

MORMUGAO PORT TRUST
MECHANICAL ENGINEERING DEPARTMENT
TENDER No: CME/PD/I/2010.

**TENDER FOR DESIGN, MANUFACTURE, SUPPLY AND COMMISSIONING OF
1NO. MULTIPURPOSE COMBINED FOAM AND CO2 FIRE CRASH
APPLIANCE AT MORMUGAO HARBOUR.**

I N D E X

Sl. No.	Description	Page No
1.	Tender Notice	1
2.	Procedure for submission of Tender	2 - 3
3.	Instructions to Tenderers.	4 - 6
4.	General conditions of the contract	7 - 11
5.	Special conditions of the Contract - I	12 - 20
6.	Special conditions of the Contract - II	21 - 25
7.	Technical specifications.	26 - 44
8.	Form of Tender	45
9.	Appendix	46
10.	Schedule Nos. 1-4	47 - 50
11.	Form of Agreement.	51 - 50
12.	Form of B.G. for security deposit	53 - 54
13.	Checklist to ascertain compliance of statutory requirements by the contractors.	55 - 56

1
MORMUGAO PORT TRUST
MECHANICAL ENGINEERING DEPARTMENT
NEW ADMINISTRATIVE OFFICE BUILDING
HEADLAND SADA, MORMUGAO GOA
TENDER NOTICE

TENDER No: CME/PD/1/2010

Tenders under dual cover system in sealed cover (sealed with wax) superscribed tender for "**Design, Manufacture, Supply and Commissioning of 1no. Multipurpose Combined Foam and Co2 Fire Crash Appliance at Mormugao Harbour**" are invited from reputed firms having sufficient experience in the line for carrying out the subject work, so as to reach the Chief Mechanical Engineer, Mormugao Port Trust, New Administrative Office Building, Headland Sada, Mormugao, Goa. 403804, **latest by 15.00hrs. on 30/08/2010.**

Tender document CD's can be obtained from the Financial Advisor & Chief Accounts Officer, Mormugao Port Trust, New Administrative Office building, Headland Sada, Mormugao Goa. 403 804, from **28/07/2010** on payment of Rs.2500/- (Rupees Two thousand five hundred only) in person which sum will not be refunded. Tender documents are also available on MPT Website www.mptgoa.com . If the tender application is downloaded by the Contractor from website, then the Contractor shall pay the cost of tender by demand draft/cash receipt at the time of submission of the tender. Tenders are to be submitted in accordance with the Instructions to the tenderers laid down in the tender documents. Tenders should be accompanied by a receipt towards EMD of Rs.1,12,000/-(Rupees One Lakhs Twelve Thousand Only), failing which the tender will not be considered.

It may be noted that offers from only those contractors will be considered who have obtained Licences/Registration/Code Nos. etc. as required under various statutory Laws, Acts, Rules, etc. especially in regard to (i) Contract Labour (R&A) Act, (ii) Inter State Migrant Workmen Act, (iii) E.S.I. Act; (iv) Employees Provident Fund Act and (v) M.P. Act (vi) Service tax Act, etc.

The contractor while submitting his offer should indicate the Licence/Registration/Code No. etc., as the case may be, obtained from various statutory authorities.

Tenders completed in all respect shall be submitted at the office of the Chief Mechanical Engineer, Mormugao Port Trust, on or before **15.00hrs. on 30/08/2010.** Tenders will be opened at 15.30hrs on 30/08/2010 in the presence of the tenderers who may wish to be present.

The Board reserves the right to reject any or all tenders without assigning any reason.

Address for communication

The Chief Mechanical Engineer,
Mormugao Port Trust,
Administrative Building,
Head-Land-Sada, GOA-403804
FAX No: (0832)- 2521175 Ph.No:(0832)- 2521170
E-mail Id: cme_mptgoa@hotmail.com
xenpw.mgpt@gmail.com

(K. C. Kuncheria)
CHIEF MECHANICAL ENGINEER

**PROCEDURE FOR SUBMISSION OF TENDER
UNDER DUAL COVER SYSTEM**

1. TENDERERS ARE REQUESTED TO SUBMIT THEIR TENDERS IN SEALED COVER (SEALED WITH WAX). TENDERS NOT SEALED (WITH WAX) WILL NOT BE ACCEPTED.
2. Tenderers are advised to quote strictly as per the conditions stipulated in the tender documents.
3. If the Tenderer stipulates conditions which are in deviation to the conditions in the Tender Documents for better and for economical design, he shall indicate the increase or deduction over the tendered amount which would be allowed by him in case the same are withdrawn. The breakup of the amount relating to each of the aforesaid conditions shall be given. In case the tenderer fails to price the conditions stipulated by him, the same shall be priced by the Port Trust which shall not be disputed by the tenderer/s.

In addition to the deviations, if any, all the following accompaniments to the tender viz:

- i) Covering letter from the tenderer on his own letter head giving full details of alterations, conditions/contract conditions, etc. if any, on which he has based his tender.
- ii) Vol. I of original tender documents issued by the Port duly filling in all the blank spaces and initialing on each with rubber stamp.
- iii) Financial stability certificate from a Nationalized Bank in India specifically indicating the amount of financial solvency in the current year.
- iv) Latest Income-tax returns/ PAN Number.
- v) List of Major/important clients for whom Fire crash tender(Appliances) has been design, manufacture and supplied specifically indicating value of order, completion time, etc.

Shall be put in the first cover which shall be sealed (sealed with wax) and superscribed WITH NAME OF THE WORK IN FULL AND MARK AS COVER – I "and bear on the bottom left corner of the cover the name of the tenderer with his official rubber stamp. The tenderer shall specifically ensure that the schedule of price with break-up thereof is not enclosed in this cover No. 1"

The schedule of prices i.e. Vol. II of the original tender document thereof duly filled in with the rates and tender amounts based on the Port Trust design shall be put in the second cover which shall also be similarly sealed (sealed with wax) and superscribed "WITH NAME OF THE WORK IN FULL AND MARK AS COVER – II, PRICE SCHEDULE - COVER NO. (2)" and bear on the bottom left corner of the cover the name of the tenderer with his official rubber stamp. No other accompaniments shall be enclosed in Cover No. (2)".

4. Both the sealed covers shall be simultaneously submitted on or before the stipulated time and date at office of The Chief Mechanical Engineer, PW Section/MPT.

5. Cover marked No.(1) containing the conditions, if any, stipulated by the tenderer will be opened on 30.08.2010 at 15.30hrs.

6. Cover marked No.(2) containing the Price schedule will be opened on a subsequent date to be notified to the tenderer, who are techno-commercially qualified.

7. **Minimum Eligibility:**

i) Average annual financial turnover during the last three years ending 31st March of the previous financial year, should be at least **18lakhs**.

ii) Experience of having successfully completed similar works during last **7 years** ending last day of month previous to the one in which applications are invited should be either of the following:

a) Three similar completed works costing not less than Rs.22,40,000/- each.

OR

b) Two similar completed works costing not less than Rs.28,00,000/- each.

OR

c) One similar completed work costing not less than Rs.44,80,000/- each.

iii) 'Similar work' is defined as "Design, Manufacture, Supply and Commissioning of Multipurpose Combined Foam and Co2 Fire Crash appliance Tender".

TENDER NO.CME/PD/I/2010
INSTRUCTIONS TO TENDERERS

1. Sealed tenders (sealed with wax) are invited under dual cover system for the subject work. Tenders are to be submitted in accordance with the attached conditions of contract, specifications and form of tender etc. Tender forms are not transferable.
2. Tenderer shall complete the form of tender with all the information called for therein. Any tender incomplete in any respect will be liable to rejection. The rates quoted by the tenderer shall hold good and be firm at least for six months from the date of opening of the tender and during the currency of the work. The rates quoted must be filled in ink only, both in figures and words in the Form of Tender.
3. Any correction to rates shall be supported by the Tenderers signature there. In case the rate quoted in figures or words are not identical, the lower of the two rates entered in figures or words shall be deemed as the price quoted for the item in question.
4. Should thereby any doubt or obscurity as to the meaning of any of the tender documents or if any further information is required, the tenderer must obtain the information immediately from the Chief Mechanical Engineer.
5. The Tender shall be based on the conditions and specifications, etc. stipulated in the tender documents. Any tender which includes any deviation with the work specified in the tender documents or which contains any other conditions of any sort shall be liable for rejection.
6. The tenderer shall submit along with his tender the latest valid Income Tax returns along with his permanent Income Tax account No. for assessing the Income Tax.
7. The E.M.D will be returned to the unsuccessful tenderer after placement of order on successful tenderer. The tender shall indicate his name of the bank, branch address, type of account, account number and MICR code for refund of EMD.
8. The tenderer shall produce satisfactory evidence with his tender to support his experience and ability for carrying out work of this class and magnitude by way of giving details of works carried out by him in the past, their cost and time of completion with copies of satisfactory performance certificate from the clients during the past three years, banker's reference and their sales Tax registration No. under the Central Sales Tax Act, 1959. In case the tenderer is not registered under the Central Sales Tax Act. Purchase tax, if any, payable by the Board will be recovered from his bills.
9. No tender will be considered which is not accompanied by receipt of EMD from the FA & CAO, MPT. The amount of earnest money deposit is Rs.1,12,000/- (Rupees One lakhs Twelve Thousand only). The amount should be paid in cash with FA&CAO, MPT or made in the form of Demand Draft on a schedule Bank in Vasco da Gama / Mormugao, in the name of the FA & CAO, Mormugao Port Trust,

and forwarded separately and not in the same envelopes as the tender and an official receipt obtained for the same. The earnest money will be returned to the successful tenderer after the execution of a formal agreement and on payment of Security Deposit or will be retained by the Port Trust as part of initial security deposit. The earnest money will be returned by RTGS/EFT.

10. In the event of a person whose tender has been received and opened on behalf of the Board, withdrawing his tender before the receipt of the final decision or in the event of a person whose tender has been accepted failing to execute the agreement in such form as aforesaid within 15 days after such acceptance shall be made to him, the earnest money deposited by such person shall be forfeited and in the latter case the tender also shall be cancelled.

11. Tender may be withdrawn in writing or telegraphic request dispatched by the Tenderer in time for delivery in the normal course of business prior to closing time for the receipt of tenders, provided that written confirmation of any telegraphic withdrawal over the signature of the Tenderer is placed in the mail and post marked prior to the closing time for the receipt of Tenders. Negligence on the part of the Tenderer in preparing his tender confers no right to withdrawal or modification of this tender after such Tender has been opened.

12. Telegraphic offers will be treated as defective, invalid and are likely to be rejected. Only detailed complete offers received prior to the closing time and date of the Tenders will be taken as valid.

13. The language in which the contract documents shall be drawn up is English.

14. The Tenderer shall submit along with his Tender a Bar Chart showing completion time of various sections of his proposed work including supply and delivery.

15. The contractor is deemed to have ascertained and provided for payment of Income-Tax, and all other Taxes, Rates, Duties, Port Fees, Wharfage, Transportation, insurance, entry tax etc. as are chargeable under the laws for the time being in force in respect of the contract and the contract price shall be deemed to be inclusive of all such payments.

16. The Board shall not bind itself to recommend for acceptance of the lowest or any other tender assign any reason for non-acceptance of any tender.

17. In the event of the tender being submitted by a Firm it must be signed separately by each constituent thereof or in the event of the absence of any partner it must be signed on his behalf by a person holding a power of Attorney from him, authorising him to do so.

18. If the tenderer approaches a Trustee or any Officer of the Port directly or indirectly with a view to exercising influence on him for securing the contract his tender is liable to be rejected summarily without assigning any reasons and the Tenderer may even be forbidden from future tendering with Mormugao Port Trust through appropriate action.

19. Within 14 days from the date of acceptance of the tender, the successful tenderer will be required to affect a security Deposit equal to 10% of the value of the tender.

20. TIME OF COMPLETION

i) Deliver/completion period: The works shall be completed in all respects, trials taken and the appliance systems successfully commissioned within 6(Six) months from the date handing over the chassis.

MORMUGAO PORT TRUST
MECHANICAL ENGINEERING DEPARTMENT
GENERAL CONDITIONS OF THE CONTRACT

1. DEFINITION OF ITEMS

In construing these conditions and annexed form of tender and the specifications, the following words shall have the meaning herein assigned to them unless there is something in the subject or context inconsistent with such construction: -

“BOARD” means the Board of Trustees of the Port of Mormugao, a body corporate under the Major Port Trusts Act, 1963. For the purpose of the contract the term “Board” also includes the Chairman and Chief Mechanical Engineer, as defined hereunder.

“CHAIRMAN” means the Chairman of the Board of Trustees of the Mormugao Port Trust.

“CHIEF MECHANICAL ENGINEER” shall mean the Chief Mechanical Engineer of Mormugao Port Trust or his duly authorised representative.

“THE CONTRACTOR” means the person or persons, firm or Company whose tender has been accepted by the Board and includes the Contractor’s personal representatives, successors and permitted assigns.

“SUB CONTRACTOR” means the person named in the contract for any part of the work or any person to whom any part of the contract has been sublet with the consent in writing of the Board and the legal representatives, successors and permitted assigns of such person.

“WORK” means and includes the equipment and things to be provided and work to be done by the Contractor under the Contract.

“CONTRACT” means the General Conditions, Technical Specifications, Drawings and Price bill of quantities, schedule of rates and prices (if any), tender and contract agreement.

“SPECIFICATIONS” means the specifications annexed to these conditions of contract.

“PLACE OF DELIVERY” or “PLACE OF DESTINATION” means the Port of Mormugao, Goa, India.

“DRAWINGS” means such plans and drawings as shall under the provisions of the contract be submitted by the Contractor and approved by the Board.

“TESTS” means such tests as are provided for in these conditions of contract and described in the specification and includes all other tests required to be carried out during construction and after completion of the work.

“APPROVED” or “APPROVAL” means approval in writing including subsequent written confirmation of previous verbal approval.

“MONTH” means month according to the Gregarian Calender.

“CONTRACT PRICE” means the sum named in the tender subject to such addition thereto or deductions there from as may be made under the provision hereinafter contained.

Works imparting the singular only also include the plural and vice versa where the context so requires.

2. **CONTRACT WORKS AND CONTRACT PRICE**

The works to be carried out (hereinafter referred to as “the contract work”) and the price for the same (hereinafter called “the contract price”) and entered into schedule of prices shall include :-

a) Design, manufacture, supply, and commissioning of 1no. multipurpose combined foam and Co2 Fire crash appliances and maintenance during guarantee period in accordance with the specifications of the appliance described in the technical specifications.

b) Such other work as the specifications may require the contractor to carry out. Except where otherwise expressly provided, the contractor shall provide all materials, labour, plant and things necessary in connection with the Contract Works although there may be errors in and omission from the specification.

3. **SALES TAX, OCTROI, ETC.**

The price quoted for the appliance/work by the tenderer shall include Excise Duty, Entry Tax, Sales Tax, Service tax, Octroi, Custom duty or any other duty or Tax dues which are in force from time to time which shall be payable by the Contractor furnished in the manner indicated in the price schedule form.

4. **INSTRUCTIONS**

After the tender has been accepted by the Board, all orders and instructions to the contractor shall, except as herein otherwise provided, be given by the Chief Mechanical Engineer on behalf of the Board.

5. **SECURITY DEPOSIT**

The contractor shall deposit with the Board a sum equal to 10% of the contract value, either in cash or by Demand Draft or in the form of Bank Guarantee (as per format attached) as performance guarantee during guarantee period. The security deposit shall be furnished within 14 days of placement of order.

6. **Refund of Security Deposit**

The security deposit will be refunded without interest and less deduction of any sum that may be due to the Board from the contractor, after all the conditions of contract, including 12 months guarantee of satisfactory performance after successful commissioning of the appliance have been fulfilled and making an application thereof.

7. **NO INTEREST PAYABLE**

No claim for interest will be entertained by the Board with respect to the above mentioned deposit or with respect to any money or balances which may be in their hands owing to any dispute of the Board with the Contractor, or with respect to any delay on the part of the Board in making monthly or final payments or otherwise.

8. **FORFEITURE OF SECURITY DEPOSIT**

The Board may at their option forthwith forfeit the said security deposit if the contractor fails to carry out the work or perform or observe any of the conditions of contract. The Board will also be at liberty to deduct from the security deposit or from any sum due or to become due under any other contract, with the Contractor, sums that may become due to the Board by virtue of the terms thereof.

9. **COMMENCEMENT OF WORK**

For the purpose of this contract, the date of commencement of the work shall be the date of handing over the chassis to the successful tenderer.

10. **INSPECTION OF WORKS ON SITE**

The Chief Mechanical Engineer or his representatives shall have full power to inspect the materials during every stage of their repair/manufacture/erection/commissioning and for this purpose shall have free access to any places and when any work in connection with the contract is being carried on, and should any workmanship, material or complete article be imperfect or not in every respect in accordance with this specifications, the same may be rejected. They shall have full power to reject such defective materials whether they have been manufactured under their inspection or not. Materials or articles of approved manufacture, shall be installed in replacement.

11. **WORKMENS COMPENSATION :**

The Contractor shall indemnify the Board in the event of the Board being held liable to pay compensation for injury to any of the Contractor's servants or workmen under the Indian Workman's Compensation act. 1923, as amended from time to time.

12. **RISK PENDING COMPLETION**

All the works comprised in this contract, until handed over to the Board shall stand at the risk of the contractor who shall be responsible and make good at his own cost all the loss and damage caused by or due to fire, or any other cause and the Contractor shall hand over all the works completed in every respect at the termination to this agreement.

13. **INJURY/DAMAGE TO PERSON AND PROPERTY :**

The Contractor shall take all the precautions whilst carrying out the contract work against any possible damage to any property, whether public or private, should any such damage be done by the contractor, he shall make good or bear the cost of making good the same, when brought to this notice, without delay to the satisfaction of the Engineer.

14. **EXTENSION IN COMPLETION TIME**

If in the opinion of the Board, the completion of the works shall be delayed by any change of original design or by the ordering by the Board of any altered, modified, substituted or additional work, or by the ordering by the Board of any work to be omitted or any strikes, stand-out or lock-out of any workman employed by the contractor or from any just cause not attributable to the act, default or omission of the contractor, the Board may, if in its discretion it shall think fit, either forthwith or at any later time or from time to time notwithstanding that the prescribed or extended time for completion of the work has expired that the work has been completed by writing under its hand extend the time for completion of the work to such date as it shall consider reasonable provided always, that unless the contractor makes a written application to the Board at or before the time when the cause of the delay in occurring or about to occur or in the event 'force majeure' immediately thereafter and of which satisfactory proof must be submitted or unless the time is extended by the Board (whether such application has been made by the contractor or not) the prescribed time shall not be extended, notwithstanding delays from the foregoing or any other cause or causes whatsoever kind, subject nevertheless to be provision that may and every extension of time by the Board shall be deemed to be in full compensation and satisfaction for and in respect of any and every actual or possible loss, damage or injury sustained or sustainable by the contractor in respect of the cause or causes giving rise to such extensions, and shall in like manner exonerate the contractor from any claims or demands on the part of the Board in respect, of the delay, in respect of which any such extensions of the time shall have been made, but not further or otherwise, nor for any delay contained beyond the time mentioned in writing, authorising such extension.

15. **COMPLETION OF WORKS**

The appliance shall be completed in accordance with the terms of the contract to the entire satisfaction of the Board and shall be ready after commissioning at the Mormugao Port within the time specified in the tender or extended time. However, no claims for compensation for delay shall be considered if time of completion is extended due to certain special reasons.

16. **LIQUIDATED DAMAGES FOR DELAY IN COMPLETION**

In the event of failure by the contractor to complete the execution of the work within the time stipulated in the contract or by the expiry of any period of extension granted by the Board's terms thereof, the contractor shall pay the Board as Liquidated Damages and not by way of penalty for delay to complete the work, a sum of 1% of contract price per week or part thereof subject to a maximum of 10% and the Board shall have the power to deduct this amount from the payment of the amounts due to the contractor or from his deposit.

17. **ADDITIONS AND ALTERATIONS**

The Chief Mechanical Engineer shall have the power and authority from time to time and at all times to make and issue such further drawings and to give such further instructions and directions as may appear to him necessary or proper for the guidance of the contractor and the good and efficient execution of the work according to the terms of the specifications and the contractor shall receive, execute, obey and be bound by the same according to the true intent and meaning thereof as fully and effectively as the though the same has been mentioned or referred to in the specifications and the Chief Mechanical Engineer may also vary or alter the position of any of the works contemplated by the

specifications or may order any of the work contemplated thereof to be omitted, with or without the substitution of any other works executed or partially executed to be removed, changed or altered and if necessary may order that work shall be substituted in the lieu thereof and any difference in the cost occasioned by any such diminution or alterations so ordered and directed, shall be added to or deducted from the quoted price and the Chief Mechanical Engineer shall ascertain and fix the rate for such additions or deductions. The Contractor shall give to the Board due notice in writing of any extra which he proposes to do.

18. **DAMAGE AND FORFEITURE OF DEPOSIT**

In case of failure on the part of the contractor at any time during the continuance of the contract to comply with any of the conditions herein contained or in case of any breach of any portion of this contract, the contractor shall be liable to make good to the Board the difference, if any, between the cost of completion of the works by himself or through other contractor as aforesaid and all other charges and expenses as shall or may in any way be incurred or sustained and the Board shall be at liberty to retain the said sums from any amount that shall become due and payable to the Contractor and without prejudice to the provision hereof. The Board shall be entitled to forfeit the amount of Security Deposit lodged by the Contractor or to assess the loss or damage which he may have suffered by reason of such failure or breach and to appropriate the said deposit towards such loss or damage without recourse to a Court and without prejudice to any right or recovery by other means.

19. **CHIEF MECHANICAL ENGINEER'S DECISION FINAL**

The whole of the work to be done under this contract shall be carried out under direction of the Chief Mechanical Engineer and his decision upon all questions relating to the details of construction of the meaning of the specifications and methods of carrying out the work shall be final and binding upon the contractor and his decision on all questions and disputes arising under or in connection with this contract or the carrying out thereof including any question as to the construction and meaning of the contract or of any clause therein shall also be final and binding upon the contractor whether such decision shall have been given during the progress of the works or after completion of the same.

20. **BOARD'S LIEN**

The Board shall have lien on and over all or any moneys that may become due and payable to the contractor under these presents and also on and over the deposit of security amount or amounts made under this contract and which may become repayable to the contractor under the conditions on that behalf contained for or in respect of any debt or sum that may become due and payable to the contractor either along or jointly with another and either under this or under any other contracts or transactions of any nature whatsoever between the Board and the contractor.

SPECIAL CONDITIONS OF CONTRACT:-I

1. **DUTIES AND DUES ETC.**

1.1 **General** :The contractor shall ascertain and provide for payment of Income Tax, Excise Duty, Sales Tax and other taxes, rates, dues including entry tax and so on as are chargeable under the laws for the time being in force in respect of contract and the contract price shall be deemed to be inclusive of all such payments.

2. **TAXATION:**

2.1 **INCOME TAX:** The contractor shall pay Income Tax and all other taxes whatsoever payable in respect of payments received from the Board in accordance with the laws and Regulations for the time being in force. If required by the authorities concerned the Board shall deduct such amounts as may be directed by the said authorities from the money due under the Interim and Final Certificates before payment under these certificates. The Board shall furnish the contractor with the necessary proof of all such deductions.

2.2 **INCOME TAX PAYABLE BY STAFF**

The contractor's staff shall pay Income Tax and other taxes in respect of such salaries and perquisites as are chargeable therewith under the laws for the time being in force and the contractor shall perform such duties in regard to deductions and transmission thereof as may be lawfully recovered by the Government.

2.3 **SALES AND EXCISE TAX**

The contractor shall pay all Sales and Excise Tax payable in respect of materials, equipment, plant and other things required for the contract.

3. **RETURNS AND REPORTS:**

3.1 **Progress Report:**

The Contractor shall submit to the Chief Mechanical Engineer and the Board of the 1st day of each week or longer period as the Chief Mechanical Engineer may from time to time direct a progress report for the preceding period showing up-to-date progress and progress during the previous period on all important items of each section or portion of the work, in relation to and in consideration of his Bar Chart.

3.2 **Program & Diagrams:**

The Contractor shall furnish the Chief Mechanical Engineer within one week from the date of commencement of work with a detailed program and diagrams showing in an approved form the estimated date of commencement and completion of the several parts of the work and including anticipated dates and arrangements for delivery, erection etc. of materials for the various sections of the work also in relation to and in a form commensurate with detailed Bar Chart.

4. **Miscellaneous**

Transportation of Personnel:

Transportation of personnel shall be at the Contractor's responsibility.

5. **LAW GOVERNING CONTRACT**

5.1 **Indian Contract:**

The Contract shall be interpreted and have effect in accordance with the Law of India and no suit or other proceeding relating to this Contract shall be filed or taken by the Contractor in any Court of Law except in Court of Competent Jurisdiction in Goa.

6. **SETTLEMENT OF DISPUTES/ARBITRATION**

If any dispute or difference of any kind whatsoever shall arise between the Chief Mechanical Engineer and the contractor in connection with or arising out of the contract or the carrying out of the works (whether during the progress of works, after the termination, abandonment of or breach of the contract) it shall in the first place be referred to and settled by the Chief Mechanical Engineer who within a period of 60 days after being requested by the contractor, shall give written notice of his decision to the contractor. If the Chief Mechanical Engineer shall fail to give notice of his decision as aforesaid within a period of 60 days after being requested by the contractor as aforesaid or if the contractor be dissatisfied with any such decision, then and in any such case, the contractor shall, within a further period of 30 days from the expiry of the first 60 days or from the date of receipt of Chief Mechanical Engineer's decision, write to the Chairman putting forth his views why he is not in agreement with the decision given by the Chief Mechanical Engineer. If the contractor, after receiving notice of decision of the Chief Mechanical Engineer does not refer the dispute to the Chairman seeking his decision, within a period of 30 days of the Chief Mechanical Engineer's decision, then the Chief Mechanical Engineer's decision will be final and binding upon the contractor, and no further claim will exist thereto.

The Chairman, shall within a period of 60 days from the receipt of the request from the contractor, give written notice of his final decision in the matter under dispute to the contractor. If the Chairman fails to give written notice of his final decision within a period of 60 days after being requested by the contractor as aforesaid or if the contractor be dissatisfied with any such final decision given, then the contractor may within a period of 30 days after the expiry of the period of 60 days from the date of his application to the Chairman, or within a period of 30 days after receiving notice of such final decision, as the case may be, require that the matter or matters in dispute be referred to arbitration as hereinafter provided, if the Chairman has given written notice of his final decision to the contractor and no claim to arbitration has been communicated to the Chairman by the contractor, within a period of 30 days from the receipt of Chairman's decision, the said decision shall remain final and binding upon the contractor. If the Chairman fails to give written notice of his final decision to the contractor within a period of 60 days and no claim to arbitration has been communicated to the Chairman or Chief Mechanical Engineer by the contractor within a period of 30 days thereafter, then the decision given by the Chief Mechanical Engineer shall remain final and binding upon the contractor.

Save as hereinafter provided such decision in respect of every matter as referred shall be final and binding upon the contractor until the completion of the work and shall forthwith be given effect to by the contractor who shall proceed with the works with all the diligence whether he requires arbitration as hereinafter provided or not.

All disputes or differences in respect of which the decision (if any) of the Chief Mechanical Engineer or the Chairman has not become final and binding as aforesaid shall be referred to the sole arbitration of a Mechanical Engineer serving or retired of Central Govt. Agencies including Defense Services and of a member of Society of Arbitrators, to be appointed by Chairman pursuant to and so as with regard to the mode and consequence of the reference and in all other respects to conform to the provision of the Govt. of India Arbitration Act 1940 (Act no. 10 of 1940) or any re-enactment or statutory modification thereof for the time being in force. The sole Arbitrator shall have full power to open up, review and revise any decision, opinion, direction, certificate or valuation of the Chief Mechanical Engineer or the Chairman and neither party shall be limited in the proceedings before the arbitration to the evidence or arguments put before the Chief Mechanical Engineer or the Chairman for the purpose of obtaining his said decision. No decision given by either the Chief Mechanical Engineer or the Chairman in accordance with the foregoing provisions shall disqualify them from being called as witness and giving evidence before the sole Arbitrator, as aforesaid.

The Arbitrator shall not enter on the reference until after the completion or the alleged completion of works, unless with the written consent of the Board/Chairman/Chief Mechanical Engineer and the Contractor provided always:

a) That such reference may be opened before such completion or alleged completion in respect of the withholding by the Chief Mechanical Engineer of any Certificate or the withholding of any portion of the retention money/EMD/Security Deposit to which the contractor claims in accordance with the conditions set out in the General Conditions of the Tender.

In the event of the Arbitrator to whom the matter is originally referred, is unable to act for any reason, the Chairman shall appoint another Engineer serving or retired of Central Govt. Agencies including Defense Services and/or a member of Society of Arbitrators as Arbitrator and he shall be entitled to proceed with the reference afresh or from the stage at which it was left by his predecessor. In all cases, the Arbitrator shall give reasons for the award.

7. EXECUTION OF THE CONTRACT

The whole contract is to be executed in the most approved and workman like manner and completed with all specified or unspecified incidental items necessary or unusual for similar plant to form complete equipment for putting into commercial use and efficient working, and in every respect such as have proved suitable for the intended purpose. The entire work shall be carried out to the satisfaction of the Chief Mechanical Engineer and the Chief Mechanical Engineer's decision thereon on any question as to the rules, intent and meaning of the specifications or of the work necessary for the proper completion of this contract shall be final, conclusive and binding upon the contractor.

In the case of contracts for the design, manufacture, supply, erection, commissioning and hiring of the equipment or plant, the contract shall not be deemed to have been executed till the equipment or plant is erected at site with complete accessories and equipment and shall have been commissioned and tested to the satisfaction of the Chief Mechanical Engineer or an officer nominated by him for the purpose and notwithstanding anything contained in these General Conditions or in the tender or in the contract entered into with the contractor and notwithstanding any time or indulgence granted or payments

made, the contractor shall not be entitled to any payment under this contract unless such plant or equipment is so erected, commissioned and tested, and duly delivered and accepted by the Chief Mechanical Engineer.

8. **SPECIFICATION AND DRAWINGS**

The specification and drawing are to be considered as part and self explanatory of each other and should anything appear in the one that is not described in the other, or should any discrepancies or inconsistencies however appear, or should any misunderstanding arise as the meaning and impact of the specification or drawing or as to the dimensions of the quality of the materials or the due and proper execution of the work or as to the measurement or quality and valuation of the works executed under this contract or as extra thereupon, the same shall be explained by the Chief Mechanical Engineer and his explanation shall be binding upon the contractor and the contractor shall execute the work according to such explanation and without extra charges or deduction to or from the lump sum figures and shall also do all such works and things as may be necessary for the proper completion of the works as implied by the specification and drawings even though such work and things are not specifically shown and described therein.

9. **APPROVAL OF DRAWINGS, DIAGRAMS ETC.**

The approval of any of the drawings, diagrams or calculations shall not relieve the contractor of his entire responsibility for the efficiency of the equipment or any part thereof.

10. **ADDITIONS AND ALTERATIONS AFTER TEST**

Should any addition or alterations be deemed necessary after all or any of the tests, the same shall be carried out at the cost of the contractor who shall alter or add or amend the same as the Chief Mechanical Engineer may require.

11. **PLANTS FOR TESTING**

The contractor shall provide all such templates, gauges, tools, testing apparatus, layout and information as may be required for examining and testing the several materials or parts of the work and he shall keep and supply such records of the manufacture of the materials or articles, the results of the tests and of the periodical deliveries, as may be required. He shall also pay the cost of the material ordered.

12. **LIQUIDATION AND/OR DEFAULT AND RE-ENTRY**

In the event of the Contractor going into liquidation or passing an effective resolution for winding up (except for the purpose of constitution or amalgamation) or upon the Contractor's making an arrangement with or assigning in favour of his creditors or upon his assigning his contract or upon execution being levied on the contractor's goods or upon the Board certifying under his hand to the Contractor in his opinion the Contractor:

- i) Has abandoned the contract, or
- ii) has suspended the progress of the works for seven days after receiving from the Chief Mechanical Engineer written notice to proceed without any lawful excuse under those conditions, or
- iii) has failed to make proper progress with the works for seven days after receiving from the Chief Mechanical Engineer written notice to employ more men, or

- iv) Failed to pull down and rebuild works or any part of the work for seven days after receiving from the Chief Mechanical Engineer written notice that the said materials or works were condemned and rejected by the Chief Mechanical Engineer, or
- v) has failed to give the Chief Mechanical Engineer proper facilities for inspecting the works or any part of them for three days after receiving from the Chief Mechanical Engineer written notice demanding the same, or
- vi) has failed to submit any work or materials to proper tests for three days after receiving written notice from the Chief Mechanical Engineer requiring the same, or
- vii) has failed to complete all or any part of the works by the time or extended time for completion, then the Chief Mechanical Engineer may enter upon the site and works and expel the contractor there from and may himself use the materials and plant upon the premises for the completion of the works and employ any Contractor to complete or may himself complete the works and upon such entry the contract shall be determined save as to the rights and powers conferred upon the Chief Mechanical Engineer hereby. The Chief Mechanical Engineer's certificate under this clause shall be conclusive proof between the contractor and the Board of the statement contained in it.

13. **ROYALTY**

The contract price is to include royalties for the use of any patents in connection with the work and the contractor shall furnish the Board with satisfactory proof of royalties having been paid and shall absolve and indemnify the Board from all liabilities in respect of the same.

14. **MATERIAL AND WORK TO BECOME THE BOARD'S PROPERTY**

The equipment whether construction, finished and completed or in the process of construction, finishing and completion and all the parts, appurtenances and materials thereof designed or in course of preparation thereof or intended to be fixed therein and whether assembled or not, lying at the contractor's factory, premises and apartments or in the premises of other parties who may be making or providing any part or parts, of the said parts, appurtenances and materials shall throughout the currency of the contract, or in the event of the contract being annulled upon the happening of the same be appropriated to and shall be the exclusive property of the Board subject only to the contractor's lien for the balance which may be due at the time of the works actually executed, so far as not paid to him. The Board or person authorised on its behalf shall be at the liberty from time to time, should they think fit, for greater security to mark the equipment and all the parts, appurtenances and materials in paint or otherwise, with such distinctive mark or names as the Board. The Contractor shall mark all the parts and all materials intended for equipment with the product number thereof.

15. **GUARANTEE**

For the period of 12 months following acceptance of the appliance in accordance with the specifications, that contractor shall be responsible for any defects that may developed under proper use, arising from the faulty materials, design, workmanship in the work, but not otherwise and shall at his own cost, remedy such defects when called upon to do so, by the board which shall state in writing in what respect any portion is faulty.

If it becomes necessary to the contractor to replace or renew any defective portions if the appliance under this clause, the provisions of the clause shall apply to the portions of the appliance replaced or renewed until the expiry of 12 months from the date of such replacement, renewal or until the end of the above mentioned period of 12 months, whichever may be later. If any defects are not rectified within a reasonable time, the board may proceed to do the work at the contractors risk and expense by without prejudice any rights which the Board may have against the contractor in respect of such defects.

If the replacement or renewal are of such character as may affect the efficiency of the appliance, the Board has the right to give to the contractor within 1 month of such replacement or renewal, notice in writing that 'test on completion' be made, in which case such test shall be carried out as specified and the cost of the tests shall be borne by the contractor.

All the inspection, adjustments, replacements or renewals carried out by the contractor during the period referred to in the clause shall be subject to the conditions of this contract shall be binding upon the contractor in all respects during the guarantee period.

16. **TESTING**

All appliance/equipment shall be subjected to the relative factory test and other tests mentioned in technical specifications, the relevant standard specifications approved and manufacturer's test certificate and calibration curves in respect of all materials, shall be supplied, if required, in triplicate, before the dispatch of appliance.

In addition to the above test, the purchaser reserves the right of carrying out at site such tests as he may decide upon. Such additional tests shall be carried out at the purchaser's expenses.

17. **PREPARATION FOR HANDING OVER**

On arrival of the appliance at Mormugao Harbour, the contractor shall rectify all blemishes to paint work or other defects and make the appliance ready for work to the satisfaction of the Chief Mechanical Engineer but at the sole cost of the contractor.

18. **ACCEPTANCE**

When the contractor shall have fulfilled all the requirement of this section of the specifications to the satisfaction of the Chief Mechanical Engineer, he will accept the appliance on behalf of the Board and issue a certificate to that effect.

19. **LAW GOVERNING CONTRACT**

The contract shall be interpreted and have effect in accordance with the law of India and no suit or other proceeding relating to this contract shall be filed or taken by the contractor in any Court of Law except in a Court of competent jurisdiction in Goa.

20. **DELIVERY**

The contractor shall deliver the appliance at MPT, Mormugao as specified in the specifications and the delivery of the appliance shall be taken by Port after the same has been duly commissioned by the Contractor. Till such delivery, the appliance shall be at the risk and cost of the contractor.

21. **TERMS OF PAYMENT**

Unless otherwise agreed between the purchaser and the contractor, the payment for materials will be made as detailed below:

- a) 80% of the contract value against delivery of the completed appliance at MPT, Mormugao.
- b) 20% of the contract value after successful testing and commissioning alongwith all certificates and manuals.

22. **INJURY/DAMAGE TO PERSONS AND PROPERTY**

22.1 The contractor shall take all precautions whilst carrying out the contract work against any possible damage to any property, whether public or private. Should any such damage be done by the contractor, he shall make good or bear the cost of making good the same, when brought to his notice, without delay to the satisfaction of the Engineer.

22.2 **INDEMNITY**

The contractor shall indemnify the Board/Engineer against any claim that may arise for any damage to or loss of port or injury caused to the port personnel or to any labour engaged by the contractor or in any manner connected with the execution of the contract. The port will not be responsible for any failure on the part of the contractor or his agent to take necessary measures or precautions in this regard.

23. **ATMOSPHERIC CONDITIONS**

The climate is damp and tropical monsoon has a good influence over this area. During summer, the mean daily maximum temperature is 29.5 deg. C and the mean relative humidity 81%. During the monsoon the humidity may rise to 90.5%. The average annual rainfall is 100.75 inches.

The air is always heavily laden with saline spray and in addition very fine particles of high abrasive iron ore dust may be present at the surrounding.

24. **INSTALLATION & COMMISSIONING OF THE APPLIANCE**

The Design, Manufacture, Supply, and commissioning of the appliance shall be carried out by the contractor. The contractor shall depute Engineer for the commissioning/demonstration of the appliance, installation and commissioning charges, if any, shall be included in the price schedule, separately.

25. **ENGAGEMENT OF LABOUR AND COMPLIANCE WITH ALL ENACTMENT/RULES & REGULATIONS APPLICABLE TO CONTRACT LABOUR**

25.1 For the purpose of proper performance of the contract, the contractor shall engage his own labour of all categories in sufficient number as may be required for the due execution of the contract and shall abide by all laws/enactment's pertaining to Contract Labour (Regulation & Abolition) Act 1970, Contract Labour (Regulation & Abolition) Central Rules 1971, Inter-State Migrant Workers Act, payment of Wages Act, 1956, Employment of Children's Act, 1923, Minimum Wages Act, Factory Act, Workmen's Compensation Act, Employee's Provident Fund Act, 1952 and Schemes made under the said Act, Dock Safety, Electricity Department, Mormugao Port Trust, Municipality etc. or any other acts which are applicable or may be applicable from time to time. The contractor shall also comply with all laws rules/regulations/schemes which are applicable to the above cited acts or made applicable from time to time.

25.2 Also, he shall obtain at his own cost such of the licenses/clearances from the Labour Enforcement Officer, Labour Commissioner, Municipality, Police and other local agencies/authorities that may be required by law for the execution of the contract. He shall also keep the Engineer indemnified in case any action is commenced for contravention, if any, of the above said acts.

25.3 In the event of any outbreak of illness or an epidemic nature, the contractor shall comply with and carry out such regulations, orders and requirement, if any, of the Government or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.

25.4 The contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighborhood of the works against the same.

25.5 The contractor should enroll himself with the EPF / ESI code No., Address of Bank, Type of account, EFT No./Electronic clearance system, allotted should be mentioned in the bills submitted for payment. No payment will be recommended unless this code is displayed on the bills.

26. **TERMINATION OF CONTRACT**

In exceptional circumstances, the engineer reserves the right to terminate the contract at the risk and cost of the contractor within 10 days notice, if in his opinion, it is not worthwhile to allow the contractor to continue the work due to the failure or incompetence in executing the work and in such an eventuality the engineer's decision as regards to necessary action, including but not limited to, forfeiture of security deposit and completion of the work at the risk and cost of the contractor against the contractor will be final and binding on the contractor.

27. **CONTRACT DOCUMENTS MUTUALLY EXPLANATORY**

The several documents forming the contract are to be taken as mutually explanatory of one another and should anything appear in one that is not described in the other, no advantage shall be taken of any such omission. Should any discrepancies or inconsistencies however appear, or should any misunderstandings arise as to the meaning and import of the specifications or drawings or as to the dimensions or the quality of the materials or the due and proper execution of the works or as to the measurement or quality and valuation of the works executed under this contract or as extra thereupon, the same shall be explained by the Engineer-in-Charge and his explanation shall be final and binding upon the contractor and the contractor shall execute the works according to such explanations, and without extra charge or deductions to from the rates and prices specified in the Bill of Quantities and Rates and shall also do all such works and things as may be necessary for the proper completion of the work as implied by the Specifications and drawings, even though such works and things are not specifically shown and described therein.

28. **CONTRACTORS' EQUIPMENT**

The contractor shall be responsible for the supply, use and maintenance of all the equipment and he shall ensure that they are suitable for the work and is maintained in such a manner as to ensure their efficient working. The Employer may, if they deem fit, direct the contractor to remove from site any equipment

which are not efficient and/or prejudicial to the quality of the work to be replaced by equipment to their satisfaction. The contractor shall immediately follow Employer's directions/instructions.

29. **EXISTING SERVICES**

Drains, pipes, cables, overhead wires and similar services whether above or below the ground which may be encountered in the course of the works, shall be saved and kept harmless from injury and/or loss or damages by the contractor at his own costs and expenses so that they continue to be in full and uninterrupted use to the Employer. The contractor shall not store any materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. The contractor shall at his own costs and expenses and without any delay repair and make good to the satisfaction of the Employer, any injury and/or loss or damage caused by the Contractor to the same.

30. **BRIBES AND COMMISSION**

Any bribe, commission, gift or advantage given, promised or offered by or on behalf of the contractor or his partners, agent or servant or anyone on his or their behalf to any Officer, servant, representative or agent of the Chief Mechanical Engineer or to any person on his behalf in relation to the obtaining or to the execution of this or any other contract with the Board shall in addition to any criminal liability which he may incur subject the contractor to the cancellation of this and all other contracts with the Board and also to the payment of any loss or damage resulting from any such cancellation and the Board shall be entitled to deduct the amounts so payable from any money otherwise due to the contractor under this or any other contract.

MORMUGAO PORT TRUST
SPECIAL CONDITIONS OF CONTRACT-II

1. **CONTRACTOR TO SUPPLY, INSTALL, COMMISSION AND TEST THE EQUIPMENT**

Subject to and in accordance with the provisions of this contract, the contractor shall manufacture the equipment to drawings and in the best and most workmanlike manner and with materials, things and workmanship respectively of the best kind build, equip and test all as 'approved' by the Chief Mechanical Engineer and deliver to the Chief Mechanical Engineer safely in Mormugao Harbour and in the conditions provided by this contract. The contractor shall supply and deliver the fire appliance and all its accessory in accordance in all respects with this contract, the said specifications and the said drawings and with such drawings, supplementary drawings, instructions and explanations as shall from time to time hereafter be furnished and given by the contractor to be approved by the Chief Mechanical Engineer and the contractor shall also in manner aforesaid when required by the Chief Mechanical Engineer supply further drawings and execute, supply and complete to the satisfaction of the Chief Mechanical Engineer all other works, materials and things mentioned and described in or to be inferred from the said specifications and said drawings furnished and given to and approved by the Chief Mechanical Engineer and shall provide to the satisfaction of the Chief Mechanical Engineer all labour, superintendence, power, materials and things which shall be requisite for the due performance, execution and completion of all and every work, matters and things hereby contracted to be executed and done.

2. **CONTRACTOR TO INFORM HIMSELF FULLY**

The contractor shall be deemed to have examined the site at which the appliance have to carry out duties as mentioned in the tender documents.

3. **MISTAKE IN DRAWING**

The contractor shall be responsible for all discrepancies, errors or omissions in the drawings whether such drawings and particulars have been approved by the Chief Mechanical Engineer or not.

4. **MATERIALS NOT MANUFACTURED BY CONTRACTOR**

In the case of apparatus, machinery, equipment and material furnished by the contractor but not manufactured by him, the contractor shall furnish to the approval of the Chief Mechanical Engineer and prior to their installation drawings, manufacturer's plans and specifications in triplicate which shall be in such detail as to describe clearly the method of design, construction, materials size, type, shape, weight, capacity, rating, efficiency, assembly and clearance required for dismantling of the equipment described.

5. **CONTRACT TO INCLUDE EXECUTION AND SUPPLY OF ALL OTHER MATTERS AND THINGS REQUIRED BY THE CHIEF MECHANICAL ENGINEER FOR DUE PERFORMANCE OF CONTRACT**

The 'Specifications' shall be accepted by the Contractor as sufficient generally for the description of the equipment and other works, matters and things comprised in this contract, but this contract shall be deemed to comprise of the design, manufacture, supply, installation and commissioning in all respects of the equipment together with other accessories and all other things to be supplied in connection therewith and the due performance, execution and

completion of all works, matters and things necessary or proper, for such building construction equipment and delivery at the price hereinafter mentioned and accordingly the contractor shall execute all works and find and supply all things which the Chief Mechanical Engineer shall consider necessary or proper according to the direction of the Chief Mechanical Engineer and to his satisfaction according to the true intent and meaning of this contract and notwithstanding that any such work or things, respectively may not be expressly mentioned or referred to in the said specifications and the said point and the contractor shall not be entitled to any payment or allowances whatsoever in respect thereof unless they comprise only such modifications of the said contract as have been agreed to in writing by the Chief Mechanical Engineer.

6. **TESTS**

The contractor shall give the Chief Mechanical Engineer reasonable notice in writing of the date on and the place at which the work will be ready for testing as provided for in the contract and unless the Chief Mechanical Engineer or his representative shall attend at the place so named within 30 days of the date of receipt of notice from the contractor, the contractor may proceed with the tests, which shall be deemed to have been made in the C.M.E.'s presence and shall forthwith forward to the Chief Mechanical Engineer duly certified copies of the test readings. The Chief Mechanical Engineer shall give the contractor at least 24 hours notice in writing of his intention to attend the tests. As and when any plant shall have passed the test referred to above, the Chief Mechanical Engineer shall furnish to the contractor a certificate in writing to that effect.

7. **TRIALS/INSPECTION**

(1) Forthwith after the complete manufacture of the equipment, the contractor shall arrange for preliminary trials/inspection of equipment at the contractor's site in accordance with the provisions of the specifications in the contract. Preliminary trials are intended to satisfy CME that the equipment is manufactured in accordance with the specifications in the contract, and give permission for the dispatch of the equipment to Mormugao Harbour.

(2) The said trials shall be at the sole expense and risk of the contractor who shall pay and discharge all costs and bear all liabilities of whatever kind arising out of the same. The contractor shall make good any damage which may arise in consequent thereof and indemnify the Board and the Chief Mechanical Engineer and their respective officers and servants therefrom and from all claims, action, suits and proceedings and all costs, charges and expenses in respect thereof or in anyway arising there from or incidental thereto.

8. **TRANSPORT CHARGES AND TRANSIT INSURANCE.**

All costs and charges of every description in connection with such transport hereinafter called 'Transport Charges' and transit insurance for to and fro transportation of the chassis and the completed fire appliance are to be borne by the contractor. The contractor shall comply with all Board of Trade or M.O.T. Rules and must also satisfy the requirements of the Insurance Broker, Underwriters and Surveyors and not do anything or leave anything undone whereby the cost of the Insurance premiums is increased. Should the cost of insurance be in any way increased by the failure of the contractor to meet such requirement any such increased cost shall be borne by the contractor.

9. **EQUIPMENT BE MADE READY FOR WORK ON ARRIVAL**

If required by the Chief Mechanical Engineer, appliance on arriving at the Port of Mormugao are to be placed in such a position and so dismantled that the Chief Mechanical Engineer may be able to examine and inspect the equipment and machinery thoroughly. The appliance shall be equipped and made ready in all respects for final acceptance trials and all costs and charges connected therewith shall be borne by the contractor.

10. **DELIVERY OF SPARES**

The spare parts specified in the Schedule 5 of shall be procured by the Port of Mormugao separately as per requirements.

11. **COST OF DELIVERY, STORAGE ETC.**

Should it be necessary for the contractor to send any of the spare parts by a separate dispatch, the contractor shall be responsible for the cost of delivery and also for the proper packing, storage and the protection whilst on board and for their subsequent reception and landing at the Port of Mormugao and delivery to the Chief Mechanical Engineer.

12. **POWER FOR CHIEF MECHANICAL ENGINEER TO DISMANTLE AND RE-EQUIP THE EQUIPMENT IN DEFAULT OF CONTRACTOR**

After the arrival of the equipment at the Port of Mormugao, if it is necessary to dismantle the equipment and/or re-equip and make it ready in all respects for work in accordance with the provisions of the contract hereof to the satisfaction of the Chief Mechanical Engineer or shall in the opinion of the Chief Mechanical Engineer be carrying on such dismantling re-equipment and making ready for work negligently, improperly or so slowly as to cause or be likely to cause the use of the equipment by the Board to be delayed, then and in any such case the Chief Mechanical Engineer on behalf of the Board may without vitiating this contract take the equipment out of the possession of the contractor and employ and pay any persons or workmen upon such terms as he may think fit to dismantle and re-equip the equipment and make them ready for work in accordance with the specifications of this contract and to perform any of the other obligations of contractor under this contract shall pay to the Board such a sum as shall be certified in writing by the Chief Mechanical Engineer to represent the costs and expenses incurred by the Board or the Chief Mechanical Engineer by reason or in course of the exercise of any power conferred on the Chief Mechanical Engineer's representative under this Clause or the Board may at their option deduct such sum from the contract price. Likewise, the Chief Mechanical Engineer shall also get done any repairs, alterations etc., as may be necessary to remove any deficiency found at the final trials at the Contractor's risk and cost.

13. **OTHER REQUIREMENTS**

The work under this contract consists of the design, manufacture, supply, testing, commissioning and delivery to the Port of Mormugao in accordance with this specifications, conditions of contract, schedules etc.

14. **CONTRACT REQUIREMENTS**

The delivery of the appliance to Mormugao and the trials at Mormugao will form part of the contract. Unless otherwise specifically stated and agreed by the Chief Mechanical Engineer, any alterations or modifications to said specifications whether of a major or minor nature made by the tenderer in his tender will be deemed to have no effect on the quoted rates or cost.

15. **SUPERVISION AND INSPECTION**

The appliance is to be built throughout to the requirements under the contract and under the supervision of the Chief Mechanical Engineer or his representative.

Tests and trials are to be carried as specified in this document, under the inspection of the Chief Mechanical Engineer or his representative.

At least 2 weeks notice is to be given to the Chief Mechanical Engineer of all tests or trials which he is to inspect and certify upon.

16. **JOINT MEASUREMENT OF EXTRAS**

In the event of the contractor having to execute any work or provide any material in regard to which he may propose to claim extras, he shall immediately notify the Chief Mechanical Engineer in writing and shall at once make arrangement to take the measurements of the said work or material with the Chief Mechanical Engineer.

If these measurements are not taken jointly and booked and agreed at the time the work is being executed, the contractor's measurements will not afterwards be recognised by the Chief Mechanical Engineer.

The fact of such joint measurement having been made will in no way commit the Chief Mechanical to a recognition of the claim if he considers such claim without foundation. The Chief Mechanical Engineer shall at all times have full access to the contractor's time book and may daily check the time of any extra work with the contractor's time-keeper or otherwise but the fact of his agreeing upon any time shall in no way bind the Chief Mechanical Engineer to value the work other than by measurement if he thinks fit to do so.

17. **GUARANTEE CERTIFICATE / COMPLETION CERTIFICATE**

(1) The contract shall not be considered as completed until a Guarantee Certificate shall have been signed by the Chief Mechanical Engineer and delivered to the Board stating that the work has been completed to his satisfaction. The Guarantee Certificate shall be given by the Chief Mechanical Engineer twenty eight days after the expiration of the period of Guarantee or as soon thereafter as any works ordered shall have been completed to his satisfaction and full effect shall be given to this clause notwithstanding any previous entry on the work or taking possession working or using thereof or any part thereof by the Board.

(2) **CESSATION OF BOARD'S LIABILITY**

The Board shall not be liable to the contractor for any matter or thing arising out of or in connection with the contract or the execution of the work unless the contractor shall have made a claim in writing in respect thereof before the giving of the Guarantee Certificate under this Clause.

(3) **UNFULFILLED OBLIGATIONS**

Notwithstanding the issue of the Guarantee Certificate the contractor and (subject to (2) of this Clause), the Board shall remain liable for the fulfillment of any obligation incurred under the provisions of the contract prior to the issue of the Guarantee Certificate which remain unperformed at the time such certificate is issued and for the purposes of determining the nature and extent of any such obligation the contract shall be deemed to remain in force between the parties hereto.

(4) No certificate of Chief Mechanical Engineer or his representative shall protect the Contractor against or prevent the Board from obtaining repayment from the Contractor in case the Chief Mechanical Engineer or his representative should over-certify for payment or the Board should overpay the contractor.

(5) No claim for interest will be entertained by the Board with respect to any money or balances which may be in its hands owing to a dispute between itself and the contractor or with respect to any delay on the part of the Board in making interim or final payments or otherwise.

18. The contractor shall provide facilities for the inspection at all stages of work.

19. The tenderer shall submit along with his tender a list of works of similar nature carried out by him during last three years, as specified in the tender.

TECHNICAL SPECIFICATIONS

TENDER NO: CME/PD/I/2010.

**TENDER FOR DESIGN, MANUFACTURE, SUPPLY & COMMISSIONING
OF 1NO. MULTIPURPOSE COMBINED FOAM AND CO2 FIRE CRASH
APPLIANCE AT MORMUGAO HARBOUR.**

SCOPE:

1. The specifications described the general requirements to which the contractor shall work, but the fact that everything may not be fully specified and there may be errors in the omissions from the specifications, shall not relieve the contractor from his obligations to complete the work in all respects.

2. It is required to build in all respects foam tender with automatic 1 No. multipurpose foam proportional system, foam system, multi pressure fire pump developing pressure up to 40 kg/cm² for fog/water mist, foam tank, cooling system, P.T.O. unit, control panel etc. for the use of MPT fire services in accordance with the following specifications in general and providing facilities mentioned therein.

The scope of work involves the following:

3. Design, manufacture, supply and commissioning of 1 No. multipurpose combined foam and CO₂ Fire Crash Appliance to be built on new TATA 1615/46 chassis to be procured by the Port and delivered to the contractor against Bank Guarantee of equivalent amount of cost of chassis before taking the delivery of the chassis from Port premises.

4. All materials used shall be of best quality and in accordance with our requirements and shall comply with the appropriate standard specifications. The material used in the work shall be subject to approval of the Chief Mechanical Engineer or his authorized representative.

5. The complete tender shall fully comply with the statutory requirements of the local Road Transport Authorities.

DESIGN & CONSTRUCTION:

6. CHASIS:

The appliance shall be built on suitable chassis TATA LPT 1615/46, 4225 mm WB which will be supplied by the Port.

7. DRIVER CUM CREW CABIN :

7.1 The driver cum crew cabin shall be made in line and in continuation and shall be such as to accommodate driver and officer in the front and five firemen at the rear.

The front wind screen of driver cum crew cabin shall be of toughened safety glass and made in one single piece. The same shall be from driver side to officer's side and provided for the entire front width for clear and unobstructed viewing of all inside driver cum crew cabin. Same shall be provided with EPBM rubber beading.

7.2 The driver cum crew cabin shall be fabricated in continuation and in line. The under frame cross members shall be fabricated and made out of rolled M.S. channel of 100 x 50 x 5 mm.

7.3 Each cross member shall be secured to the runner running full length of the chassis frame with suitable mounting plates. The runner shall be fixed to the chassis frame with suitable arrangement.

7.4 The superstructure of the cabin shall be constructed out of suitable aluminum sections manufactured by reputed company, used in Automobile Body fabrication work. The superstructure shall be strengthened specifically on the members where the doors and window frames are to be fitted and also on the other members by providing brackets and the gusset plates securely fitted. The details of super structure members shall be mentioned clearly in the drawing and shall be submitted along with the offer.

7.5 The flooring of the driver cum crew cabin shall be fabricated out of MS angles of 40 x 40 x 4mm thick which shall be properly welded/ bolted to the cross members.

7.6 All the MS super structural members and under frame cross members shall be painted with three coats of rust preventive paint.

7.7 All the under frame cross members shall be painted with two coats of chassis black paint.

7.8 The complete external paneling of driver-cum-crew cabin, including doors shall be of 16 SWG aluminum sheet with all the joints riveted and bided except the roof of paneling which shall be of 2 mm. thick aluminum sheet. The domes and corners shall be as small as possible and shall be of 18 S.W.G. aluminum sheets with all joints riveted to the super structure by 100 mm. riveted in double row with solid rivets.

7.9 The complete internal paneling of driver-cum-crew cabin shall be of 18 SWG aluminum sheet properly riveted and bided to the super structural members.

7.10 The flooring of the driver-cum-crew cabin shall be fabricated from 10 SWG (3.15mm) aluminum chequered plates except over the mudguard arches which shall be of 16SWG aluminium chequered plate rigidly fixed to the under frame by means of nuts and bolts or riveting. Trap doors for topping up wherever necessary shall be provided.

8. DOORS AND WINDOWS :

8.1 The driver-cum-crew cabin shall be equipped with full four doors, one for driver, one for officer in the front and two at the rear for the crew members.

8.2 All the doors shall be fitted on the super structural members each hung upon the three numbers invisible coach type M.S. stout hinges and fitted with best quality N.P. handles. In addition to the automatic door lock, aluminum tower bolt of 8 inch shall be provided for the doors from inside.

8.3 The window on all the doors shall be full lift type.

8.4 A peep window of 10" x 10" shall be provided at the officer's side bottom panel above the floor level for the use of driver to see clearly the off side.

8.5 For all the above windows, 5 mm. thick toughened safety glasses in an aluminum extruded frame shall be used.

8.6 The front end structure, cowl shall be original and shall be retained as supplied with the chassis. The wind screen glasses shall be original TATA design used on 2516 models with EPDM rubber bedding.

8.7 The wind screen glass frames shall be made from SS 304 sheet of min. 18 SWG. The front wind screen of driver cum crew cabin shall be of toughened safety glass and made in one single piece. The same shall be from driver side to officer's side and provided for the entire front width for clear and unobstructed viewing of all inside driver cum crew cabin.

8.8 The two fixed type quarter glasses shall be provided between the wind screen glasses and driver side door and officer's side of suitable size and shape. The glasses shall be of 5 mm. thick toughened safety glass.

8.9 The rubber bedding used for fitting glasses and window frames shall be E.P.D.M. rubber.

8.10 The grab handles shall be provided from inside the cabin preferably on door pillars.

9. SEATS:

9.1 The driver seat shall be adjustable type both vertical upward and downward, forward and backward. The seat shall be fixed to the flooring by means of nuts and bolts. The seat assembly shall be original TATA design.

9.2 The officer's seat shall be fixed type rigidly fixed to the flooring by means of nuts and bolts.

9.3 The seat cushion shall be of latex foam rubber of 75 mm, thick upholstered in good quality foam leather cloth of approved shade. The backrest shall be of latex foam rubber of 50 mm. thick upholstered in good quality foam leather cloth of approved shade.

9.4 The crew seat shall be suitable for 5 firemen, rigidly fixed to the floor by means of nuts and bolts, running full width of the vehicles. The fireman's seat shall be provided with 75 mm x 50 mm. latex foam rubber upholstered in good quality foam leather of approved shades.

9.5 Below the crew seat, two lockers shall be provided, one for battery and another for keeping accessories. Extra length of battery cable, if necessary shall be provided by the successful tenderer.

10 REAR BODY:

10.1 The rear body shall accommodate sufficient number of lockers to keep 2.5 metres suction hoses – 4 numbers with couplings, 20 numbers of delivery hoses with couplings, light portable pump, and other accessories and water tank of 4,500 litres, Pump, P.T.O. ladder, etc.

10.2 The rear body shall be fabricated in continuation and in line. The under frame cross members shall be fabricated from M.S. rolled channel section of 100 x 50 x 5 mm.

10.3 A full length runner fabricated from MS rolled channel section of 100 x 50 x 5mm thick shall be provided and fixed on the chassis frame by means of 6mm thick MS plate bolted to the chassis frame as per the available bolt holes. A 5/8" dia 'U' clamp shall be provided where the fixing plate cannot be provided due to non availability of bolt holes on chassis frame. Each cross members shall be secured to the runner with suitable plates and 5/8" dia bolt with nylock nut.

10.4 The super structure of the rear body shall be constructed out of Aluminium sections manufactured by reputed company used for automobile body fabrication work. The super structure shall be adequately strengthened specifically at the members where the doors are fitted and also other members by providing brackets and gussets securely fitted. The details of the super structure members shall be submitted along with the offer.

10.5 The flooring of the lockers shall be fabricated from MS angles of 40 x 40 x 4mm thick.

10.6 All the under frame cross members and other Mild Steel members shall be painted with three coats of rust preventive paint.

10.7 All the under frame cross members shall be painted with two coats of chassis black paint.

10.8 The complete external paneling of the rear body, lockers, doors shall be of 16 SWG aluminium sheet with all joints riveted and beaded.

10.9 The side paneling of lockers shall be made of 16SWG aluminium chequered sheet and the flooring shall be made from 10 SWG chequered aluminium sheet.

10.10 The complete top deck of the rear body shall be provided with 10SWG aluminium chequered sheet rigidly fixed to the super structure members by means of nuts and bolts. The complete top deck paneling shall be easily removable type.

10.11 The complete inside paneling of all doors and lockers shall be 16SWG aluminium chequered sheet duly fixed to the super structure members by means of riveting.

11 LOCKERS:

11.1 Sufficient number of lockers shall be provided at both the sides of rear body for keeping suction hoses, delivery hoses, accessories, light portable pump, hose reels and other tools.

11.2 The lockers shall be arranged in such a manner that the load distribution shall be equal on both the sides.

11.3 The size and placement of lockers shall be clearly shown in the drawing. There shall be three full width lockers out of which 2 lockers shall be provided just behind the crew cabin and one locker shall be provided behind the water tank. There shall be lockers provided at the skirt level of suitable size on both the sides.

11.4 One of the lockers shall be provided with sliding trays for keeping hydraulic rescue tools along with proper fastening arrangement.

11.5 The sliding trays shall be provided in one of the locker for keeping all the accessories, tools and gears.

11.6 The lockers shall be divided into compartments and halves as per the requirement. The final design will be decided at the time of fabrication work.

11.7 All lockers shall be provided with Aluminium rolling shutters including the pump compartment but excluding the lockers provided below the chassis level. The aluminium shutters shall be water tight with suitable rubber packing. The shutters shall have smooth operation. The aluminum shutters shall be dust & water proof of MCD – France / FIRECO – Italy or any reputed imported make only made of extruded aluminum & duly hard anodized. (Indigenous aluminum shutters will not be accepted.) All the required lockers & rear pump compartment shall be covered with shutters. The shutters shall be of roller type only and not sliding type. The shutter doors shall be equipped with electro-magnetic switch on the door tracks to provide automatic switch on/off of compartment lights. All the space below the rear body and chassis shall be utilized for making lockers for storage of equipment. These lockers shall be covered with flap type self closing doors opening downwards. These doors can be used as climbing steps for access to the lockers. Chains, outside hinges & locks shall not be provided on these doors.

12 FLOORING:

The flooring shall be provided over the cross members with 16 gauge chequered Alluminium sheets. The complete floor plates shall be rigidly fixed to cross members. The floor shall be completely air tight. Drain holes of suitable size shall be provided wherever necessary.

13 DRAG HOOKS & TOWING HITCH:

Drag hooks or eyes shall be fitted on each chassis member at front and rear and provision shall be made at the rear for towing hitch suitable for a two wheeled trailer weighing approximately one M.T. The towing hitch shall be mounted on a sub-frame attached to the chassis with its height centre at 600 mm above ground level. Spurge pipe and winch of suitable capacity in the front of the vehicle, shall be provided.

14. GRAB RAILS:

Alluminium hand rails and non-slip steps of aluminium chequered plates shall be provided wherever necessary and also to climb on the roof as well as proper water tank.

15. No part of the body work shall reduce the ground clearance to less than 36 cm or increase the overall width of the vehicle to more than 2.50m. The height part of the appliance with the extension ladder and the monitor mounted on it shall not exceed 3.60m. The construction of superstructure shall not reduce the angles of approach and departure below 30 degree.

16 WATER TANK:

16.1 A water tank of 4500 liters shall be fabricated and mounted on the chassis. All the welding shall be by MIG welding with Argon gas process only. The welding of the tank shell shall be in such a manner that the first beading is from inside the shell and subsequent bead from outside the shell. The welded surface shall be cleaned of all slag's, scale etc. There shall be minimum joints in the tank shell and hence plates used for fabrication of tank shall be of maximum size.

16.2 The tank shall be mounted on the chassis onto a runner in such a manner that, the proper load distribution on each axle is achieved. The "U" bolts shall not be used for mounting of Water Tank. Water Tank shall be mounted on subframe with rubber metacones.

16.3 The water tank of required capacity shall be fabricated from stainless steel, 304 grade sheets and rectangular in shape with rounded corners duly mounted on a chassis in a manner keeping in view the proper load distribution on the axles. The load distribution calculation shall be shown in the detailed drawing.

16.4 The tank shall be provided with suitable baffle plates to prevent the surge of water while the vehicle is in motion, accelerating, braking in speed and cornering. The arrangement of baffles shall be clearly shown in the drawing.

16.5 The baffles shall be arranged in a manner to facilitate the movement of a person throughout the tank for welding, cleaning and general maintenance purpose.

16.6 The tank shall be mounted on minimum three cross members to counteract the stresses caused by chassis flexing and shall be so secured that it can be removed easily for maintenance purpose.

16.7 The sidewalls and the baffle plates of the tank shall be fabricated from 4 mm thick S.S sheet, whereas bottom plates of the water tank shall be 5 mm thick S.S plate. The bottom plate shall be rounded upward to a min of 300mm and the side plates shall be welded with a overlap joint of min 25mm.

16.8 The water tank shall be provided with 6 saddle supports, three on either side for mounting the tank on the runner.

16.9 The water tank shall be fixed to the runner plate with 5/8" dia bolt with nylock nut.

16.10 EPDM rubber packing of ½" thickness shall be provided between the tank saddle support plate and runner.

16.11 Suitable lifting eyes shall be provided on the shell of water tank to enable it to be lifted from the vehicle for repairs / replacement as and then required.

16.12 The tank shall be fitted with 100 mm dia overflow pipe of S.S and it shall be taken down below the chassis but without reducing the ground clearance.

16.13 The tank shall be fitted with one 63 mm instantaneous hydrant connection with non return valve and strainers, closed to the pump panel for filling the tank through 50 mm. bore S.S. pipe.

16.14 A draw pipe of 100 mm. dia. of S.S shall be taken from the tank to the pump suction inlet, incorporating a 100 mm butterfly valve of "Audco" make. A Flexible connection (rubber bellow) shall be provided to this pipe to take the vibrations.

16.15 The water tank with its piping and fitments shall withstand hydrostatic pressure of 0.3 bar.

16.16 A visual level gauge of glass tube shall be provided near the control panel calibrated ¼, ½, ¾, and full (preferably calibrated in liter).

16.17 The water tank shall have two bolted manholes of 60 cm dia. made from 4 mm thick S.S. plate. The rear manhole cover shall have aluminum / gunmetal threaded cap of 30 cm. dia. for filling the water in the tank from outside.

16.18 The tank shall be connected with the pump and hose reels and valves shall be provided in such a way that, any of the following operations are possible.

- 9.19.1 Hydrant - Tank
- 9.19.2 Tank - Pump - Reel

16.19 All the piping shall be of S.S 304 grade material.

16.20 The tanks shall be connected with pump as per the following connection (Control valves shall be butterfly valves and SS ball valves for easy operation).

a)	Pump to Monitor	b)	Pump to foam proportion
c)	Auxiliary connection	d)	Hydrant to hose reel.
e)	Pump to hose reel	f)	Cooling pipe
g)	Tank to primer	h)	Water level indicator.

TECHNICAL DATA FOR HIGH PRESSURE FOG/JET GUN WITH FOAM EXTENSION:

<u>Jet/Fog Gun</u>	<u>Foam extension</u>	
Length	500 mm approx.	600 mm
Weight	3.10 kgs 6.8 lbs.	1.90 kgs. 4.2 lbs
Nozzle	8 mm	---
Coupling	Store 1 ½	Bayonet Catch
Material	Aluminium alloy	
Throwing range	Upto 30 mtrs	
Throwing height	Upto 25 mtrs	
Foam output	Upto 2.9 m3/min.	

17 HOSE REEL (HIGH PRESSURE)

17.1 Two high-pressure hose reels shall be provided one on each side and fixed in one of the lockers provided between rear mudguard and rear bumper. This hose reel shall be connected to H.P. out let of pump with "AUDCO" make SS ball valve of suitable size.

17.2 The hose reel shall be made from carbon steel/ Aluminium/ stainless steel material with bearings / bush made from gunmetal. There shall not be any gland sealing for the hose reel and sealing shall be done by means of either oil seals or 'O' rings.

17.3 The design and size of hose reel shall be such that, it shall accommodate 60 mtrs. H.P. hose having 19.0 mm bore with quick connect couplings. The hose reel shall have 40 kgs./cm² working pressure and bursting pressure shall not be less than 120 kgs./cm². The hose shall be "Duplon ", "Swastik", or "Dunlop" make.

17.4 The H.P. hose reel shall be hydraulically tested to 50kg/cm² pressure.

17.5 Additional 60mtrs hose with quick connect coupling (male & female) of above specifications shall be supplied loose, to connect the hose reel whenever required. The loose hose shall be stored in one of the locker on during hose reel in winded condition.

17.6 The HP hose reel shall be provided with High Pressure fog / Jet trigger type AWG/ Rosenbauer make gun connect by quick connect couplings. The gun shall be made from aluminum alloy with rubber grip handle. The inlet connection shall be of ¾ " BSP and shall have leak proof rotating type hose connector.

The gun shall be of constant flow type and shall have discharge capacity of 150 LPM approx. The gun shall have facility to set of either spray or jet pattern reparably in handle grip. The gun shall have ability to work on pressure from 20 kg/cm² to 40 kg/cm² without affecting the discharge pattern. The weight of the gun assy. shall not be more than 3.0 kgs.

18 PUMP:

The pump shall be multi-stage combined high/normal pressure pump intended for fog application through high pressure fog gun attachments. The pump shall be multi-stage centrifugal fire pump having discharge capacity of 3000 LPM at 7 kg/cm² and high pressure 300 LPM at 40 bar and made from light alloy body and stainless steel shaft with bronze impeller. Pump shall have one suction inlet and four delivery outlets for normal pressure application and a connection for high pressure hose reels. Mechanical carbon seal shall be provided in pump. Pump shall have the following performance.

The pump shall have single shaft with only two impellers and no gears or gear box. The pump should be capable of simultaneous operation for high and low pressure discharge. Pump shall have self adjusting mechanical seal to avoid leakage and maintenance free. Multi-shaft design is not acceptable.

19. PRIMER:

The pump shall be coupled with an automatic watering type primer capable of lifting water from 7 mtrs. Depth at a rate of 30 cm/sec. At NTP.

20. PUMP TEST:

The pump fitted on the vehicle shall be subjected to various tests as detailed below

- i) The pump with its all fitments will be subjected to Hydrostatic testing on a pressure of 21 kgs./cm² for low pressure side and 52 kgs./cm² for high pressure side.
- ii) The pump shall be run dry for a period of minimum two minutes at 2000 RPM to check the integrity of mechanical carbon seal. After this test there shall not be any leakage of water through carbon seal.
- iii) The pump performance test will be carried out by running the pump at constant RPM at 2800 and measuring the discharge at various pressure.
- iv) The pump will be subjected to Endurance test for a period of FOUR hours continuous running. The first Three hours the pump shall deliver rated output of 2000 LPM at 8 kg/cm² and next one hour will be 300 LPM at 35 kg/cm².
- v) During the endurance test the water shall not be replenished in the cooling system and the temperature of the cooling water and engine oil should not exceed the manufacturers standards recommendations for the continuous operation and engine should not show any sign of stresses.

21 FOAM TANK:

21.1 Foam compound tank of 500 ltr. Capacity shall be suitably mounted on the chassis. The tank shall be fabricated from stainless steel plates of not less than 3 mm thickness (AISI-304). The tank shall be of welded construction having suitable eye hooks on the shell of the tank to enable it to be lifted off the chassis for the maintenance purposes. The "U" bolts shall not be used for mounting of Foam Tank. Foam Tank shall be mounted on subframe with rubber metacones.

21.2 The tank shall be provided with stainless steel baffles to prevent surging and adequate arrangement of suitable size for filling of tanks. A suitable sum with drain valve shall be provided at the bottom. One air release valve shall be fitted to the tank, which shall work both ways i.e. at the time of filling the tank and drawing the foam compound when the unit is in operation. Necessary pipeline shall be provided for feeling the foam compound to the inductor. Metallurgy of all foam compound carrying pipelines and various immediate attachments of foam compound tank must suit to deal with AFFF foam compound.

21.3 The foam tank shall be duly charged with AFFF foam compound as per IS:4989(PT.2), 1984 with amendments, bearing ISI Mark. A level indicator shall be provided for the foam tank.

22. FOAM TRANSFER PUMP:

2Nos. suitable hand operated pumps for transfer of foam compound from drums / jery cans into the foam compound tank shall be provided at a convenient position. Locker shall be provided for spare foam drums on each side.

23. AUTOMATIC FOAM PROPORTIONING SYSTEM:

Automatically governed around-the-pump proportioner inductor type (PV) shall be provided between suction and delivery of the pump to induct 3% to 6% foam solution in the water stream with no loss in delivery pressure from the pump. Automatic foam proportionate can induce foam liquid proportionally to water discharge for using monitor and any number of foam branches in combination.

24. COOLING SYSTEM:

Indirect cooling system of open circuit type consisting of a special heat exchanger shall be provided on the vehicle to enable full power output to be maintained during pumping duty without overheating the engine and hot water is discharged to waste.

25. POWER TAKE OFF (P.T.O.)

i) A power take off assy. shall be brand new and capable of transmitting full torque developed by vehicle engine and transmitted to wheels in first gear shall be provided.

ii) A power take off assy. shall be "SYALL" or any equivalent make with speed ratio suitable to specification Requirement, Control lever: Drivers cab with locking device and oil level indicator.

iii) The PTO control lever shall be located inside the driving compartment at suitable and easily accessible position.

iv) The PTO assy. shall have a built in cooling system.

v) Means shall be provided to determine with reasonable accuracy the oil level in the PTO.

vi) There shall be locking arrangement for PTO lever to ensure that the pump gear dose not get engaged inadvertently.

vii) The driving shafts between the main transmission and the PTO shall be fully universal with provision for lubrication and shall have spline and socket system at other end.

viii) The successful tenderer shall submit separate drawing for PTO mounting.

ix) The PTO assy. shall be mounted preferably on heavy duty Rubber mountings. The mounting design will be decided at the time of fabrication.

26. WATER/FOAM MONITOR:

Foam monitor shall be mounted on the roof of the driver's cabin in such a way that it can be operated from the cabin by the operator by single lever. The monitor shall be capable of traversing 360 degree horizontal and elevating from horizontal to 15 degrees and depressing to not less than 45 degree. The monitor shall be fitted with a deflector instantaneously by single lever. Monitor shall be able to produce 16000 to 18000 ltrs. Of foam per minute at 7 kg./6m² pressure.

The range shall be 50 to 60 mtrs. The monitor shall have a single lever for operation of horizontal/vertical movement within the cabin.

MONITOR: » Size 75 / 100 mm, » Body Barrel of SS 316, GM swivel joint for horizontal & vertical motion manual operation.
» Rotation 360°, » Elevation 90° (+75° -15°)

SWIVEL JOINT:

» Material GM., » Gear Wheel LTB Gr.2 of IS:318, » Worm SS/LTB Gr.2 of IS:318

WATER-FOAM NOZZLE:

» Material of construction SS 316
» Type of Foam used AFFF
» Discharge capacity 750 USGPM
» Throw of 7 Kg/cm² horizontal Water: min. 50 mtrs. , Foam: min. 40 mtrs.
» Foam Expansion Min. 1:8
» Fog (curtain) 160°

FLANGE

» Material SS 316
» Specification Table B 16.5/150#

OTHER CONSTRUCTION DETAILS

» Welding Radiography type
» Working pressure 7 to 10 Kg/cm².
» Painting As per mfgs standards

27. SUCTION & DELIVERY:

The pump shall have one suction inlet and four delivery outlets for normal pressure applicable and a connection for high-pressure hose tools. The suction inlet shall be of 100 mm dia. With instantaneous gunmetal coupling as per IS:903/1984 with male blank caps. The delivery outlets shall be fitted with SAS ball type valves.

28 HAND LINES:

28.1 Four hand-lines, two on either side of the appliance, shall be provided. These shall terminate in foam making branch pipes made of SS-304/SS-316 each capable of producing 3600/4500 ltrs. Per minute foam with expansion of 6 to 8 and fitted with spray jet attachments and preferably also fitted with hand control and minimum throw of 25 m when either all the hand-lines only are used simultaneously or at least two of them are used in combination with the monitor.

28.2 The hand-lines shall be stowed in quick-release clamps or lockers as close as possible to the pump operating panel. The hoses for the hand-lines shall have an internal diameter of 63 mm. These shall be of the reinforced rubber lined type or similar and be in lengths of 30 m each and conforming to IS:636-1962.

28.3 The controls for the hand-line outlets shall be of the pneumatic type ball valve and fitted to a control panel in front of the driver. In addition to these, manual controls shall also be provided and fitted close to the stowage position of the hand lines.

29. PICK-UP TUBE CONNECTION:

A connection for using the auxiliary foam compound pick-up tube shall be provided to enable foam compound to be induced into the pump direct from the foam drums. The pick-up tube with a strainer shall be supplied for this purpose. The valves shall be so arranged that all operations are controlled by one lever movement only.

30. CONTROL PANEL:

The control panel consisting of the following controls shall be mounted at the rear:

1. Compound gauge
2. Pressure gauge
3. Engine throttle control
4. Selector valve (automatic)
5. Control valve for the foam proportioner
6. Valve for the auxiliary foam connection
7. Valve for the tank to sump
8. Valve for the engine cooling
9. Foam tank isolating valve
10. Valve for the hose reel control
11. Technometer
12. Other controls as per latest version of IS: 1977

31. CO2 EQUIPMENTS:

2 Nos. 22.5 kg. (50 lbs.) CO2 cylinder of controlled valve type, shall be mounted on the appliance. These shall be provided in a battery of 2 Nos. on each side with one manifold for each set of 2 cylinders. Each connection between the cylinder and the manifold shall be fitted with a non-return valve to prevent back flow of the gas into other cylinders. A pressure relief valve or a safety bursting disc shall be incorporated in the manifold. 2 Nos. hose reels shall be provided for CO2 discharge, each reel fitted with 15 mtrs. (50 feet) long high pressure hose terminating into a CO2 horn. The CO2 extinguisher shall be provided at a convenient position on the appliance. The CO2 cylinders, valves etc. shall comply with the latest version of 3224/64, 307/58, 3224/71, 9903/703, 2872/67 etc.

32 DRY CHEMICAL POWDER UNIT:

32.1 Two nos. of 50 kgs. capacity DCP fire extinguishers shall be suitably located with two hand lines 30 mtrs. Each – 25 mm dia. Fitted with trigger type gun metal nozzle having an output of 2.5 kgs./sec as per IS.

32.2 The DCP vessel shall be provided with suitable device to maintain the fluidity of the powder at all times. Details of such device shall be submitted along with the offer.

33. PORTABLE FIRE FIGHTING PUMP

High pressure Portable fire fighting pump set model P572s Rabbit Portable Fire Pump having discharge capacity of 1600 LPM at 7 kg/cm² with 100mm round thread suction head and 2x 63 mm delivery out let, coupled with (Petrol) Gasoline Engine, Stainless Steel Tubular carrying frame, control panel, painting, etc as per enclosed Technical Leaflet of FUJI ROBIN, JAPAN, along with the following standard accessories:

- a) 1 no. Flood light projector
- b) 1 no. Battery charger
- c) 2 nos. x 2.5 m length 4" dia suction hose with coupling
- d) 1 pair Suction Wrench
- e) 2 nos. Basket Strainer for firefighting purpose cylinder type
- f) 1 no. Pump & Engine manufacturing tool kit
- g) 1 sets Operation and maintenance Manual
- h) 1 no. Metal suction strainer

34 INFLATABLE TOWER LIGHTING

Supply/ mounting of inflatable Tower Lighting System on fire Tender.

35 GENERATOR

Supply of 5 KVA single phase, 50 cycles petrol engine driven portable electric power generator of HONDA/YAMAHA/or equivalent make.

36 ACCESSORIES:

The following accessories shall be provided along with the tender:

- a) 2 Nos. CO₂ extinguishers 22.5 kgs. Capacity fitted in suitable position on chassis in a locker with suitable arrangement.
- b) Electric siren – 24 volt electric siren combined with public address system (1/2 mile range).
- c) Fog lamp – mounted in front of appliance (2 nos.)
- d) Resersing light – At a suitable place (2 Nos.)
- e) Red bar light – one amber bar light rotating type shall be fitted on the driver's cabin (red revolving beacons).
- f) Search light – fitted at a convenient position with electric cable of 30 m length. It shall be easily removable type and a stand for fixing at ground (aluminium tripod).
- g) Spot light – Mounted on roof cabin.
- h) Trafficators – Bar type
- i) Inspection lamp – with bracket clamped with battery.
- j) Tool kit – Container.
- k) Exhaust pipe with spark arrestor
- l) Foam filling electrical pump.
- m) Fire bell 10" hand operated: Fire bell to be located in such a manner to enable to be operated through the window by the person sitting near the window on left side, to prevent passing of handle etc. through the roof which result in rain water seeping into the cabin.
- n) Audio Signal Assembly – 1 No.
- o) Operation and maintenance manuals – 2 sets.
- p) A battery operated amplifier system with a control panel in the driver's cabin, shall be provided. One loudspeaker will be mounted on the driver's cabin roof with a swivel base along with two tone hooter shall be provided.

- q) Aluminised fire proof suits complete – 2 Nos.
- r) Battery charger of input + 200/230 output 12V, 6 Amps – 1 No.
- s) Suction wrenches for 4" suction house coupling – 2 Nos.
- t) Manila rope 2" x 100' – 1 length.
- u) Fire Axe 2 kg head – 1 No.
- v) Carpenter's saw 60 cm – 1 No.
- w) Hacksaw with six spare blades – 2 Nos.
- x) Fireman's axes with insulated handles – 4 Nos.
- y) Shears, bolt cropper, 60 cm – No.
- z) Fire hooks – 2 Nos.
- aa) Quick release knives with sheath – Nos.
- bb) Crowbars – 2 Nos.
- cc) Grapnel with chain and cable – 1 No.
- dd) Dividing breeching with control – 1 No.
- ee) Delivery hose 63 mm reinforced rubber lined 30 mts. Length (IS:636-1962) complete with instantaneous couplings – 10 lengths.

37 PAINTING:

37.1 The cross members of driver cum crew cabin, rear body shall be painted with two coats of Anticorrosive paint.

37.2 The complete external and internal aluminum paneling of driver cum crew cabin and rear body shall be painted with two coats of Zinc Chromate paint.

37.3 The complete exterior of the vehicle shall be painted with two finish coats of "POST OFFICE RED" polyurethane paint manufactured by ICI Dulux / Nerolac paint / Dupont.

37.4 The internal painting of cabin lockers etc. shall be done with two coats of Grey Synthetic enamel paint made by ICI Dulux enamel paint.

37.5 The words " _____ " and " _____ " shall be painted on both sides of vehicle in letter of 7 mm. size in golden yellow paint with black colour shading.

37.6 The "logo" of MPT shall be painted on both sides of vehicle in natural colours at suitable place in consultation with Chief Fire Officer, Mumbai Fire Brigade.

38 SAND BLASTING AND PAINTING:

38.1 The sandblasting and painting of steel of the body work of the fire tender will have to be carried out in the presence of the representative of the Port. For this purpose, the entire fabrication work should be first completed so that the sandblasting and painting work can be carried out within 4 to 5 days.

38.2 The aluminum work of the fire tender including plates, sections, etc. and the entire vehicle shall be painted both from inside and outside with 2 coats of Post Office red colour by using primer bonding and finish of good quality. Service lettering shall be as per instructions. Paints of only following makes should be used. Jenson & Nicholson/Asian/Berger/ Shalimar.

38.3 The foam crash tender with pump and other accessories shall comply with the requirements of latest version of IS so far as possible. Wherever not specified, the tender shall conform to relevant I.S.S.

38.4 The body shall be so constructed as to comply with the Motor Vehicle Rules or any other rules in respect of the same stipulated by the State of Central Government, Municipal Corporation of any other Public body empowered to do so.

38.5 The tenderers shall submit a full sketch/drawing detailing arrangements and general layout with dimension etc. along with the tender documents for approval.

38.6 The tenderers shall extend all facilities and co-operation to the M.P.T. in passing and registering the vehicle by the Regional Transport Authorities.

38.7 The construction of the body shall be done to the entire satisfaction of the Chief Mechanical Engineer or his authorized representative and any defects found during the construction or guarantee period after delivery, shall be made good at the cost of the builder.

38.8 Top structure of the Fire Tender behind the cabin should be fabricated with bolted detachable arrangement to facilitate maintenance works on water and foam tank and inside the body of the Tender.

39 VALVES:

All valves, drain plugs etc. shall be of stainless steel of 304/316 quality. No M.S. or C.I. materials will be used.

40 HAND RAILING:

All hand railings to be installed on the fire tender will be of aluminum make. All connecting fittings will be also of aluminum.

41 TRIALS/ACCEPTANCE TESTS:

The following tests shall be applied before accepting the MFT. These shall be carried out at manufacturer's works before dispatch of the vehicle and after receipt of the vehicle at Mormugao Port Trust, Goa.

42 ROAD TEST:

To check manufacturer's rating for acceleration maximum speed, breaking efficiency and turning circle. These shall be carried out with appliance fully laden.

43 STABILITY TEST:

The fabrication must take good care to equally distribute the load and keep the center of gravity as low as possible. The desirable performance will be when under fully equipped and loaded condition (but excluding fire crew) if the surface on which the appliance stands is tilted on either side, the point at which overturning occurs is not passed at an angle of 27 degree from the horizontal.

44 PUMP TEST:

In addition to the test to check that the pump fulfils the requirement laid down at Sr.No:20 of this specification, the pump shall be run for a continuous period of 4 hrs. delivering the rated output. During this test, the water in the engine cooling system shall not required replacement, the temperature of the engine lubricating oil shall not exceed the maximum temperature recommended by manufacturer and the engine shall not show any sign of distress.

45 PRIMER TEST:

The primer test shall be carried out in order to check the fulfillment of the equipment laid down at Sr.No:19 of this specification.

46 FOAM MAKING EQUIPMENT TEST:

These shall be applied to check the induction ratio of foam compound, total foam discharge and expansion ration of foam production. Then foam/water monitor shall be tested as per the Sr.No:26 of this specification.

47 DRY POWDER SYSTEM:

The system shall be tested to ensure its functioning as specified in this specification at Sr.No:32. However, the DCP vessel fabricated as per ASME code will be tested hydraulically to 30.0 kg/cm² as per the Sr.No:32 of technical specification.

47.1 The fabrication of the appliance should provide suitable facilities for carrying out all the tests specified above including the foam compound and dry powder required for the testing purpose.

48 MARKING:

48.1 Appliance shall be clearly and permanently marked with the following information:

48.2 Manufacturer's name or trade mark, if any.

48.3 Year of manufacture

48.4 Capacity of the pump.

48.5 Layout of pipeline for foam and water

48.6 An illuminating "FIRE" sign shall also be fitted to the outer center.

49 MISCELLANEOUS:

49.1 The original rear bumper as provided by the chassis manufacturer shall be retained.

49.2 Two cat ladders made out of MS pipe of 1" dia shall be fixed at the rear.

49.3 1" dia Aluminium pipe railing with sufficient number of brackets shall be provided to the rear body over the deck.

49.4 A towing hook shall be provided and fitted at the rear end by means of nuts and bolts.

49.5 A suitable siding arrangement shall be provided for Light Portable Pump in one of the lockers with suitable locking arrangement.

SCHEDULE OF EQUIPMENTS TO BE CARRIED ON THE FOAM TENDER

Following Accessories shall be provided with Foam Tender:

Sr. No	Description	Qty.
1	Simplex make Aluminum trussed type Triple Extension Ladder 15 m.	1 No.
2	Non percolating flexible Fire Fighting Delivery Hose 63mm X 15 Mtrs, three layered synthetic jacketed, with electrometric outer covering, resistant to liquids, chemicals, acids alkalizes, solvents, abrasions & heat, having 42 Kg/cm ² burst pressure, 25 Kg/cm ² proof pressure, 18 Kg/cm ² working pressure, bearing IS : 636 -1988 type B mark. Hose coupling, 63mm x 63mm size, heavy duty SS, inst. pattern, pair of male & female parts, duly copper wire bounded with above hose.	10 Nos.
3	PVC heavy duty suction hose of 140mm complete with copper alloy round threaded couplings to suit the pump inlet – 2.5m long.	4 Nos.
4	Universal type Suction wrenches IS 4643	1 Pair
5	Cylindrical gunmetal Suction strainer according to pump inlet, IS: 907	1 No.
6	Basket strainer IS:3582.	1 No.
7	Blank cap for suction hose	1 No.
8	Hose Bandages, rubberized (IS 5612) Part 2	12 Nos.
9	Hose Clamps (IS 5612) Part 1	6 Nos.
10	Hose sling	2 Nos.
11	Dividing breaching with control arrangement as per IS:5131	1 No.
12	Collecting breaching made out of light alloy as per IS: 905	1 No.
13	Gunmetal Short Branch Pipe, IS:903, ISI Marked.	4 Nos.
14	Nozzles for branch (12mm, 16mm, 20mm, 24mm & 32mm) 2 each	10 Nos.
15	Dual head stand pipes (IS 5714)	1 No.
16	Gunmetal Adapter for 140mm suction female screw coupling and 63mm male instantaneous	2 Nos.
17	Gunmetal Adaptor double female instantaneous pattern 63 mm, IS:901	2 Nos.
18	Gunmetal Adaptor double male instantaneous pattern 63 mm, IS:901	2 Nos.
19	Nozzle spanners, IS: 903	2 Nos.
20	Hand Lamp (4 Cells)	1 No.
21	Portable DCP 10 Kgs. Fire Extinguisher ISI marked.	2 Nos.
22	Foam making Branch pipe FB10X with pick up tube	1 No.
23	Long line with Manila 50 mm circumference, 30 m long	2 Nos.

24	Short line with Manila, 50 mm circumference, 15 m long	2 Nos.
25	First aid box for 10 persons	1 No.
26	TFT / AKRON or equivalent make Multipurpose hand held Nozzle will be made of light alloy (hard anodized) having twist type control for straight jet, spray and wide angle fog, capable to operate at low pressure 3.5 Kg/cm ² , facility of Solid jet and fog simultaneously or independently, discharge capacity at 5 kg/cm ² pressure not less than 500 LPM for jet and 300 LPM for spray and Horizontal Jet throw in still air not less than 35 Mtrs. at 5-6 Kg/cm ² pressure, provision for change over to flush without shut-off, twist shut off from fog to stream, provision of teeth to provide dense fog, Control lever for ON-OFF Position, 63 mm size inlet connection, rubberized pistol grip handle for better control and weight not more than 3 Kgs.	1 No.
27	TFT / AKRON or equivalent make Selectable Flow Nozzle made of Light alloy extruded construction of 64430 – WP Grade, hard anodized black to prevent from corrosion or wear, twist type control for straight jet, spray and wide angle fog, having arrangement for five flow selection from 350 to 900 LPM by twist, horizontal reach Min. 35 Mtrs at 7 Kg/cm ² pressure, Pistol grip type handle for better grip, provision for change over to flush without shut-off, Replaceable spinning teeth ring for fog curtain, Ball valve type handle for shut off, 63 mm size Male instantaneous inlet connection, Weight less than 3 Kgs.	1 No.
28	TFT / AKRON or equivalent make Dual Pressure Hand Held Nozzle shall be made of light alloy Extruded construction 64430-WP Grade, hard anodized to prevent the wear & tare and corrosion, twist type control for straight jet, spray and wide-angle fog, facility to changeover from high pressure to low pressure without disturbing the same stream and flow performance, Discharge capacity shall be more than 800 LPM at 7Kg/cm ² and 900 LPM at 8Kg/cm ² on changeover from high pressure to low pressure and Spray angle 160°, horizontal throw in still air must be more than 40 Mtrs. at 7-8 Kg/cm ² pressure, Different flow positions with click stop mechanism shall be provided on hand to maintain selected flow, shall have Pistol grip handle for better control to firefighter, shall give turbulence free performance, shall have provision for change over to flush without shut-off, shall have 63mm size Inlet connection conf. to IS: 903.	1 No.
29	POK or equivalent make Ground cum Deck Oscillating Monitor The portable oscillating monitor shall be designed for a dual use of Ground Monitor as well as an oscillating monitor. The light weight aluminium construction monitor should confirm to the following technical specifications: <ol style="list-style-type: none"> 1. The flow of the monitor shall be not less than 1800 LPM @ 7 bar. 2. The monitor shall be equipped with a selectable gallonage nozzle with a maximum flow range of 2000 LPM @ 7 bar. 3. It should have a rotation capability of 360° in Horizontal and 80° in Vertical when being used as a Ground Monitor. 4. It should have a carrying handle on top to carry the monitor in folded condition. 5. It should have stainless steel foldable legs with carbide tips to ensure full stability during operation. 6. It should have a 2.5" Size double swivel inlet which locking mechanism for mounting and locking the oscillating 	1 No.

	<p>attachment.</p> <p>7. The unit shall be equipped with a vertical stop pull pin to limit its vertical movement to 30° for safety reasons. The vertical movement beyond 30° shall be possible by pulling the vertical stop pull pin.</p> <p>8. The unit shall be equipped with a pressure gauge and shall be powder coated in RED.</p> <p>9. The unit shall have screw locks to lock the horizontal as well as vertical movement of the unit.</p> <p>Oscillating Attachment: The unit shall be equipped with an oscillating attachment which shall be mounted on to the double swivel inlet of the monitor through a locking mechanism. The oscillating attachment shall work on Pelton Wheel – Planetary Gear Mechanism. The range of oscillations shall be from 0° to 60°. The oscillating mechanism shall avoid complex valve block design and any water lines exposed on the body of monitor. The oscillating mechanism shall have a oscillating arm to control the Degree of Oscillations. The frequency of oscillations shall be controlled through a locking gear on the Pelton Wheel. The mechanism should be simple to understand, easy to operate and unconstructive to water flow. The oscillating mechanism shall work even when used with water containing solid particles.</p>	
30	Flame proof lamps approved by CCE – Nagpur	1 No.
31	Rubber gloves (in case)	1 pair
32	Axe, large IS: 703	1 No.
33	Spade	1 No.
34	Pick axe IS: 273	1 No.
35	Electricians Hand Gloves tested to 20 KV	1 Set
36	Bolt cutter (TAPARIA / JHALANI make) (IS 5200) 30 Inch.	1 No.
37	Quick release knife (IS: 5486)	1 No.
38	Grab Hook	1 No.
39	Door breaker	1 No.
40	Crow bar with chisel and claws in between IS: 704	1 No.
41	Sledge Hammer, (TAPARIA / JHALANI make) 6.5 Kgs., IS:841	1 No.
42	Fireman's AXE with leather belt & pouch	1 No.
43	Hydraulic Jack with tommy bar of 16 Ton capacity	1 No.
44	Fire hook	1 No.
45	Pelican make heavy duty rechargeable search light	1 No.

**MORMUGAO PORT TRUST
FORM OF TENDER**

(Notes: Tenderers are required to fill up all
the blank spaces in this Tender Form and Appendix)

To,
Gentlemen,

1. Having examined, General Conditions, Special Conditions, Technical Specifications and Schedules for the manufacture of the above named works, we, the undersigned, offer to execute complete and guarantee the whole of the said work in conformity with the said General Conditions, Special condition, Technical Specifications and Schedules for the sum indicated separately in the Schedule of Price submitted in sealed cover No.2.

2. We undertake, if our Tender is accepted, to complete and to deliver the whole of the work comprised in the contract within 90 days, calculated from the date of work order.

3. In the event of my/our tender being accepted, I/We undertake to deposit 10% value of the contract within 14 days of being intimated of the acceptance of the tender failing which the earnest money as mentioned above may be forfeited to the Board.

4. In the event of my or our tender being excepted, I/We also agree to enter into an agreement, to be prepared at my/our cost incorporating the annexed conditions of the contract and specifications with such additions and alterations thereto which may be necessary to give effect to the acceptance of this tender, failing which, the Board shall be entitled to forfeit the deposit of 10% of the value of the contract referred to in para 3 above.

5. We agree to abide by this Tender for the period of six months from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

6. We have deposited as Earnest Money with the Board's FA&CAO, Rs._____ vide enclosed receipt No._____ dated _____.

We further agree that if we withdraw the tender before the expiration of this period of six months or fail to execute an agreement in the form prescribed within reasonable time, the Earnest Money deposited shall be forfeited to the Board.

7. Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof shall constitute a binding contract between us.

7. We understand that you are not bound to accept the lowest or any tender you may receive.

Place:

Signature of authorised
Representative and Official seal

Date:

APPENDIX

TENDER NO. CME/PD/I/2010

- i) Name of the Work : Design, Manufacture, Installation, Supply and Commissioning of 1no. Multipurpose Combined foam and co2 Fire appliance at Mormugao Harbour.
- ii) Earnest Money Deposit : Rs.1,12,000/-(One Lakhs Twelve Thousand Only)
- iii) Amount of security deposit : 10% of value of contract.
- iv) Time for Completion : 6(Six) months from the date of handing over the chassis.
- vi) Amount of liquidated Damages for delay : 1% of the contract value per week of seven days or part thereof subject to the ceiling of 10% of the contract value.
- vi) Period of Guarantee for equipment : 12months from the date of commissioning and acceptance of appliance (Fire crash tender).
- vii) Terms of Payment : a) 80% of the contract value against delivery of the completed unit at our site.
b) 20% of the contract value after successful commissioning, testing and registration of the equipment (Fire crash Tender) alongwith all certificates and manuals.
- ix) Time within which payment to be made : All payments will be made within 30 days from the receipt of bills provided bill is undisputed. Bill should indicate PAN/EPF/ESI Code No. Address of Bank, Type of Account, EFT No./ Electronic clearance system. MICR Code for Electronic Credit System.

Dated this _____ day of _____ 2010

Signature _____ Name _____ in the capacity of _____ duly authorised to sign tender for and on behalf of _____

(IN BLOCK LETTERS)

Signature of Witness _____

Name of witness _____

Occupation of witness _____

SCHEDULE NO. 1

EXPERIENCE

Name of work :

Tenderers must fill in the under-noted columns.

Sr. No.	Full particulars of similar or such kind of works carried out by the tenderer	Value of the work (Rs.)	Completion time as stated in tender	Actual completion time	Name & authorities for whom work was carried out
(1) (6)	(2)	(3)	(4)	(5)	

Place:

Date:

Signature of authorised
Representative and rubber
Stamp (seal) of the firm

P.S.:

Tenderers should enclosed copies of work orders and performance certificate for having carried out the work satisfactorily during the last 7(Seven) years.

**SCHEDULE NO. 2
ORGANISATION CHART**

Tenderers is to indicate the following:

Designation of Key personnel	Name and short resume of experience
---------------------------------	--

Estimated labour force:

Peak:

Average:

SCHEDULE NO. 3
SCHEDULE OF TAXES & DUTIES
(PLEASE FILL UP THE SCHEDULE AFTER READING FOOT NOTE)

Sr.No.	Description	Percentage Rate %	Applicable on
1	2	3	4

Design, Manufacture, Installation,
 Supply and Commissioning of 1no.
 Multipurpose Combined foam and
 co2 Fire crash appliance at Mormugao Harbour.

1. Excise Duty
2. Sales Taxes
3. Entry Tax
4. Any other Taxes and Duties

No prices should be indicated. Only percentage rate % of the taxes & duties shall be indicated.

FOOT NOTE:

a) Please indicate on what cost the Taxes and duties are applicable at Col.4 Above. For e.g. Excise duty is applicable on Basic price.

b) Port is not eligible to issue 'C' or 'D' forms.

c) Only percentage rate of Taxes & Duties should be indicated at Col.(3) above.

::50::

SCHEDULE NO. 4

List of 5years spares for trouble-free operation to be indicated alongwith company price catalogs.

Sr. No.	Description	Qty.
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Signature of Tenderer
With official rubber stamp.

In WITNESS whereof the parties have hereunto set their respective hands and seals the day and year first above written.

THE COMMON SEAL OF THE BOARD WAS }
HEREUNTO AFFIXED AND THE CHIEF } CHIEF MECHANICAL ENGINEER
MECHANICAL ENGINEER THEREOF, } MORMUGAO PORT TRUST
SIGNING IN THE PRESENCE OF :

i) _____

ii) _____

SEALED AND SIGNED BY THE }
CONTRACTOR IN THE PRESENCE }
CONTRACTOR OF :- }

i) _____

ii) _____

FORM OF BANK GUARANTEE FOR SECURITY DEPOSIT

(To be used by approved scheduled bank)

1. In consideration of the Board of Trustees , Mormugao Port Trust (hereinafter called 'the Board') having agreed to exempt _____ (hereinafter called 'the said Contractor(s)') from the demand under the terms and conditions of Agreement to be entered between _____ for _____ (hereinafter called "the said Agreement") of Security Deposit for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said Agreement on production of a bank guarantee for Rs. _____ (Rupees _____ only), we _____ Bank Ltd., (hereinafter referred to as 'The Bank') do hereby undertake to pay to the Board an amount not exceeding Rs. _____ against any loss or damage caused to or suffered by the Board by reason of any breach by the said Contractor (s) of any of the terms or conditions contained in the said Agreement.

2. We, _____ Bank Ltd., do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Board stating that the amount claimed is due by way of loss or damage cause to or would be caused to or suffered by the Board by reason of any breach by the said Contractor(s) any of the terms or conditions contained in the said Agreement or by reason of the Contractor'(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under Guarantee. However, out liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

3. We, _____ Bank Ltd., further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Board under the virtue of the said agreement have been fully paid and its claim satisfied or discharged and till the Board certifies that the terms and conditions of the said agreement has been fully and properly carried out by the said Contractor(s) and accordingly discharged the Guarantee, unless a demand or claim under this Guarantee is made on us in writing on or before three months from the expiry date i.e. three months from _____ we shall be discharged from all liability under this guarantee thereafter.

4. We, _____ Bank Ltd. further agree with the Board that the Board shall have the fullest liberty without our conceit and without affecting in any manner our obligations hereunder to vary any terms and conditions of the said agreement or to extent time of performance by the said Contractor (s) from time to time or to postpone for any time to time any of the powers exercisable by the Board against the said Contractor(s) and to enforce or forbear any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reasons of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the Board or any indulgence by the Board to the said Contractor(s) or by any such matter or thing whatsoever

which under the law relating to sureties would but for this provision have effect of so relieving us.

5. Notwithstanding anything stated above, our liability under the Guarantee is restricted to Rs. _____ (Rupees _____ only). The Guarantee shall remain in force until and Unless a suit or action to enforce claim under the guarantee is filled against us within three months from that date, all right under the Guarantee shall be forfeited and we shall be relieved and discharged from all the liabilities there under.

6. The Board is authorised to enforce claim against guarantee at the local branch of the Bank in Goa, in case such an eventuality of encashment arises.

7. We, _____ Bank Ltd., lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Board in writing.

Dated this _____ day of _____ 2010 .

For _____ Bank.

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MORMUGAO PORT TRUST
ENGINEERING MECHANICAL DEPARTMENT

SECTION: _____

CHECKLIST TO ASCERTAIN COMPLIANCE OF STATUTORY REQUIREMENTS BY THE CONTRACTORS

1. Name of the work _____

2. Name of the contractor and address _____

3. Maximum number of workers the contractor proposed to engage on any day during the execution of the work. _____

4. Whether a Licence under the Contract Labour (R & A) Act. has been obtained by the contractor. YE. NO

a) If yes, quote Licence No. No. : _____
and date

Date : _____

b) If no, record reasons _____

5. Whether contractor is engaging any Migrant Workmen (i.e. from other than the State of Goa) YE. NO

a) If yes, whether the contractor has obtained licence under the Inter State Migrant Workmen (RECS) Act, 1979. YE. NO

i) If yes, quote ref. No. and date No. _____
Date _____

ii) If no, record reasons _____

6. Whether contract worker has been cleared for security by the local Police. YES NO

::56::

7. Whether registration under ESI Act. has been obtained ? YES NO
a) If yes, quote Reg. No. & dt. No. : _____
b) If no, record reasons: Date : _____

8. Whether registration under PF Act. has been obtained ? YES NO
a) If yes, quote Reg. No. & dt. No. _____
b) If no, record reasons Date: _____
9. Any other relevant information / remarks
a) Service tax Registration
b) Income tax PAN
10. Bank Details
a) Name of the Bank _____
b) Branch name _____
c) Bank Account No. _____
d) MICL Code for Electronic Credit system. _____

Date: _____
(Signature and Seal of the Contractor)

P.S.:

As per Contract Labour Act., the contractor has to keep necessary record/Register in respect of daily deployment of labour category wise and wage register for wages distributed/to be distributed to produce the same to the Labour Inspector when he inspects the contract work at site.

The Contractor has to also display notices indicating the rate of wages, hours of work, wage period and date of payment. A copy of such notices will have to be sent to the Inspector and to the undersigned as Principal Employer. The payment/disbursement of wages would be made in the presence of authorized representative of this department with prior notice and arrangements.