OIL INDIA LIMITED
(A Government of India Enterprises)
4, India Exchange Place
Kolkata -1

TELEPHONE NO. (033) 22301657
FAX NO: (033) 22302596
Email: kolpur1@oilindia.in

FORWARDING LETTER

Tender No & Date	:	**SKI8566P16** **Date: 14.09.2015**
Tender Fee	:	**Rs 1,000.00**
Bid Security Amount	:	**Rs 66,600.00**
Bidding Type	:	**Single Stage Two Bid**
Bid Closing on	:	As mentioned in the Basic Data of e-portal
Bid Opening on	:	As mentioned in the Basic Data of e-portal
Performance Guarantee	:	Applicable
Integrity Pact	:	Applicable
Delivery Required	:	**At DULIAJAN, ASSAM**

OIL invites Bids for **Supply, fabrication, Installation & Commissioning of 1 (one) no. Foam Nurser as per Annexure II** through its E-Procurement site. The bidding documents and other terms and conditions are available at Booklet No. MM/CALCUTTA/E-01/2010. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions. The details of items tendered can be found in the Item Data and details uploaded under Technical RFX.

The tender is invited with firm price for the specified quantity. Further details of tender are given below:-

1. Details of Items with Quantity and Unit of measure are as under:

SL.NO.	MATERIAL DESCRIPTION.	QUANTITY	UNIT
10	**SUPPLY, FABRICATION AND INSTALLATION & COMMISSIONING OF FOAM NURSER (Details as per Annexure-II)**	**1**	NO.

The tender will be governed by:

a) "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

b) Technical specifications with BEC/BRC and Qty. as per **ANNEXURE II** .

c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

e) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

f) Bidder are advised to fill up the Technical bid **CHECK LIST** and **RESPONSE SHEET** given in MS excel format in Technical RFx -> External Area - > Tender Documents. The above filled up document to be uploaded in the Technical RFX Response.

g) Integrity Pact :

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide **Annexure V** of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e. who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.

The name of the OIL's Independent External Monitors at present are as under:

1.SHRI RAGHAW SHARAN PANDEY, IAS(Retd.),
e-Mail ID : rspandey_99@yahoo.com

2. SHRI RAJIV MATHUR, IPS(Retd.),

e-Mail ID : rajivmathur23@gmail.com

Special Note:

1.0 General Qualification Criteria:
In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered (documentary evidence to be provided along with the bid in Technical RFx -> External Area - > Tender Documents as on the Bid Closing Date:

a) Bidder should have experience of successfully executing similar order for at least Rs 19.95 Lakhs during last 3 years as on the Bid Closing Date.

b) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than Rs 66.50 Lakhs.

2.0 Application showing full address / e-mail address with Tender fee (non-refundable) of ` 1000.00 per tender (excepting PSU and SSI units registered with NSIC) by Demand Draft in favour of M/s. Oil India Limited payable at Kolkata and to be sent to Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001. Application shall be accepted only upto one week prior to Bid Closing date. The envelope containing the application for participation should clearly indicate ""REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO **SKI8566P16 dated 14.09.2015** for easy identification and timely issue of authorisation. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through-e-mail) and will be allowed to participate in the tender through OIL's e-Procurement portal. No physical tender documents will be provided. USER_ID AND INITIAL PASSWORD WILL BE ISSUED TILL ONE WEEK PRIOR TO THE BID CLOSING DATE.

Alternatively, applicants already having User ID & Password for OIL's e-portal can pay the requisite tender fee and bid security against this tender through the online payment gateway.

On receipt of request from applicants who do not have USER_ID and initial PASSWORD, it will be communicated to the bidder (through-e-mail) and will be allowed to participate in the tender through OIL's e-Procurement portal on payment of requisite tender fees. No physical tender documents will be provided. USER_ID AND INITIAL PASSWORD WILL BE ISSUED TILL ONE WEEK PRIOR TO THE BID CLOSING DATE.

PSU's and SSI units registered with NSIC claiming exemption from payment of tender fee should submit their request with all credentials at least 7 days prior to bid closing date for participation in the tender

3.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001** only on or before the Bid Closing Date and Time mentioned in the Tender.

a) Original Bid Security
b) Detailed Catalogue (if any)
c) Any other document required to be submitted in original as per tender requirement

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate

4.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

5.0 All the Bids must be Digitally Signed using "Class 3" digital certificate (e-commerce application) with organisation name as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

6.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

7.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

8.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed Annexure-II. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/CALCUTTA/E-01/2010 for E procurement (LCB Tenders) to General Terms and Conditions for Indigenous E-Tender elsewhere, those in the BEC / BRC shall prevail.

9.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

10. Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

NOTE:

1. Bidders should submit their bids explicitly mentioning compliance / non compliance to all the NIT terms and conditions.

2. PSUs and SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender. SSI unit to submit valid NSIC certificate specifying the tendered item or its equivalent in their manufacturing range.

Yours Faithfully,

Sd-
(G. C. Sarma)
SMM(P)
For Head-Calcutta Branch

OIL INDIA LIMITED
(A Government of India Enterprise)
4, India Exchange Place, 4th floor,
Kolkata 700001,
West Bengal (India)

TELEPHONE NO. (033) 2230 1657 / 58 / 59
FAX NO: (033) 2230 2596
Email : oilcalmn@oilindia.in

ANNEXURE-II

Tender No& Date : SKI8566P16 /04 **Dated : 14.09.2015**

OIL INDIA LIMITED invites Indigenous tenders for items detailed below:

TECHNICAL SPECIFICATIONS WITH QUANTITY

Sl No. & MATERIAL CODE NO.	MATERIAL DESCRIPTION.	QUANTITY	UNIT
10 ---------- **0C000198**	**SUPPLY OF TRAILER FIRE PUMP** **Chassis of Foam Nurser – Brand new 4x2 drive truck chassis of TATA, Ashok Leyland or equivalent make.**	1	NO.
20 0C000198	**Fabrication of Foam Nurser**	01	
30	**INSTALLATION & COMMISSIONING**	01	AU

Details Specification for Item 10:-

PART – "A" CHASSIS FOR "Foam Nurser"

Brand new 4x2 drive Truck chassis of TATA, Ashok Leyland or Equivalent make manufactured not prior to six months from the date of issuance of Letter of Intent (LOI). The bidder shall take special care in selecting and designing the Foam Nurser Fire Tender considering the unit's application in rough terrain and typical oilfield roads. The offered model shall be latest and conforming to international quality standard norms, having specifications, fittings, accessories, etc. as under:

1. CHASSIS:

a	Drive &Cowl	4 x 2 Drive & Full Forward Control Cowl.
b	Engine	Min. 6 cylinder Water-cooled diesel engine.
c	Max. Output Power	Not less than 130 HP at rated rpm.
d	Max. Output Torque	Not less than 400NM at rated rpm.
e	Emission	Euro-III/BS-III or as applicable in the state of Assam at the time of delivery of the vehicle.
f	Steering	Hydraulic Power Assisted Steering (Right Hand Steering).
g	Gearbox	Minimum 5 forward speed & 1 reverse speed.
h	PTO(as applicable)	Side PTO (Chassis should be attached with PTO) for driving the Foam Pump. It should be suitable to match engine and pump characteristic. It should engaged by separate level in main cabin. Necessary support for PTO unit, shaft etc. should be provided. The drive assembly shall be dynamically balance.
i	Wheelbase	In the range of 4200 mm. to 5200mm.
j	GVW	Not less than 16000 Kg.
k	Brake	Full air or Hydraulic power assisted Dual Circuit Service Brake and suitable Parking Brake.
l	Axles	Front - 1, Rear - 1(Drive axle).
m	Suspension	Semi elliptical leaf spring suspension.
n	Wheels & Tyres	Front- 2, Rear - 4 & Spare - 1, Tyre .Size - preferably 10.00 x 20 of adequate ply rating

2. DRIVER'S CABIN:

Suitable factory built cab for Fire tender.

3. DIMENSIONS:

Full Unit:

Overall Length - Approx. 8500mm.
Max. Width – 2600 mm.
Max. Height - Not more than 3000mm (Unladen).

4. ADDITIONAL/OTHER FITMENTS & ACCESSORIES:

a. All standard gauges and meters, Horn, Reversing Alarm, Lightings, Reflectors, Roof Lamps, Windscreen wipers, Sun shade, Glove box, Lockable fuel tank, Standard Tool Kit, 30T Capacity Hydraulic Jack with handle & wheel wrench, Mud flaps/guards, etc.
b. Rear View Mirror- 2 Nos.
c. Well-covered Battery Box, Tool box. Suitable storage box at suitable location.
d. Suitable Jaw & Pint type rear Towing Hook, mounting arrangement for spare wheel.
e. First Aid Box, Fire Extinguisher, Licence Holder at suitable locations and other fittings required as per MV Act.

5. DOCUMENTATION:

A. The following documents/literatures are to be submitted along with the bid:

a. Technical leaflet, to support the specifications provided in the bid. (All specifications, as desired, as well as MODEL NAME/CODE of the offered Truck shall clearly be defined in the bid. Submission of Technical Leaflet is not sufficient).
b. A detailed Dimensional Drawing of the fire tender, showing among others overhang, seat size, leg space & sitting arrangement etc. as applicable.

B. The following documents /literatures are to be submitted along with the supply:

a. Temporary Registration, Insurance, Road Tax, Sale Letter in Form 21 & 22/22(A), etc. in the name of M/s OIL INDIA LIMITED, Duliajan as required under MV act for onward registration of the Trucks in Assam.

6. TECHNICAL CHECK LIST:

Part A TECHNICAL **A 1.1 (TRUCK CHASIS)**					
Sl. No.	**PARAMETERS / REQUIREMENTS**			**BIDDER'S OFFER (To indicate details or yes/no, as applicable)**	**REMARKS, IF ANY**
1	***Make & Model of Chassis***				
2	***Gross Vehicle Weight (GVWR)***				
3	***Drive:***				
4	***Wheelbase:***				
5	***Overall Dimensions (Width, Height & Length) of complete unit:***				
6	***Ground Clearance:***				
7	***Laden Weight (Total weight of the unit)***				
8	Engine	a	Make & Model		
		b	Max. Output Power		
		c	Max. Output Torque		

		d	Naturally Aspirated or Turbo Charged		
		e	Emission Norms		
		f	Control System (Electronic)		
9	Transmission (Main)	a	Make & Model		
		b	No. of gears		
10	***Make & Model of Transfer Case, if any***				
11	***Total number of PTOs in operation***				
12	***Make & Model of PTOs***				
13	***Make, Model & Type of Steering System***				
14	***Minimum Turning Circle Radius (MTCR)***				
15	***Type of Front Suspension***				
16	***Type of Rear Suspension***				
17	Axle Capacity	a	Front		
		b	Rear		
18	Type, Size of Wheel & Tyre	a	Front		
		b	Rear		
19	Type of Service Brake (S/Z-cam or not)				
20	Type of Wheel Brake Servos(screw type manual release or not)	a	Front		
		b	Rear		
21	Fuel Tank capacity				
22	Reversing Alarm with Blinker Lights				
23	Provision of Air Dryer in truck's pneumatic system.				

Part B DOCUMENTATIONS
B1.1 TRUCK

Sl. No.	DESCRIPTIONS	DOCUMENT ENCLOSED (Yes or No)	REMARKS, IF ANY
1	Technical leaflets with detailed specifications, Make & Model of chassis, engine, transmission, transfer case (if any), PTOs, suspension, axle, steering, wheel & rim, brake, etc.		
2	Detailed dimensional layout drawing illustrating Driver's Cabin and all major items/ components.		
3	List of tools that shall be supplied under Standard Tool Kit for general maintenance of the truck.		

7. WARRANTY/GUARANTEE:

Notwithstanding the Guarantee/Warranty clause(s) mentioned elsewhere in the NIT, complete units shall be under guarantee/warranty by the supplier for a minimum period of 1(one) year from the date of successful commissioning at site.

OIL reserves the right to inspect, test and if necessary, reject the truck or any part/parts after delivery at site, only if the said rejection is attributed to be the responsibility of the supplier. It shall, in no way be limited or waived by the reason that the truck was being previously inspected, tested and passed by OIL as per Para- 6 above.

8. DEVIATIONS FROM THE SPECIFICATIONS:

The bidder shall enclose comprehensive list of intended deviations from the technical specifications, of any clearly highlighting the reasons thereof, along with the bid. Deviations from the Technical specifications are intended, the same shall be confirmed in the offer. However, OIL reserves the right for acceptance or rejection of the deviation(s).

PART – B Fabrication OF "Foam Nurser" With Accessories

1.0 SCOPE :

1.1 This specification covers the requirements regarding design, procurement, fabrication, testing and supply of "Foam Nurser" to be used for fire fighting. The scope of supply shall be inclusive of, but not limited to the following.

1.1.1 Chassis
1.1.2 A foam compound gear/transfer pump of **500** LPM discharge capacity at 12 kg/ cm^2
1.1.3 Foam Tank of capacity **6000** Litres capacity
1.1.4 Water cum Foam monitor **500-750** GPM (UL Listed)
1.1.5 Body Fabrication/ Works
1.1.6 Control Panel
1.1.7 Accessories and spares
1.1.8 Piping, necessary controls etc.

1.2 The chassis for the "Foam Nurser" shall be procured & supplied by the Successful Bidder. The Successful Bidder shall be responsible for supplying all equipment / accessories and properly fixing them on the chassis as described in this specification. Other details and requirements which are not covered under this specification, but may be necessary to complete the **"FOAM NURSER"** and/or to fulfil the operation/performance requirement shall be provided by the Successful Bidder, who will be responsible for the design and construction of the complete Unit to the full satisfaction of M/s Oil India Ltd.

2.0 GENERAL REQUIREMENTS:

2.1 The **"FOAM NURSER"** including all accessories shall be designed, manufactured, tested etc. as per relevant Indian, International Standards, wherever applicable and as per sound engineering practice.

2.2 All the equipment and accessories shall be fixed on the Unit in a compact and neat manner and shall be so placed that each part is easily and readily accessible for use and maintenance. The centre of gravity shall be kept as low as possible.

2.3 The controls on control panel shall be so arranged that one man can operate all the controls.

2.4 The Successful Bidder shall provide a detailed description of the "**FOAM NURSER**", a list of equipment to be furnished, and other construction and performance details to which the "FOAM NURSER" shall conform.

2.5 The detailed description of the **"FOAM NURSER"** shall include, but shall not be limited to, estimated weight, wheelbase, turning clearance radius, principal dimensions, transmission, and axle ratios.

2.6 Responsibility for the "**FOAM NURSER**" and equipment shall remain with the Successful Bidder until they are accepted by the OIL.

2.7 On initial delivery of the "**FOAM NURSER**", the Successful Bidder shall supply a qualified representative to demonstrate the "**FOAM NURSER**" and provide initial instructions to representatives of the OIL regarding the operation, care, and maintenance of the "**FOAM NURSER**" and equipment supplied.

2.8 **INSPECTION & TESTING:**

2.8.1 Third-Party Certification of Test Results:-The results of tests to be certified by OIL's approved third-party certification organization.

2.8.2 Prior to dispatch of Unit from Successful Bidder's shop, Stage inspection & testing shall be carried out by the Successful Bidder to the complete satisfaction of third party inspection agency as mentioned below :-

Stage	**Scope of Inspection (But not limited to)**
First stage	**Chassis & Materials Inspection:** The Successful Bidder shall facilitate inspection of chassis by OIL's Engineers along with Third Party Inspection Agency for inspection of the Chassis & other materials to be used for fabrication of the FOAM NURSER. (i) Chassis Identification & physical verification of chassis No., engine No. etc. (ii) Verification of all document related to chassis procurement. (iii) Verification of all Documents related to Quality of material of tank. (iv) Thickness measurement of Tank and distinct marking of each material by ultrasonic thickness gauge. (v) Physical Identification of material of Tank, Super structure, under structure etc. (vi) Physical Identification of Components / sub-assemblies identification, before fabrication. (vii) Cutting & marking of material sample for laboratory test (Chemical & Physical). (viii) Verification of all manufacturers/ fabricators document including

	documents of imported items. (ix) Calibration checking and documents of testing instruments, gauges, tools, accessories etc. (x) Positioning of Tank on the chassis.
Second stage	**<u>After completion of under structure:</u>** (i) Hydro testing of Foam Tank (ii) Dye penetration test of all weld joints of Tank (iii) Verification of laboratory test (Chemical & Physical) material Test Certificates (MTC) (iv) Positive Material Identification (PMI) of material (v) Construction of under- structure & super structure (vi) Foam tank (vii) Documents related to Quality of material of Tank and thickness of tank's plates, radiography inspection report and stamped by recognised third party inspector. (viii) Dimensions check of under structure on chassis, fabricated components as per specifications & approved drawings. (ix) Location for Placement of tank, fittings, lockers, pump, quality of fabrication. (x) Calibration checking of testing instruments, gauges, tools, accessories etc.
Final stage	**<u>After completion of panelling, fitment before final painting</u>:** (i) Stability checking of the unit after mounting all equipment and accessories. It should be free from undue rattling and vibration. (ii) Check proper functioning of all types of signal lights, alarms, Bell etc. (iii) Check quality of workmanship. (iv) Check calibration of instruments, gauges, tools, accessories etc. (v) Check operation of various levers, locks, caps, fitment of Tank, linkages, Markings and plumbing work. (vi) Performance test of all the systems, Pump, load & stability test of **FOAM NURSER**, (vii) Testing of equipment / tools & Unit (viii) Checking of all relevant documents etc.

2.8.3 **<u>Stability:</u>** Stability of Unit will be such that when fully equipped & laden, if the surface on which the Unit stands is titled to either side at an angle of 27º from horizontal it will not overturn.

2.8.4 **<u>Endurance Test:</u>** The pump will be tested for a continuous period of four hours and water will not be replenished during this test, engine will not show signs of overheating. During this test, the temperature of engine should not exceed the rated temperature and that of lubricating oil 79 degree C.

2.8.5 **<u>Hydraulic Testing</u>**: All the pipings will be subjected to hydraulic test pressure of 18 Kg/cm2 for a period of 2 hrs. The pump casing will be subjected to a hydraulic test pressure of a minimum 21 Kg/cm2.

2.8.6 **<u>Shower Test:</u>** After completion of the fabrication, the Unit will be subjected to shower test as per the norms laid down under BIS. The Unit will not show any signs of leakages during this test.

2.8.7 **Road Test:** Unit will be tested for braking, acceleration & top speed by the inspecting officers.

After full laden of fire Tender.

(i) Max. Speed attained.

(ii) Any rattling or abnormal sound.

Stability test under fully equipped & loaded condition as per1.

Hand Brake- Fully laden on 1 in 4 gradients in neutral gear.

2.8.8 OIL representatives shall have access at all reasonable times to Successful Bidder's works where the Unit or its accessories are being fabricated and tested.

2.8.9 Drawings (i.e. Skelton Structure, Foam Tank drawing, General layout drawing, Load distribution chart, Electric circuit diagram etc.) & Quality assurance Plan (QAP) shall be approved by the Oil India Ltd. No supply shall be accepted unless drawings & Quality assurance Plan (QAP) are finally approved by the Oil India Ltd.

2.8.10 Third party Inspection agency shall carryout the Inspection based on approved drawings & approved QAP.

2.8.11 The inspection release note of Third part Inspection agency shall clearly stipulate that

Material /equipment have been inspected as per approved drawings & approved QAP.

2.8.12 All the tests/inspection for Unit shall be witnessed by Oil India Ltd. representatives along with third party inspection agency.

2.8.13 **For Foam Tank:**

2.8.13.1 Review of mill test certificates and Co-relation of raw materials before start of fabrication.

2.8.13.2 DP test of all welds of Foam Tank.

2.8.13.3 DP test of all nozzles to shell (reinforcement pads) for Foam Tank.

2.8.13.4 Visual and dimensional check of Foam Tank before mounting on chassis.

2.8.13.5 Hydraulic test of completed Foam Tank. Hydraulic test shall be carried out at 0.5 KG/CM2 (G) at top of Tank. Pressure shall be held for the duration to permit complete inspection.

2.8.14 **For Piping :**

2.8.14.1 Review of mill test certificates and co-relation of raw materials (for pipes, fittings, valves etc) before start of fabrication.

2.8.14.2 DP test of butt welds and final run.

2.8.14.3 DP test of all flanges to pipe welds.

2.8.14.4 Radiographic examination of 10% butt welds (selected at random).

2.8.14.5 Hydraulic test of piping installation on chassis.

2.8.14.6 Visual and dimensional check.

2.8.15 **FOR FOAM PUMP :**

2.8.15.1 Review of mill certificates for material of casing, gears and shaft.

2.8.15.2 Dynamic testing of casing.
2.8.15.3 Performance testing of pump to establish the performance curve and power absorbed at rated conditions. Parameters at maximum & minimum allowable speeds shall also be evaluated.
2.8.15.4 Power input at rated conditions
2.8.15.5 Four-hour mechanical run test shall be carried out.
2.8.15.6 Performance test shall be done on test bench with shop driver.
2.8.15.7 Four-hour run test at rated conditions for verifying satisfactory performance.
2.8.15.8 NPSH test.
2.8.15.9 Dismantle inspection of close running parts after performance test.
2.8.15.10 Visual and dimensional check.

NOTE: The above inspections & tests shall be carried out at pump manufacturer's shop prior to dispatch. Third party inspection agency shall review the documents for the tests carried out by the manufacturer.

2.8.16 **For Foam Cum Water Monitor :**
2.8.16.1 Availability of the specified flow and pressure of water and Foam solution at the base flange for the monitor.
2.8.16.2 Review of mill certificates for material.
2.8.16.3 Hydro-testing of monitor at 25 KG/CM2 pressure
2.8.16.4 Horizontal & vertical movements of monitor.
2.8.16.5 Spray/jet pattern of the monitor.
2.8.16.6 Foam expansion ratio of monitor.
2.8.16.7 Foam throws.
2.8.16.8 Workmanship & painting.

2.8.17 **For "Foam Nurser" (During Fabrication & Assembly) :**
2.8.17.1 Review of mill test certificates and co-relation of raw materials used for structure & body fabrication before start of fabrication.
2.8.17.2 Inspection of framework for soundness of welding and fitment of chassis and dimensional check.
2.8.17.3 Inspection for proper installation of pump, Tank, piping with supports and their dimensional checks.
2.8.17.4 Inspection for proper installation of piping with supporting etc. and dimensional check.
2.8.17.5 Visual inspection of raw materials for framework, cladding, flooring etc.

2.8.18 **For Completed Unit :**
2.8.18.1 All consumables (Foam, fuel, engine lube oil, Water etc.) required during inspection & testing shall be arranged by Successful Bidder at his own cost. Successful Bidder shall arrange all facilities to carry out inspection & testing.
2.8.18.2 Determination of actual payload on the chassis so as to confirm payload given by Successful Bidder in the bid. For determining actual laden weight all Tank shall be full, all removable accessories will be on Unit with a crew of six.

2.8.18.3 Static stability of the fully laden Unit shall be checked to ensure that no overturning occurs till Unit attains tilting of 35 ± 1 degrees from horizontal.

2.8.18.4 Road test of the fully laden Unit shall be carried out to ensure the maximum speed, acceleration, turning radius, breaking ability as specified by chassis manufacture.

2.8.18.5 Dimensional check of completed Unit. The overall height shall be measured both when Unit is laden with full payload and un-laden.

2.8.18.6 Test to confirm functional capability of the "**FOAM NURSER**" shall be carried out:

2.8.18.6.1 Running of Foam pump at rated conditions while discharging Foam through various outlets individually and in combination.

2.8.18.6.2 The pump shall be run for minimum 4 hours continuously at rated conditions.

2.8.18.6.3 Functional testing of each Foam outlet (hose point / hose reel) individually and in combination

2.8.18.6.4 Performance tests of Foam-cum water monitor.

2.8.18.6.5 Performance tests of Foam-cum-water monitor with water through hydrant inlets.

2.8.18.6.6 Functional testing of each hose outlet individually and in combination.

2.8.18.6.7 Vibrations at rotary parts

2.9 Personnel Protection:

2.9.1 Electrical insulation or isolation shall be provided where necessary in order to prevent electrical shock from onboard electrical systems.

2.9.2 Workmanship shall ensure an operating environment free of accessible sharp projections and edges.

2.9.3 Safety-related (caution, warning, danger) signs shall meet the requirements of job.

2.10 Controls and Instructions :

2.10.1 Illumination shall be provided for controls, switches, instruction plates, gauges, and instruments necessary for the operation of the "**FOAM NURSER**" and the equipment provided on it.

2.10.2 All required signs, plates, and labels shall be permanent in nature and securely attached

2.10.3 No gauge or visual display shall be more than 84 in. (2.1 m) above the level where the operator stands to read the instrument.

2.11 Unit Stability :

2.11.1 When the "FOAM NURSER" is loaded to its maximum in-service weight, the height of the Unit's center of gravity shall not exceed the chassis manufacturer's maximum limit.

2.12 Weight Distribution :

2.12.1 When the "**FOAM NURSER**" is loaded to its maximum in-service weight, the front-to-rear weight distribution of the "**FOAM NURSER**" as defined shall be within the limits set by the chassis manufacturer.

2.12.2 The axle loads shall not be more than the axle loads specified by the chassis manufacturer under full load and all other loading conditions.

2.13 **Load Distribution :**

2.13.1 Using the information supplied by the OIL, the "FOAM NURSER" manufacturer shall calculate the load distribution for the "FOAM NURSER".

2.13.2 The manufacturer shall engineer the "FOAM NURSER" to comply with the gross axle weight ratings (GAWR), the overall gross Unit weight rating (GVWR), and the chassis manufacturer's load balance guidelines.

2.13.3 **The total laden weight of the unit should not exceed the permissible GVW of Unit.**

2.14 **FOAM NURSER Performance :**

2.14.1 The FOAM NURSER shall meet all the requirements while stationary on a grade of 6 percent in any direction.

2.15 **Serviceability :**

2.15.1 Where special tools are required for routine service on any component of the FOAM NURSER, such tools shall be provided with the FOAM NURSER.

2.16 **Road Tests :**

2.16.1 Road tests shall be conducted in accordance with this section to verify that the completed FOAM NURSER is capable of compliance roadability.

2.17 **INFORMATION / DOCUMENTS REQUIRED FROM SUCCESSFUL BIDDER :**

2.17.1 Any documentation provided with the FOAM NURSER shall be permitted to be in printed format, electronic format, audiovisual format or a combination thereof.

2.17.2 All drawings & literature shall be kept in Proper folders.

2.17.3 All literature shall be on A-4 size paper and shall be properly laminated.

2.17.4 Each drawing shall be kept in separate pockets in folder. Contents in each pocket shall be labelled properly.

2.17.4.1 **AFTER PLACEMENT OF ORDER :**

The following documents are required to be submitted in 2 sets and to be approved prior to start of fabrication**:**

2.17.4.1.1 Flow diagrams showing all piping Tank, pump, valves etc.

2.17.4.1.2 GA & cross sectional drawings, characteristic curves and other details for Foam pump.

2.17.4.1.3 Drawings for system to drive pump from engine.

2.17.4.1.4 Detailed Drawing for Foam-cum water monitor.

2.17.4.1.5 Fabrication drawings & data for Foam tank.

2.17.4.1.6 Line diagram for electrical circuits.

2.17.4.1.7 Drawings showing layout of all equipment, lockers, cabin etc.

2.17.4.1.8 QAP incorporating the stipulated inspection and testing requirements.

2.17.4.2 **AFTER COMPLETION OF ORDER (4 SETS) :**

The manufacturer's record of FOAM NURSER construction details, including the following Information:

2.17.4.2.1 M/s Oil India Ltd. name and address (Oil India Ltd., Duliajan, Dibrugarh , Assam.)
2.17.4.2.2 FOAM NURSER manufacturer, model, and serial number
2.17.4.2.3 Chassis make, model, and serial number.
2.17.4.2.4 Front tire size and total rated capacity in pounds (kilograms)
2.17.4.2.5 Rear tire size and total rated capacity in pounds (kilograms)
2.17.4.2.6 Chassis weight distribution in pounds (kilograms) with Foam & manufacturer mounted equipment (front and rear)
2.17.4.2.7 Engine make, model, serial number, rated horsepower and related speed, and governed speed
2.17.4.2.8 Fuel tank capacity
2.17.4.2.9 Battery make, model, and capacity in cold cranking amps (CCA)
2.17.4.2.10 Chassis transmission make, model, and serial number
2.17.4.2.11 Chassis transmission gear ratio
2.17.4.2.12 Pump make, model, rated capacity in liters per minute and serial number
2.17.4.2.13 Foam tank certified capacity in liters.
2.17.4.2.14 Paint manufacturer and paint number(s)
2.17.4.2.15 As built drawings of FOAM NURSER
2.17.4.2.16 As built drawings for tank.
2.17.4.2.17 Flow diagram.
2.17.4.2.18 GA & cross sectional drawings, characteristic curves and other details for Foam pump.
2.17.4.2.19 As built Drawing for Foam-cum water monitor.
2.17.4.2.20 As built Line diagram for electrical circuits.
2.17.4.2.21 All inspection and testing records for tank, pump, piping, valves, monitor etc.
2.17.4.2.22 Operating and instruction manual for the FOAM NURSER. This should also contain adequate information for all bought out items also.
2.17.4.2.23 Fire pump manufacturer's certification of suction capability
2.17.4.2.24 Fire pump, the pump manufacturer's certification of the hydrostatic test
2.17.4.2.25 Weight documents showing actual loading of “FOAM NURSER” (with the Foam full but without personnel, equipment, and hose).
2.17.4.2.26 Operations and Service Documentation :
2.17.4.2.26.1 The Successful Bidder shall supply operation and service documentation covering the completed FOAM NURSER as delivered and accepted.
2.17.4.2.26.2 The documentation shall address at least the inspection, service, and operations of the “FOAM NURSER” and all major components thereof.

3.0 FOAM NURSER EQUIPMENT:

3.1 **Equipment Storage :**

3.1.1 A minimum of 20 ft^3 (0.6 m^3) of enclosed weather-resistant compartmentation meeting the requirements for the storage of equipment.

3.2 **Hose Storage :**

3.2.1 A minimum hose storage area of 6 ft3 (0.2 m3) for 2½ in. (65 mm) or larger fire hose that meets the requirements.

3.3 **Minor Equipment :**

3.3.1 Brackets or compartments shall be furnished so as to organize and mount the specified equipment.

3.3.2 **Following equipments shall be supplied:**

3.3.2.1 One first aid kit

3.3.2.2 One Nos. HDPE Long Spine Board Stretcher.

3.3.2.3 Two combination spanner wrenches

3.3.2.4 Two hydrant wrench

3.3.2.5 Double female adapter, sized to fit 2½ in. (65 mm) conforming to IS-901/1993- 5 Nos. (In locker)

3.3.2.6 Double male adapter, sized to fit 2½ in. (65 mm) conforming to IS-901/1993- 5 Nos. (In locker)

3.3.2.7 Four Nos. wheel chocks with chain link, mounted in readily accessible locations, each designed to hold the FOAM NURSER.

3.3.2.8 A 24 volts DC operated GRAND make blinker light bar (minimum three blinkers on each side) with PA system and siren shall be provided on top of the Unit with firm support and assembly shall be covered with SS grill. Assembly shall be operable from cabin- 1 No. (fitted on roof, operable from cabin)

3.3.2.9 Fog lamps powered by the battery of the Unit- 2 Nos. (Fitted on front of FOAM NURSER. Switch in cabin).

3.3.2.10 Reversing lights-2 Nos. (At rear of chassis)

3.3.2.11 Strong Reversing siren connected with reverse gear of the Unit-1 set (Mounted on roof)

3.3.2.12 All tools required for normal / routine maintenance of the Unit, which are not included with the kit of chassis -1 Set (In tool box under rear seat in cabin).

3.3.2.13 Description of Ordinary Hand Tools in tool box

Sr No	**Description of Material**	**Quantity of Tools**
1.	Set of pipe wrench of sizes: - 8",10",12",14",18"	01 each
2.	Double open end spanner (set of 6 mm to 32 mm) 6x7,8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22, 21x23, 22x24, 24x26, 24x27, 25x28, 30x32	01 Set
3.	Ring spanner set (06 mm to 32 mm) 6x7, 8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22, 21x23, 24x26, 24x27, 25x28, 30x32 (Total 13 Nos.)	01 Set

4.	Adjustable slide wrench (04 Nos.) (150 mm, 200, 250 mm & 300 mm)	01 each
5.	Allen keys (in L' shape) & (size in MM) 1.5, 2, 2.5, 3, 04, 05, 06, 07, 08, 09, 10 & 12 (12 Nos.)	01 each
6.	Combination pliers (02 nos.) 150 mm & 200 mm	01 each
7.	Flat file (02 Nos.) 150 mm & 200 mm	01 each
8.	Half round file (200 mm)	01 No.
9.	Hack saw frame with handle (for 12" long blade) along with 10 Nos. of blades.	01 Set
10.	Screw drivers (in mm) 04 Nos. 50x3, 100x4, 125x6, 150x8.	01 each
11.	Oil can 1/2 pint capacity	01 No.
12.	Steel measuring tape (05 meter long)	01 No.
13.	Nose Plier 150 mm	01 No.
14.	Bolt Cutter-12 Inch & 24 Inch with Spare Blades Set for Bolt Cutters (Taparia Make)	02 No. Each
15.	Tin Cutter of good quality	02 Nos.
16.	Tool box, to contain all above mentioned tools in proper condition. It should be drawer type with 03 pull out drawers and a tote tray with locking system.	01 No.
17.	Centre Punch	02 No.
18	Threading Tools, 20 Pcs Taps And Die Set	01 Set

3.3.2.14 PESO/CCE approved removable spark arrestor (If chassis manufacturer not provided) fitted to the exhaust of the engine - 1 No.

3.3.2.15 Stainless Steel dividing breeching each having two 63MM female instantaneous type outlets, conforming to IS-905/1980- 1 Nos. (In Locker)

3.3.2.16 Stainless Steel collecting breeching each having two 63MM male instantaneous type outlets, conforming to IS-905/1980- 1 Nos. (In Locker)

3.3.2.17 Stainless Steel 3 way suction collecting head (With one 140MM outlet with round female threads and two female instantaneous type inlets), conforming to IS-904/1983-1 Nos. (In Locker).

3.3.2.18 Lightweight PVC rubber suction hose fitted with round thread male-female gun metal couplings. Length – 4.5 meter, Diameter: as per pump suction - 4 Nos. (In compartment on top deck, Compartment shall be open able from top with latching system)

3.3.2.19 Suction strainer with foot valve size to suit suction hose as per IS: 907-1984 - 1 Nos. (In locker)

3.3.2.20 Stainless steel foot strainer-1 Nos. (In locker)

3.3.2.21 Suction Wrench to tighten suction hose as per IS:4643- 04 Nos. (In locker)

3.3.2.22 TFT make hand controlled non-aspirating aqua fog / Foam type nozzles having spray/jet pattern with variable flow & low pressure features (suitable for both Foam & water)– 2 Nos. (in locker)

3.3.2.23 Fireman's axe with belt and pouches conforming to IS: 3650-1981- 02 Nos. (In locker)

3.3.2.24 Crow bar (IS: 704-1984)- 1 No. (In locker)

3.3.2.25 Sledge hammer - 1 No. (In locker)

3.3.2.26 Female Adopter (140 mm X 100 mm) - 02 Nos.

3.3.2.27 Spade – 02 No.

3.3.2.28 Ceiling Fire hook as per IS:927:1981-2007 or latest - 1 No.

3.3.2.29 One 6 lb (2.7 kg) flathead or pick head axe mounted in a bracket fastened to the Tender

3.3.2.30 Door Breaker-01 No.

3.3.2.31 Carpenter saw-01 No.

3.3.2.32 Inline inductor 225 LPm-01 No.

3.3.2.33 Inline inductor 450 LPM- 01 No.

3.3.2.34 ISI marked 63MM SS male instantaneous couplings (threaded) with caps - 4 Sets.

3.3.2.35 ISI marked 63MM SS female instantaneous couplings (threaded) with caps - 4 Sets.

3.3.2.36 Hydrant key for 4" Gate valve : 10 nos.

3.3.2.37 Hydrant Key for 2 ½'' hydrant valve: 10 Nos.

3.3.2.38 Suction adopter (Stainless Steel) 4 inch round threaded by 63 mm instantaneous male coupling -02 Nos.

3.3.2.39 Portable Pressure gauge for checking of Tyre Air Pressure – 02 Nos.

3.3.2.40 Hydraulic Jack (Floor Type) – 15 to 20 Ton capacity.

3.3.2.41 Curtain Nozzle with 63 MM Male Instantaneous, Stainless Steel with portable with Carrying Handle (Make: Newage/ Shah Bhogilal/ TFT/ Akron) - 04 Nos.

3.3.2.42 Zero Torque Nozzle: Multipurpose pistol grip lightweight aluminium alloy construction nozzle with Zero-Torque technology with various flow settings & spinning teeth. Flow: 115-360-475-550-750 LPM along with foam barrel attachment (Make: Newage/ Shah Bhogilal/ TFT/ Akron) -04 Nos.

3.3.2.43 Fast Action Nozzle Arrangement for Detent flows To shut off pressure assisted flush without shutting down Slide type valve for turbulence free flow moulded rubber B teeth for full fill Power for gasket grabber inlet screen Pistol type grip for holding Flow straightness for quality jet stream Suitable for flow of 450 LPM at 7kg/cm^2 with inlet of 63mm size Weight 1.6 kg approximately along with foam barrel attachment (Make: Newage/ Shah Bhogilal/ TFT/ Akron) - 04 No.

3.3.2.44 Dual Pressure Nozzle Fast Action Nozzle Standard & Emergency Mode with 185 -224 GPM @7 Kg/cm2 (Make: Newage/ Shah Bhogilal/ TFT/ Akron) - 04 Nos.

3.3.2.45 Flow meter 4 inch line size & Flow – 3200 LPM @ 10 Bar (Make : Rockwin / Siemens) – 01 No.

4.0 CHASSIS AND UNIT COMPONENTS :

4.1 Welding and drilling on frame work of chassis are not allowed.

4.2 An engine hour-meter shall be provided.

4.3 An angle of approach and an angle of departure of at least 8 degrees shall be maintained at the front and the rear of the Unit when it is loaded.

4.4 FOR OTHER WORK ON CHASSIS :

4.4.1 No part of the bodywork shall reduce ground clearance of Unit to less than 36cm. & not increase the overall width to more than 2.60 M. The highest part of the Unit with the monitor mounted on it shall not exceed 3.60M from the ground level. The construction of super-structure shall not reduce the angles of approach below 30 degree.

4.4.2 3M/Hi-tech/ Zenith make anti-vibration rubber mats shall be provided while mounting the Tank etc. on the chassis.

4.4.3 Reflective stripe(s) shall be affixed to the perimeter of the unit as per MVA.

4.4.4 Arrangement shall be made on Dashboard opposite to the fire officers' seat to fix a Motorola mobile wireless set of 25W capacity. Power supply shall be provided from Unit battery. M/s Oil India Ltd. shall fit wireless set later.

4.5 Optical Warning Devices :

4.5.1 FOAM NURSER shall have a system of optical warning devices

4.5.2 The optical warning system shall consist of an upper and a lower warning level.

4.5.3 The four zones shall be designated A, B, C, and D in a clockwise direction with zone A to the front of the FOAM NURSER in accordance with Figure 4.8.3.2.

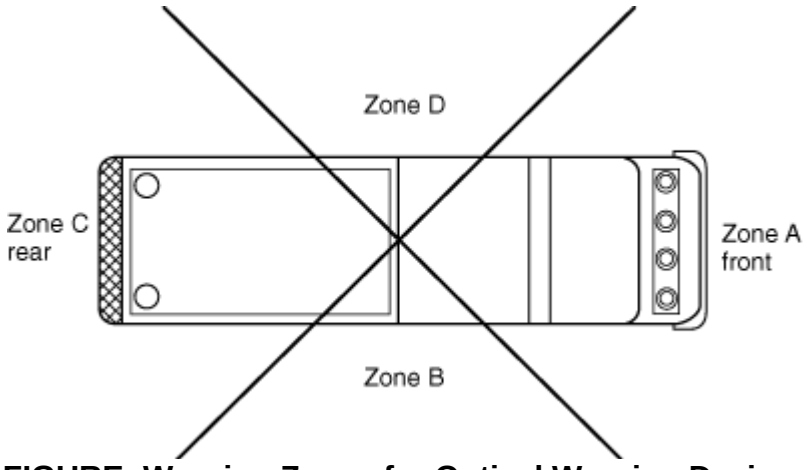

FIGURE: Warning Zones for Optical Warning Devices

4.5.4 Each optical warning device shall be installed on the FOAM NURSER and connected to the FOAM NURSER's electrical system in accordance with the requirements

4.5.5 A master optical warning device switch that energizes all of the optical warning devices shall be provided in driver's cabin.

4.5.6 The optical warning system on the “FOAM NURSER” shall be capable of two separate signaling modes during emergency operations.

4.5.7 One mode shall signal to drivers and pedestrians that the FOAM NURSER is responding to an emergency and is calling for the right-of-way.

4.5.8 One mode shall signal that the FOAM NURSER is stopped and is blocking the right-of-way.

4.5.9 A switching system shall be provided that senses the position of the parking brake or the park position of an automatic transmission.

4.5.10 When the master optical warning system switch is closed and the parking brake is released or the automatic transmission is not in park, the warning devices signaling the call for the right-of-way shall be energized.

4.5.11 When the master optical warning system switch is closed and the parking brake is on or the automatic transmission is in park, the warning devices signaling the blockage of the right-of-way shall be energized.

4.5.12 The system shall be permitted to have a method of modifying the two signaling modes.

4.5.13 The optical warning devices shall be constructed or arranged so as to avoid the projection of light, either directly or through mirrors, into any driving or crew compartment(s).

4.5.14 The front optical warning devices shall be placed so as to maintain the maximum possible separation from the headlights.

4.5.15 The optical sources on each level shall be of sufficient number and arranged so that failure of a single optical source does not create a measurement point, in any zone on the same level as the failed optical source, without a warning signal at a distance of 100 ft (30 m) from the geometric center of the FOAM NURSER.

4.5.16 Flash Rate.

4.5.16.1 The minimum flash rate of any optical source shall be 75 flashes per minute, and the minimum number of flashes at any measurement point shall be 150 flashes per minute.

4.5.17 Color of Warning Lights.

4.5.17.1 Permissible colors or combinations of colors in each zone, within the constraints imposed by applicable laws and regulations, shall be as shown in Table.

Table Zone Colors

Color	Calling for Right-of-Way	Blocking Right-of-Way
Red	Any zone	Any zone
Blue	Any zone	Any zone
Yellow	Any zone except A	Any zone
White	Any zone except C	Not permitted

4.5.18 **Audible Warning Devices :**

4.5.18.1 Audible warning equipment in the form of at least one automotive traffic horn and one electric or electronic siren shall be provided.

4.5.18.2 A means shall be provided to allow the activation of the siren within convenient reach of the driver.

4.6 **Work Lighting :**

4.6.1 **Ground Lighting :**

4.6.1.1 The work area immediately behind the Unit shall be illuminated

4.6.1.2 The “FOAM NURSER” shall be equipped with lighting that is capable of providing illumination on ground areas within 30 in. (800 mm) of the edge of the FOAM NURSER in areas designed for personnel to climb onto the FOAM NURSER or descend from the FOAM NURSER to the ground level.

4.6.1.3 All other ground area lighting shall be switchable.

4.6.1.4 Surface Lighting: The FOAM NURSER shall have sufficient lighting on all work surfaces, steps, and walkways.

4.6.1.5 Interior Lighting: The FOAM NURSER shall have sufficient lighting to provide in the driving and crew compartments.

4.6.1.6 Each enclosed tool and equipment compartment greater than 4 ft3 (0.1 m3) in volume and having an opening greater than 144 in.2 (0.9 m2) shall have an average minimum level of lighting.

4.6.1.7 Switches for all work lighting shall be readily accessible.

4.6.1.8 The lights shall be arranged or protected to minimize accidental breakage.

4.6.2 **Backup Alarm (Reverse Horn) :**

4.6.2.1 An electric or electronic backup alarm (Reverse Horn) with light indication shall be provided that meets the Type D (87 dBA) requirements.

4.6.3 The FOAM NURSER shall be equipped with all legally required stop, tail, and directional lights.

4.6.4 Directional lights shall be visible from the front, sides, and rear of the FOAM NURSER.

4.6.5 Equipment shall not be mounted in a manner that obscures the stop, tail, or directional lights.

5.0 **DRIVING AND CREW AREAS**:

5.1 **General :**

5.1.1 Each crew riding position shall be within a fully enclosed personnel area.

5.1.2 All interior crew and driving compartment door handles shall be designed and installed to protect against accidental or inadvertent opening.

5.1.3 **Means of Escape :**

5.1.3.1 Any interior area to be occupied by personnel shall have a minimum of two means of escape.

5.1.3.2 Each opening shall be large enough for a person to escape through the opening.

5.1.4 **Instrumentation and Controls :**

5.1.4.1 All the standard instrumentation and controls shall be mounted in the driving compartment and shall be identified and visible to the driver while seated.

5.1.5 Controls and switches that are expected to be operated by the driver while the FOAM NURSER is in motion shall be within convenient reach for the driver.

5.1.6 There shall be two doors in the cabin, sized generously with proper arrangement for embarking and disembarking of crewmembers. The doors shall open outwards and hung forward and shall have levers for unlatching from outside and inside. The doors shall be provided with shatterproof safety glasses which can be raised / lowered by winding type mechanism.

5.1.7 First aid box made of fiber glass/ aluminum suitable for 10 persons shall be provided in the cabin. First aid box shall be suitably mounted in the cabin at easily accessible location.

5.1.8 Non slip type steps & grab rails shall be provided in the cabin to assist the crew members to get in & out. Front side of the cabin shall have glass paneling so that the crew can have an all-around view.

5.1.9 The cabin structure shall be so designed so as to avoid any vibration / rattling / deformation in the intended usage of the Unit. The entire floor of the cabin shall be provided with 3M make vinyl matting of minimum 6MM thickness with anti-skid features.

5.1.10 Battery shall be placed in totally enclosed box with spark proof gland for cable entry with battery cut-Off switch. Installed battery shall have a charging faculty from external source at its location itself.

5.2 **Seating arrangement**

5.2.1 Seating arrangement for 6 persons shall be provided in cabin.

5.2.2 For Driver & Officer In-charge **each** - Pacifica Air-50XD Wide “HO Bostrom, USA make”

5.2.3 For Crew (02 Nos.) - Tanker 550 ABTS SLS Wide “HO Bostrom, USA make”

5.2.4 For Crew (02 Nos.) - Sierra ABTS “HO Bostrom, USA make”

6.0 BODY, COMPARTMENTS AND EQUIPMENT MOUNTING:

6.1 **STRUCTURE / FRAME WORK :**

6.1.1 The structure/frame work on chassis & crew cabin shall be of welded construction and made from 30 mm X 30 mm X1.6 mm hollow square section of **SS-316L** and distance between each horizontal and vertical square shall be maximum 400 mm. Cross supporting members of the panelling shall be made of SS-316L channels of 75 mm X 5 mm thickness

6.1.2 The entire roof of the Unit including the crew cabin top, entire rear, crew cabin floor, locker floor and sides shall be made from 2 MM of **SS- 316L**

sheets suitably treated for slippage and these shall be bolted to the frame for ease in removal of the tank for repairs. The roof of the cabins should be rigid enough to take the weight of two persons without deforming the roof sheeting.

6.1.3 Area around the monitors operation shall be provided with 16 SWG anodized aluminum-checkered plate (in addition to the 2 mm Alluminum sheets) and shall be bolted to the frame.

6.1.4 Proper access ladder with Grab rails and non-skid steps shall be provided to give access to the roof for approaching to the manholes for tank and monitor etc.

6.1.5 Access handrails shall be provided at each entrance to a driving or crew compartment and at each position where steps or ladders for climbing are located. Access handrails shall be constructed of, or covered with, a slip-resistant, non-corrosive material. Handrails shall be between 1 in. and 1-5/8 in. (25 mm and 41 mm) in diameter and have a minimum clearance between the handrails and any surface of at least 2 in. (51 mm).

6.1.6 All handrails shall be designed and mounted to reduce the possibility of hand slippage and to avoid snagging of hose, equipment, or clothing.

6.1.7 Single Roller type Sun Shade Screen Assembly and long arm outside fitting rear view mirrors shall be fitted to cabin.

6.1.8 Proper draining arrangements shall be provided on the entire roof, crew cabin and inside the lockers.

6.2 **LOCKERS :**

6.2.1 Size and number of locker shall be decided such that on either side 15 nos. 22.5 m length fire hose can be easily accommodated in single layer and equipment may be accommodated in maximum two layers. Sufficient numbers of lockers shall be provided to accommodate all the equipment/accessories in an easily accessible manner.

6.2.2 All lockers shall be provided with Roller type shutter doors. The shutters shall have smooth operation. The aluminum shutters shall be dust & water proof of **M/s. MCD, France** imported make only made of extruded aluminum & duly hard anodized.

6.2.3 Roller shutters shall be of hollow rectangular shaped & made from aluminium inter-changeable links connected by means of plastic profiles.

6.2.4 Sealing of roller shutter shall be watertight when closed.

6.2.5 Roller shutters shall be inward rolling type and shall be provided with guide rails over entire length on both sides to make them torsion free.

6.2.6 When shutters are rolled, unobstructed access should be available to the equipment & hoses.

6.2.7 Shutters should open in all positions of the Unit even in rough terrains.

6.2.8 Roller shutters shall have locking arrangement to prevent accidental opening during movement of the Unit.

6.2.9 **Spare lock of shutters – 10 Nos. shall be provided.**

6.2.10 All the lockers shall be illuminated by **MCD make LED lightning system**.

6.2.11 All the lockers shall be fitted with internal lighting, which shall be capable of being automatically switched, ‘ON’ and ‘OFF’ by the opening of shutters. A master switch for isolating the locker lighting circuit shall also be fitted in the driver’s cabin.

6.2.12 Lockers shall have arrangement for self-draining of any water entering inside

6.2.13 Sufficient number of lockers shall be provided for storage of all accessories listed. Lockers shall also be provided to accommodate 4 nos., 10 kg DCP extinguishers.

6.2.14 Lockers shall be accessible from ground level by a man of average height (1.67M). All the Lockers shall be provided with 3M make, 4MM thick, vulcanized synthetic rubber mat at bottom and up-to 12 inch on three sides.

6.2.15 The hose storage area(s) shall be reinforced at the corners.

6.2.16 The bottom shall be made of removable sections fabricated from noncorrosive materials.

6.2.17 The bottom shall be constructed to prevent the accumulation of water and allow ventilation to aid in drying of hose.

6.2.18 The interior shall be smooth and free from all projections, such as nuts, sharp angles, or brackets that might cause damage to the hose.

6.2.19 Ladders and equipment holders shall be placed so as not to obstruct the laying or removal of hose from the storage area.

6.3 **Compartmentation :**

6.3.1 Any enclosed external compartments shall be weather resistant and ventilated and have provisions for drainage of moisture.

6.3.2 All electrical junctions or wiring within compartments shall be protected from mechanical damage resulting from equipment stored in the compartment.

6.4 **Equipment compartments:**

6.4.1 Equipment holders or compartments shall be provided for all tools, equipment, and other items that are on the FOAM NURSER.

6.4.2 Equipment holders shall be attached and shall be designed so that equipment remains in place under all operating conditions.

6.4.3 All tools and equipment shall be readily accessible.

6.5 **Pump and Plumbing Access :**

6.5.1 **FOAM PIPINGS:**

6.5.1.1 Foam piping shall be of SS-316L grade.

6.5.1.2 Stainless Steel lines joint - The bolting (studs, bolts) at break flanges shall be of SS-316L with SS washers.

6.5.1.3 A flow chart/schematic diagram shall be made and supplied with the FOAM NURSER.

6.6 One or more doors or panels that open or are removable without the use of tools shall be provided to allow visual inspection or access for checking the fire pump and plumbing area(If required).

6.7 All valves, gauges, controls, and other plumbing equipment shall be accessible for service and replacement.

6.8 The clear space required by the pump manufacturer to perform in-truck overhaul and maintenance shall be provided.

6.9 **Stepping, Standing and Walking Surfaces :**

6.9.1 Steps, platforms, or permanently attached ladders shall be provided so that fire fighters have access to all working and storage areas of the FOAM NURSER.

6.9.2 The maximum stepping height shall not exceed 18 in. (460 mm), with the exception of the ground to first step, which shall not exceed 24 in. (610 mm).

6.9.3 All ladders shall have at least 7 in. (175 mm) of clearance between any rung and the body or other obstruction.

6.9.4 All steps, platforms, or ladders shall sustain a minimum static load of 500 lb (227 kg) without deformation.

6.10 All materials used for exterior surfaces designated as stepping, standing, and walking areas and all interior steps shall have slip resistance.

6.11 All materials used for interior floors shall have slip resistance.

6.12 **Access Handrails :**

6.12.1 Access handrails shall be provided at each entrance to a driving or crew compartment and at each position where steps or ladders for climbing are located.

6.12.2 Access handrails shall be constructed of, or covered with, a slip-resistant, noncorrosive material i.e. Aluminium / SS.

6.12.3 Handrails shall be between 1 in. and 1 in. (25 mm and 42 mm) in diameter and have a minimum clearance between the handrails and any surface of at least 2 in. (52 mm).

6.12.4 All handrails shall be designed and mounted to reduce the possibility of hand slippage and to avoid snagging of hose, equipment, or clothing.

6.13 **PAINTING AND MARKING :**

6.13.1 Unit and monitor should be painted with 2 coats of zinc phosphate epoxy primer each of 50 microns DFT and two coats of polyurethane finished red paint each coat of 50 microns DFT.

6.13.2 All the lockers / cabins shall be provided with Stainless steel Name Plates with letters itched/ embossed on it boldly indicating the content.

6.13.3 Foam lines should be painted with of zinc phosphate epoxy primer each of 50 microns DFT and two coats of polyurethane finished paint each coat of 50 microns DFT. Foam lines shall be painted red in colour.

6.13.4 Paint shall be of Asian/Burger/Akzonoble/3M make only.

6.13.5 M/s Oil India Ltd. emblem in original colour together with name shall be written in golden yellow colour on both sides of the Unit.

6.13.6 On the front of the Unit “FOAM NURSER” shall be written IN ENGLISH.

6.13.7 The inside of lockers shall be painted in pale Cream colour.

6.13.8 The chassis frame shall be painted black and wheel arch shall be painted white.

6.13.9 Mud flappers of sufficient length and width shall be provided at wheels.

6.13.10 Under frame of Chassis shall be painted with chlorinated rubber paint.

6.13.11 The Unit shall be clearly having the following marks at suitable locations.

(a) Manufacturer’s name & trade mark.
(b) Year of manufacture
(c) Pump serial numbers and capacities.
(d) Capacity of Foam tank in litres.
(e) Engine and chassis number.
(f) All instrument control & valves shall be identified with properly itched metallic Name plates.
(g) All valves and hoses inlet and outlet shall also be identified by suitable metallic Nameplates.

6.13.12 All exposed ferrous metal surfaces that are not plated or stainless steel shall be cleaned and prepared and shall be painted or coated.

6.13.13 The paint or coating, including any primer, shall be applied in accordance with the paint or coating manufacturer's recommendation.

6.13.14 A reflective stripe(s) shall be affixed to the perimeter of the FOAM NURSER.

6.13.15 The stripe or combination of stripes shall be a minimum of 4 in. (100 mm) in total width and shall conform the requirements.

6.13.16 At least 50 percent of the cab and body length on each side, at least 50 percent of the width of the rear, and at least 25 percent of the width of the front of the FOAM NURSER shall have the reflective material affixed to it.

7.0 Foam Concentrate Pump (FOAM PUMP) :

7.1.1 Pump to handle Foam Compound (AFFF/FFFP) shall be rotary gear type and EMI (Edward mfg. Inc. USA) make.

7.1.2 The pump shall be as per OEM specification and all components & materials of construction shall be as per OEM. The shaft sealing shall be as per OEM.

7.1.3 The pump shall have be minimum discharge capacity of 500 LPM at discharge pressure 12.0 KG/CM2 (G).

7.1.4 The pump shall be used to :

(a) Deliver foam compound from foam tank on chassis to the balance pressure foam proportionating system for each of the 6 outlets as mentioned in clause 4.1.9.

(b) Transfer foam compound from foam tank on chassis to other tender. One 50 mm screwed male connection (with cap) on each side of Unit.

(c) Transfer foam compound from barrels to foam tank on chassis.

(d) Delivery foam compound from barrels kept on ground to the balance pressure foam proportionate system.

7.1.5 The pump shall be driven by the main engine on chassis through a side power take-off unit.

7.1.6 The pump shall have a by-pass to route the discharge to foam tank on chassis.

7.1.7 The pump shall have a PSV (set at suitable pressure) for protection of pump against over pressure and PSV discharge will be routed to foam tank on chassis. Isolation valve shall be provided on downstream side of PSV.

7.2 SPARES :

7.2.1 The following mandatory spares shall be supplied by the Successful Bidder for foam pump:

(a) Shaft with gears- 1 Set

(b) Mechanical seal (s) complete with sleeve & gland plate etc.- 2 Nos.

(c) Mechanical seal spares- 2 Sets.

(d) Rotating & stationery faces with packing- 2 Sets.

(e) Springs pins, gaskets etc- 2 Sets

7.2.2 An instruction plate shall be provided for the foam proportioning system that includes, at a minimum, a piping schematic of the system and basic operating instructions.

7.2.3 Each control, gauge, and indicator necessary to operate the foam proportioning system shall be marked with a label as to its function.

7.2.4 A plate, located at the operator's position, shall provide the following information pertaining to the operating specifications of the foam proportioning system:

(a) Types of foam concentrate(s) compatible with system design
(b) Proportioning rate (percentage)
(c) Maximum/minimum Foam flows (LPM)
(d) Maximum/minimum operating pressures

7.3 **Operations and Maintenance Manual :**

7.3.1 Two copies of an operations and maintenance manual shall be provided.

7.3.2 The manual shall include a complete diagram of the system, together with operating instructions, system foam concentrate capabilities, original system calibration, and details outlining all recommended maintenance procedures.

7.4 **Certification and Documentation :**

7.4.1 The final installer shall certify the following:

(a) The foam system, as installed, complies with the foam equipment manufacturer's installation recommendations.
(b) The foam system has been calibrated and tested to meet the foam equipment manufacturer's and the purchaser's performance specifications.
(c) The accuracy of the foam proportioning system meets the requirements

8.0 WATER CUM FOAM MONITOR:

8.1 Foam-cum water monitor with manual override shall be mounted on rooftop of the “FOAM NURSER” having following specification:

(a) Make & Model: Suitable Make & Model
(b) Foam/ Water monitor should be **UL listed /FM approved**
(c) Capacity: Variable flow of 750 to 500 US GPM single Nozzle with Jet, Spray & Fog Pattern.
(d) Type: Non-aspirating
(e) Discharge Capacity: 750 US GPM at 7.0 KG/CM2 (at the base flange of the monitor)
(f) Barrel Size: Suitable size as per requirement
(g) Material of Construction: Entire body along with all components shall be SS-316L.

8.2 **PERFORMANCE:**

(a) Water Throw at 7.0 KG/CM2 (Monitor inlet pressure): Minimum 60 meter-Horizontal.
(b) Foam Throw at 7.0 KG/CM2 (Monitor inlet pressure): Minimum 50 meter-Horizontal.
(c) Foam expansion :7-8
(d) Type of nozzle: Non-aspirating aqua fog/Foam type.
(e) Rotation: Vertical:90 deg.(+75 degrees:-15 degrees)
(f) Horizontal: 340 deg stop to stop.

8.3 Operational control for the monitor shall be provided at the rooftop for horizontal movement, vertical movement & jet/spray pattern of the monitor.

8.4 One oil filled pressure gauge shall be provided near the monitor inlets flange.

8.5 Separate connection shall be made to operate Foam/Water Monitor directly from pressurized hydrant mains/ Tender by means of suitably sized inlet line 4 nos., 63MM, ISI marked instantaneous male connectors with strainer fitted on the rear side of the FOAM NURSER, shall be connected to the Monitor line with a SS isolation valves.

9.0 FOAM CONCENTRATE TANK :

9.1.1 The foam compound tank of **6000 liters** net capacity shall be fabricated out of 5MM thick SS-316L plates for the bottom & 4 MM thick SS-316L for the sides & top. In addition 2% of expansion space shall be made in the tank, over and above foam compound capacity.

9.1.2 **The both side of Foam tank shall be Die Pressed Stiffened type.**

9.1.3 The foam tank shall be of welded construction and shall be suitably stiffened with SS 316L angles/flats so as to avoid buckling and distortion.

9.1.4 Weld joints shall be minimized

9.1.5 Suitable lifting lugs shall be provided on the tank shell to enable it to be lifted off the Unit for repairs/replacement as necessary.

9.1.6 The tank shall be fitted with a sludge trap of 150 mm. The bottom of the tank shall have a slight slope towards the sludge trap.

9.1.7 The tank shall also have a cleaning hole and drain pipe with AUDCO make S.S. ball valve and 63MM (SS) instantaneous male coupling incorporated in it.

9.1.8 The tank shall have a filling hole of 150MM diameter at top and with a removable conical strainer of SS-316L. The filling manhole shall have a screwed cap. The filler cap shall have an etched SS name plates with marking ‘FOAM’. A calibrated dip tape shall be provided on the tank to measure the tank level.

9.1.9 Breather valve shall be provided for automatic venting of the foam compound tank when the foam compound is drawn from it or when the tank is being filled.

9.1.10 The inlet line in the tank shall have an adequately strong deflector plate, which will avoid the incoming jet of foam from hitting the tank side/roof.

9.1.11 All nozzles for the tank shall have suitable reinforcement pads. Nozzles shall also have adequate stiffeners to take the loads from piping. Tank shall be provided with anti-vortex device at nozzle for pump suction.

9.1.12 Tank supporting structure on the chassis shall be of SS 316L.

9.1.13 Reinforcement pads at tank supporting structure shall be of same thickness and material as that of the foam tank

9.1.14 Provision shall be made on either side of the body for visual inspection/maintenance of the foam tank.

9.1.15 A calibrated dip tape shall be provided on the tank to measure the tank level.

9.1.16 The foam concentrate tank shall be provided with a fill tower.

9.1.17 The fill tower opening shall be protected by a completely sealed airtight cover.

9.1.18 The cover shall be attached to the fill tower by mechanical means.

9.1.19 The fill opening shall incorporate a removable screen with a mesh not to exceed ¼ in. (6 mm).

9.1.20 The fill tower shall be equipped with a pressure/vacuum vent that enables the tank to compensate for changes in pressure or vacuum when filling or withdrawing foam concentrate from the tank.

9.1.21 The pressure/vacuum vent shall not allow atmospheric air to enter the foam tank except during operation or to compensate for thermal fluctuations.

9.1.22 The vent shall be protected to prevent foam concentrate from escaping or directly contacting the vent at any time.

9.1.23 The vent shall be of sufficient size to prevent tank damage during filling or foam withdrawal.

9.1.24 The foam concentrate tank shall not be equipped with an overflow pipe or any direct opening to the atmosphere.

9.1.25 The foam concentrate tank(s) shall be designed and constructed to facilitate complete interior flushing and cleaning as required.

9.1.26 **Level Indicator** :

9.1.26.1 An indicator shall be provided that shows the level or amount of Foam in the tank(s).

9.1.26.2 A mechanical (**magnetic type**) level gauge also to be provided.

9.1.26.3 A suitably protected Foam level indicator of the graduated glass tube, clear acrylic shall be provided close to the control panel. Isolation valve shall be provided just after the tap off point near the Foam tank for the level indicator.

9.1.26.4 Electronic LED Foam Level Indicators indicating the tank levels as EMPTY, ¼, ½ , ¾ and FULL shall be provided on the pump control panel. These levels shall be indicated by number of glowing LED lights (no LED Lights means and empty tank, All LED Lights means full tank). The indicators shall sense the fluid level in the tank with help of a pressure sensing probe. The indicators shall be located on the rear pump control panel in such a manner that the Operator / Firemen can easily view the tank levels while being away from the Unit. **Additional Level Indicator – Two Nos. shall be provided as spare**.

9.1.27 **Tank Drain :**

9.1.27.1 A minimum 1 in. (25 mm) inside diameter full flow drain valve and piping shall be provided at the lowest point of any foam concentrate tank.

9.1.27.2 The drain shall be piped to drain directly to the surface beneath the Tender without contacting other body or chassis components.

9.1.28 The foam concentrate tank shall be constructed and installed to be independent of the tender body.

9.1.29 The foam concentrate discharge system design shall prevent the siphoning of foam concentrate.

9.1.30 A label that reads “Foam Tank Fill” shall be placed at or near any foam concentrate tank fill opening.

9.1.31 The foam concentrate tank outlet connection shall be designed and located to prevent aeration of the foam concentrate and shall allow withdrawal of 80 percent of the foam concentrate tank storage capacity under all operating conditions with the Tender on level ground.

9.1.32 The foam concentrate tank inlet connection, if provided, shall prevent aeration of the foam concentrate under all operating conditions.

9.1.33 The foam tank will be mounted on the Unit on a sub frame using Rubber Metacones. This sub frame will be made from Anti-Corrosive Treated MS 4” section and will be bolted with the chassis using the high tensile bolts. 'U' Bolts shall not be used for mounting of Tank on Unit. The rubber metacones shall facilitate to absorb the jerks and bending torsions in expansion as well as compression mode without high deflection. The manufacturer shall provide complete design data of metacones and sub frame including the load calculations and metacone quantity sufficiency. Tank will be mounted on the chassis in a manner keeping in view the proper load distribution on the axles. The baffles will be arranged in a manner to facilitate easy cleaning of the Tank. The tank will be mounted on two / three cross bearers to counteract stresses caused by chassis flexing. The Centre of Gravity shall be maintained as low as possible.

9.1.34 A manual rotary transfer pump shall be provided for transferring foam compound from drums to the foam compound tank without causing any frothing in the tank. Arrangement shall be provided to connect this pump through a tube to the tank filling line.

9.2 ACCESSORIES :

9.2.1 CONTROL PANEL :

Adequately illuminated pump operating panel shall be provided at the rear side of the Unit and these shall include the following areas:

a. Auxiliary throttle control for the engine.
b. Independent pressure gauges calibrated to 25 KG/CM2 for pump discharge.
c. Threaded suction inlet of Foam pump with blind cap.
d. Quick opening valve for lining up Foam tank to pump.
e. Level gauge for Foam Tank.
f. System schematic etched on Stainless Steel plate.
g. Operating instruction plate and flushing out instruction plate (both on boldly etched Stainless steel plates).
h. Compound pressure gauges.
i. RPM for pump.

9.2.2 In addition to the items mentioned above, Successful Bidder shall provide any other items that he may find essential. Any of these items which are also required in the driver’s cabin shall be provided at suitable locations in the driver’s cabin. Each lever, switch, valve, gauges, outlet/inlet etc. shall have identification made on metal plate and duly riveted. The microphone of

the PA system shall be fixed inside the driver cabin on a flexible stand at a suitable location.

10.0 PERFORMANCE GUARANTEE :

10.1.1 The manufacturer shall guarantee the design, material, workmanship and the performance of the unit for a period of 18 months from the date of the supply of completed Unit. The Successful Bidder, at M/s Oil India Ltd. premises, shall rectify any mechanical defect, faulty workmanship or operational defects found during this period within reasonable time without any extra cost.

11.0 TRAINING :

11.1.1 Manufacturer is responsible for imparting training, to the operators of the equipment from the Unit holding the equipment. This training will be imparted to two operators for period of one week. The training will cover following areas:-

i) Assembly/ disassembly of pump and primer
ii) Trouble shooting
iii) Any other subject desired by the operator (assembly/disassembly) will be done at least five times with complete identification of all components of pump during the week.

11.1.2 After supply of the Unit, the Successful Bidder shall provide two days training on operation & maintenance of fire Unit including chassis at M/s Oil India Ltd. site and charges for the same shall be included in the price.

Abbreviation:

Unit - Complete Foam Nurser
MVA - Motor Vehicle Act
RPM - Revolutions per Minute
LED - Light-Emitting Diode
PSV - Pressure Safety Valve

Annexure – A

See Clause 2.13 for GVW

S. No.	Item	Numbers
1.	Foam Tank of capacity 6000 Litres capacity (Wt. Approx. 7500 Kg)	01
2.	Chassis (Wt. Approx. 4300 Kg)	01
3.	Pump & Propeller Shaft (Wt. Approx. 1000 Kg)	01
4.	Fabrication & Piping (Wt. Approx. 1200 Kg)	01
5.	Weight of crew members (weight 420 Kg)	06
6.	Delivery hoses (type – B) with GM coupling (22.5 M length)	15
7.	Suction Hose	4
8.	SCBA Sets	2
9.	Foam Branches (FB – 10X)	4
10.	Triple purpose branch	4
11.	Standard branch	4
12.	Male to Male coupling	2
13.	Female to female coupling	2
14.	Fire suits	2
15.	Roof top ladder (10.5 M, Aluminum)	1
16.	Portable monitor	1
17.	Akron Branch	4
18.	Ceiling Hook	1
19.	Dividing Breachings	2
20.	Collecting breaching	2
21.	Collecting head	1
22.	MFG	2
23.	Safety Helmets	10
24.	Gum boots	10
25.	Manila rope (1” diameter, 50M length)	1
26.	Suction wrenches	2
27.	Strainer	1

BID EVALUATION CRITERIA/BID REJECTION CRITERIA

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that pass through the “Bid Rejection Criteria” as stipulated in this document.
Other terms and conditions of the enquiry shall be as per General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BRC / BEC) contradict the Clauses of the tender or MM/CALCUTTA/E-01/2010 elsewhere, those in the BRC / BEC shall prevail.

BID REJECTION CRITERIA (BRC):

The bids shall conform generally to the specifications and terms as well as conditions laid out in the tender. Bids will be rejected in case the items offered do not conform to the required parameters stipulated in the technical specifications and to the respective international/national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements will have to be met by the bids, without which, the same shall be considered as non-responsive and stand rejected.

A – TECHNICAL

Bid should be complete in all aspect covering the entire scope of supply and should conform to the technical specifications indicated in the bid documents duly supported with technical catalogues/ literatures. Incomplete and non-conforming bids will be rejected outright.

1.0 BIDDER’S QUALIFICATION

The bidder shall be a "Fabricator / Assembler" of "Fire Water Tender/ Foam Tender/DCP Tender /Foam Nurser or Multi-purpose Fire Tender (i.e. combination of Water, Foam & DCP Tender).

Copy of "Certificate of Incorporation" / "NSIC" certificate of the firm shall be furnished along with the bid.

2.0 BIDDER'S EXPERIENCE

The bidder should have the experience of successful execution of supply of at least 01 (one) no. of Foam Nurser or in combination of "Fire Water Tender/ Foam Tender/DCP Tender/ Foam Nurser/ Multi-purpose Fire Tender (i.e. combination of Water, Foam & DCP Tender) on minimum 16 Tone Chassis capacity in the last 03 (three) years preceding to the Bid Closing date of this Tender.

Copy of Purchase Order and Commissioning report /Performance report/ Proof of Supply should be enclosed along with bid to ascertain the same.

3.0 FINANCIAL:

3.1 The Annual financial turnover of the firm in any of the last 03 financial years or current financial year should not be less than Rs 66.50 lacs. In support of annual financial turnover, any one of the following documents/photocopies (self attested/attested) must be submitted along with the bid:

► A certificate issued by a practicing chartered/cost accountants firm with membership no. certifying the annual turnover and nature of business.
► Audited balance sheet and profit & loss account.

4.0 The bid/ offer shall be for complete unit i.e. chassis along with fabrication & commissioning of Foam Nurser.

B:COMMERCIAL

i) Bids are invited under **Single Stage Two Bid System**. Bidders shall quote accordingly under Single Stage Two Bid System. **Please note that no price details should be furnished in the Technical (i.e. Unpriced) bid**. The "Unpriced Bid" shall contain all techno-commercial details except the prices, which shall be kept blank. The "Price Bid" must contain the price schedule and the bidder's commercial terms and conditions.
Bidder not complying with above submission procedure will be rejected.

ii) **Bid security in the form of Demand Draft / Bank Guarantee as per format given in the LCB booklet** MM/CALCUTTA/E-01/2010 **of Rs 66,600.00** shall be submitted manually in sealed envelope superscribed with BID SECURITY AGAINST Tender no. **SKI8566P15 dated 14.09.2015** to **Head Calcutta Branch, Oil India Limited, 4 India Exchange Place, Kolkata - 700001** only on or before the Bid Closing Date and Time mentioned in the Tender. **If bid security in ORIGINAL of above mentioned amount is not received within bid closing date , the bid submitted through electronic form will be rejected without any further consideration.**
In lieu, Bid Security of **Rs. 66,600.00** can also be paid online through our e-procurement portal as per procedure given in user manual in OIL"s e-procurement portal.

For exemption for submission of Bid Security, please refer relevant para of General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders.
The Bid Security shall be valid for 180 days more than the Bid validity, i.e., for 300 days from the date of bid opening.

iii) Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of twelve months from the date of successful commissioning against any defects arising from faulty materials, workmanship or design. Defective goods/materials or parts rejected by OIL shall be replaced

immediately by the supplier at the supplier's expenses and no extra cost to OIL.

iv) The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

v) Successful bidder will be required to furnish a **Performance Bank Guarantee** @10% of the order value. For exemption for submission of Performance Bank Guarantee, please refer relevant para of General Terms and Conditions vide MM / CALCUTTA / E-01 / 2010 for E – Procurement LCB Tenders. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment or 18 months from the date of despatch whichever is earlier. Bidder must confirm the same in their bid.
Offers not complying with this clause will be rejected.

The validity requirement of Performance Security is assuming despatch within stipulated delivery period and confirmation to all terms and conditions of order. In case of any delay in despatch or non-confirmation to all terms and conditions of order, validity of the Performance Security is to be extended suitably as advised by OIL.
The Bank Guarantee should be allowed to be encashed at all branches within India.

vi). Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

vii). Validity of the bid shall be minimum 120 days from the Bid Closing Date. Bids with lesser validity will be rejected.

viii). Bids containing incorrect statement will be rejected.

ix). All the Bids must be Digitally Signed using "Class 3" digital certificate *(e-commerce application)* as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3" digital certificate, will be rejected.

x). **INTEGRITY PACT:**
OIL shall be entering into an Integrity Pact with the bidders as per format enclosed with the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.

C. GENERAL:

i) The Compliance statement must be filled up by bidders and to be submitted/uploaded along with their bids. In case bidder takes exception to any clause of the bidding document not covered under BEC/BRC, then the Company has the discretion to load or reject the offer on account of such exception if the

bidder does not withdraw/modify the deviation when/as advised by Company. The loading so done by the company will be final and binding on the bidders.

ii) If any of the clauses in the BRC contradicts with other clauses of bidding document elsewhere, then the clauses in the BRC shall prevail.

2.0 BID EVALUATION CRITERIA (BEC):

A. TECHNICAL:

The bids conforming to the technical specifications, terms and conditions stipulated in the bidding document and considered to be responsive after subjecting to Bid Rejection Criteria (BRC) will be considered for further evaluation as per the Bid Evaluation Criteria given below.

i) In the event of computational error between unit rate and total price, the unit rate as quoted by the bidder shall prevail.

ii) Similarly in the event of discrepancy between words and quoted figure, words will prevail.

iii) Evaluation will be done on 'total contract cost' basis to ascertain the lowest bid.

B. COMMERCIAL:

i) To evaluate the inter-se-ranking of the offers, Assam entry tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date.
Bidders may check this with the appropriate authority while submitting their offer.

ii) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in to must be received on or before the dead line given by the company, failing which the offer will be summarily rejected.

iii) To ascertain the inter-se-ranking, the comparison of the responsive bids will be made as under, subject to corrections / adjustments given herein:

(A) Total material cost of Main Equipment:
(B) Total cost of tools/tackles/accessories/mandatory spares/ repair kit for commissioning
(C) Total Material Cost,(A+B)
(D) Total cost of fabrication
(E) TPI charges including service tax
(F) Packing and Forwarding Charges
(G) Total Ex-works value, (C+D+F) above :
(H) Excise Duty including Cess
(I) Sales Tax, (Please indicate applicable rate of Tax)

(J) Total FOR Despatching station price, (E+G+H+I) above
(K) Road Transportation charges to Duliajan
(L) Insurance Charges @0.5% of Total For Despatching StationValue (I) above
(M) Assam Entry Tax
(N) Total FOR Duliajan value, (J+K+L+M) above
(O) Installation/Commissioning Charges including Service Tax, if any :
(P) Training Charges including Service Tax, if any :
(Q) Grand Total value, (N+O+P)

Standard Notes:

A. The original bid security (Amount is mentioned above and also in Basic Data of the tender in OIL's e-portal) should reach us before bid closing date and time. Bid without original Bid Security will be rejected (except for the bidders who has paid the same online). The bidders who are exempted from submitting the Bid Bond should attach documentary evidence in the Collaboration folder as per General Terms and conditions for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

B. "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

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