristics of Oil Spill Response Boom Horizontal flammability Test Standard Test Methods for Coated Fabric	PU coated Polyester	Govt. approved NABL certificate witnessed by the IASC Class Surveyor Flame retardant certificate. Govt. approved NABL certificate witnessed by the IASC Class
		ASTM D4355	Standard Test Method for Deterioration of		Surveyor Certificate witnessed by the IASC Class Surveyor.
		ASTM D1308 &ASTM D6943	Testing of Industrial Protective Coatings		
2	Solid foam	ASTM D3574	Standard Test Methods for Flexible Cellular Materials Slab, Bonded, and Molded Urethane Foams	Closed cell Polyethylene foam	Original manufacturer Certificate
3	Ballast Chain (10mm)	IS2629 IS 6745 IS 4759	ASTM A413 ASTM 123 ASTM A 90	Galvanized	Galvanizing Test Certificate certified by the Class Surveyor
4	Fasteners			SS 316	Marine grade stainless

5	End	ASTM	Standard	Manufacture
	Connection	F-962	Specification for Oil Spill	Certificate
			Response Boom	
			Connection: Z-	
	m ·		Connector	
6	Towing		Load test of	Certified by the
	Bridles		minimum 3Ton	IACS Class Surveyor
7	Boom	ASTM F2682-07	Standard guide	Witness and
	Flotation	(2012)	for determining	Certified by the
			the buoyancy to	IACS Class Surveyor
			weight ratio of oil spill containment	
			boom	
			Oooni	
8	Buoyancy	ASTM D2842	Standard Test	Certified by the
	material		Method for Water	Class Surveyor and
			Absorption	required
				Manufacture
				Certificate.
9	Anchor		Load test	Load Certificate
	strong point		certificate of	Witnessed and
			anchor strong	Certified by IACS
			point at the boom	Class Surveyor
			any member of	
			IACS Class	
10	Performance te	<u> </u>	Surveyor Finally tested and	Witness and
10	1 CHOIIIance te	oi.	to be deploy in	Certified by the
			water for	•
			flotation, towing.	IACS Class Surveyor

MODEL QUALITY ASSURANCE PLAN

INSPECTION TO BE CONDUCTED FROM IACS MEMBERS, WITH SURVEYOR NAME AND DESIGNATION CLEARLY MENTIONED, ALL TESTS TO BE CONDUCTED FROM GOVERNMENT APPROVED NABL LABORATORIES

SR. 2No	COMPONENT	PARAMETER	QUANTUM AND TYPE OF	ACCECPTANCE NORM	DOCUMENTATI	REFERENCE	EVALUATION		
			CHECK		ON	DOCUMENT	VE	TPIA	NMPA
1	OIL CONTAINMENT BOOM FABRIC	a) TENSILE STRENGTH 310N/MM AS PER ASTM 751-06 (2011), ASTM F1093-99 ASTM D 4632 ASTM D 1308 ASTMD 6943	SAMPLE TO BE CUT OUT RANDOMLY FROM INVENTORY OF MANUFACTURER WHICH SHOULD BE SUFFICIENT FOR THE ORDER QUANTITY, STAMPED BY IACS MEMBER AND SENT TO GOVERNMENT APPROVED NABL LABORATORY FOR TENSILE STRENGTH TESTING AS PER ASTM D751, SURVEYOR TO WITNESS_THE TEST	AS PER THE PURCHASE ORDER	IACS INSPECTION REPORT- Govt approved NABL LAB CERTIFICATE CERTIFIED BY IACS WITH WITNESS CONFIRMATIO N	TENDER DOCUMET	P	W & V	R
		b) <u>COATING:-</u> POLYURETHANE ASTM D 4355,ASTM c) Fire/flame Retardant	THE STAMP AND SIGN POLYURETHANE FABRIC MANUFACTURE TEST CERTIFICATE AND NABL LAB TEST CERTIFICATE CONFIRMING PB FABRIC TO BE WITNESSED BY SURVEYOR OF IACS MEMBER Horizontal flammability	AS PER THE PURCHASE ORDER	LAB REPORT	TENDER DOCUMENT TENDER	P	W & V	R R
		ISO 3795 NFPA701	Test	ORDER	·	DOCUMENT			

2	FLOATATION	a. STABLE FREEBOARD = 200±3% MM b. STABLE DRAFT = 400±3% MM ASTM F-2682-07 (2012) ASTM D-2842	RANDOM 25 METERS SECTION LENGTH TO BE SELECTED AFTER PRODUCTION COMPLETION AND CHARACTERISTICS TO BE WITNESSED BY SURVEYOR	FLOATATION AND STABILITY AS PER SPECIFICATIONS	IACS- INSPECTION REPORT- RELEASE NOTE CONFIRMING THE WITNESS	TENDER DOCUMENT	P	W & V	R
3	CYLINDRICAL FOAM	MATERIAL VERIFICATION ASTM D 5734	THE CYLINDRICAL FOAM MATERIAL TO BE VERIFIED BY IACS	THE POLYETHYLENE FOAM IS ENCAPSULATED IN THE HEAVY DUTY HIGH TENSILE STRENGTH FABRIC TO ENSURE THERE IS NO WATER IMPREGNATION AND ROBUSTNESS OF THE BOOM.	ORIGINAL MANUFACTURE R CERTIFICATE HAS TO BE SUBMITTED.	TENDER DOCUMENT	P	R	R
4	BALLAST CHAIN	GALVANIZED CHAIN MINIMUM 100 MICRON GALVANIZATION IS -2629, ASTM 123, ASTM A- 413 IS -2633 IS- 6745, IS 4759, ASTM A - 90,	SAMPLING	CHEMICAL ANALYSIS CERTIFICATE CONFORMING TO PARAMETERS	IACS MEMBER CERTIFIED	TENDER DOCUMENT	P	W&V	R/W
5	FASTENERS S.S. NUTS AND BOLTS S.S. 304-S.S. 316 L	CHEMICAL COMPOSITION Marine grade SS 316	SAMPLING	CHEMICAL ANALYSIS CERTIFICTATE CONFORMING TO S.S. 316 L	-	TENDER DOCUMENT	P	R	R
6	TOWING BRIDLES	LOAD TEST WITNESSED BY ANY MEMBER IACS for minimum 2 Tons.	TO BE TESTED FOR TOWING THE BOOM BY THE SPEED OF 8KNOTES	ALL THE ACCESSORIES OF THE TOWING BRIDLES SHALL BE CERTIFIED AS PER THE STANDARD	IACS MEMBER CERTIFIED	TENDER DOCUMENT	P	W&V	R

7	ANCHOR STRONG POINT	LOAD TEST CERTIFICATE OF ANCHOR STRONG POINT AT THE BOOM ANY MEMBER OF IACS	TO ENSURE THAT A STRONG POINT TO BE PROVIDED AT EACH SECTION OF THE 25 MTRS BOOM TO HOLD THE ANCHOR SO THAT THE BOOM IS ABLE TO DEPLOY AS PER THE REQUIRED LENGTH	WHEN THE BOOM IS ANCHORED THE CURTAIN PROPERLY CURTAIN IN THE WATER FOR COMBATING THE OIL AND SHALL NOT BE SINKING AT INTERMEDIATE AND ALSO AT THE POINT OF ANCHORED POSITION.	IACS MEMBER CERTIFIED	TENDER DOCUMENT	P	W&V	R
8	END CONNECTORS A.S.T.M. F-962	a) MARINE GRADE ALUMINUM COMPOSITION	SAMPLING	CHEMICAL ANALYSIS CERTIFICATE CONFROMING TO MARINE GRADE ALUMINUM	Manufacturer certificate	TENDER DOCUMENT	P	R	R
		b) CONNECTOR PROFILE	SAMPLING	PROFILE SHOULD BE SIMILAR TO ASTM F- 962 STANDARD	Manufacturer certificate	TENDER DOCUMENT	P	R	R
9	BUOYANCY TO WEIGHT RATIO	3:1 ASTM F-2682-07(2012)	SAMPLING	VENDOR TO SUBMIT NECESSARY DOCUMENTATION	IACS MEMBER CERTIFIED	TENDER DOCUMENT	Р	W&V	R
10	PERFORMANCE OF THE OIL BOOM	a. FLOTATION AND PROPER CURTAINING OF THE BOOM for combating the SPILL OIL b. SHALL SUSTAIN SEA WEATHERING CONDITIONS. c. SHALL CAN BE USED FOR COMBATING POL AND CHEMICAL SPILL FORM THE VESSEL	A TRAIL HAS TO BE CARRIED OUT OF THE BOOM IN THE WITNESS OF THE IACS	VENDOR TO SUBMIT THE COMPLIANCE REPORT DOCUMENTATION	IACS MEMBER CERTIFIED	TENDER DOCUMENT	P	W&V	R/W