

Tele : + 91 - 11 -23382967  
Fax : + 91 - 11 – 23074119  
E mail : [dte-as@indiancoastguard.nic.in](mailto:dte-as@indiancoastguard.nic.in)

**BY HAND/ E-MAIL**  
Coast Guard Headquarters  
National Stadium Complex  
New Delhi - 1100 01

Reply should be addressed  
to the Director General


Quoting: AS-ATM/0105/CFT/RG

21 Mar 18

M/s  
\_\_\_\_\_  
\_\_\_\_\_

**INVITATION OF (TECHNICAL AND COMMERCIAL) QUOTATIONS FOR PROCUREMENT OF  
TWO (02) NUMBERS CRASH FIRE TENDER**

1. Bid(s) (**Technical and Commercial**) in separate sealed covers are invited from Indian firms only for supply of 02(Two) in number **CRASH FIRE TENDER** for Indian Coast Guard Air Station Ratnagiri. Please superscribe the above mentioned Title, RFP number and date of opening of the Bids on the sealed cover to avoid the Bids being declared invalid.
2. The address and contact number for sending bids or seeking clarifications regarding this RFP are as given below:-  
  
The Director (Air Staff)  
Coast Guard Headquarters  
National Stadium Complex  
New Delhi - 110 001  
Telephone : -011-23382967, Fax : 011- 23074119  
Email [dte-as@indiancoastguard.nic.in](mailto:dte-as@indiancoastguard.nic.in)
3. This RFP is divided into five Parts as follows:-
  - (a) **Part I** - Contains General Information and Instructions for the Bidders about the RFP such as the time, place of submission and opening of tenders, Validity period of tenders, etc.
  - (b) **Part II** - Contains essential details of the items/services required, such as the Schedule of Requirements (SOR), Technical Specifications, Delivery Period, Mode of Delivery and Consignee details.
  - (c) **Part III** - Contains Standard Conditions of RFP, which will form part of the Contract with the successful Bidder.
  - (d) **Part IV** - Contains Special Conditions applicable to this RFP and which will also form part of the Contract with the successful Bidder.
  - (e) **Part V** - Contains Evaluation Criteria and Format for Price Bids.
4. This RFP is being issued with no financial commitment and the Buyer reserves the right to change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the RFP, should it become necessary at any stage.
5. You are requested to comply with all the terms and conditions mentioned in the RFP and certificate in this regard is to be endorsed on the quotes submitted by your firm. Relaxation/deviation from terms/conditions if any should be clearly brought out for consideration, however, acceptance of same will solely be at the discretion of the Indian Coast Guard.
6. EMD or valid registration certificate required for exemption of EMD should be kept in separate envelop (not in the envelop that contain Commercial/Price bids). In the absence of EMD/valid registration certificate, the Price Bids will be rejected.

  
(Ramesh Sharma)  
Commander  
JDAS (ATM&SE)  
for Director General

**Encls-** Technical Compliance Parameters

**PART I - GENERAL INFORMATION**

1. **Last date and time for depositing the Bid (s).** Your sealed bids (Technical and Commercial) should reach this office latest by **1500 hrs on 11 Apr 18**. The sealed Bids (Both technical and commercial) under **Two Bid System**, should be deposited/reach by the due date and time. The responsibility to ensure this lies with the Bidder
2. **Manner of depositing the Bids.** Sealed Bids should be either dropped in the Tender Box (Air Staff) kept at Reception Room at Main Gate of CGHQ, National Stadium Complex, New Delhi-110011 or sent by registered post at the address given above so as to reach by the due date and time. Late Bids will not be considered. No responsibility will be taken for postal delay or non-delivery/non-receipt of Bid documents. Bids sent by FAX or e-mail will not be considered (unless called for by these modes due to urgency).
3. **Time and date for opening of Bids.** **1100 Hrs on 12 Apr 18** (If due to any exigency, the due date for opening of the Bids is declared a closed holiday, the Bids will be opened on the next working day at the same time or on any other day/time, as intimated by the Buyer).
4. **Location of the Tender Box.** **Reception Room, Main Gate, Coast Guard Headquarters, New Delhi-** Only those Bids that are found in the Tender Box will be opened. Bids dropped in the wrong Tender Box will be rendered invalid.
5. **Place of opening of the Bids.** **Coast Guard Headquarters, New Delhi-** The Bidders may depute their representatives, duly authorized in writing, to attend the opening of Bids on the due date and time. Rates and important commercial/technical clauses quoted by all Bidders will be read out in the presence of the representatives of all the Bidders. This event will not be postponed due to non-presence of your representative.
6. **Two Bid System.** The case is being processed on Two Bid System and, only the Technical Bids would be opened at the time and date mentioned above. Date of opening of the Commercial Bids will be intimated after acceptance of the Technical Bids. Commercial Bids of only those firms will be opened, whose Technical Bids are found compliant/suitable after Technical evaluation is done by the Buyer. Technical bids without compliance parameters as per **Enclosure-1 to this RFP** will be rejected.
7. **Forwarding of Bids.** Bids should be forwarded by Bidders under their original memo / letter pad inter alias furnishing details like TIN number, VAT/CST number, Bank address with EFT Account if applicable, etc and complete postal & e-mail address of their offices.
8. **Clarification regarding contents of the RFP.** A prospective bidder who requires clarification regarding the contents of the bidding documents shall notify the Buyer in writing about the clarifications sought not later than 14 (fourteen) days prior to the date of opening of the Bids. Copies of the query and clarification by the purchaser will be sent to all prospective bidders who have received the bidding documents.
9. **Pre-Bid Meeting** Pre-Bid meeting with the Vendors to clarify all aspects and contents of this RFP including technical specifications will be held at **1430 hrs on 02 Apr 18 in the Office of Principal Director (Air Staff), CGHQ, New Delhi**. Prospective bidders are to intimate details of the representative including name and address of the firm, at least four days prior to the Pre-Bid meeting for obtaining security clearance.
10. **Modification and Withdrawal of Bids.** Bidders may modify or withdraw their bids after submission, provided that the written notice of modification or withdrawal is received by the Buyer prior to the deadline prescribed for submission of Bids. A withdrawal notice may be sent by fax but it should be followed by a signed confirmation copy to be sent by post and such signed confirmation should reach the Buyer not later than the deadline for submission of bids. No bid shall be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and expiration of the period of bid validity specified. Withdrawal of a bid during this period will result in forfeiture of Bidder's bid security.
11. **Clarification regarding contents of the Bids.** During evaluation and comparison of Bids, the Buyer may, at his discretion, ask the bidder for clarification on his Bid. The request for clarification will be given in writing and no change in prices or substance of the Bid will be sought, offered or permitted. No post-bid clarification on the initiative of the bidder will be entertained.
12. **Rejection of Bids.** Canvassing by the Bidders in any form, unsolicited letter and post-tender correction may invoke summary rejection of the Bids with forfeiture of EMD. Conditional Bids will be rejected.

13. **Unwillingness to quote.** Blank
14. **Validity of Bids.** The Bids should remain valid till **180 days** from the last date of submission of the Bids.
15. **Earnest Money Deposit.** Bidders are required to submit **Earnest Money Deposit (EMD) 5% of total value** of the contract in favour of "**PCDA (N), Mumbai**". The EMD may be submitted in the form of an Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the public sector banks or a private sector bank authorized to conduct government business as per Form DPM-16 (Available in MoD website and can be provided on request). EMD is to remain valid for a period of **forty-five days** beyond the final bid validity period. EMD of the unsuccessful bidders will be returned to them at the earliest after expiry of the final bid validity and latest **on or before the 30th day** after the award of the Contract. The Bid security of the successful bidder would be returned, without any interest whatsoever, after the receipt of Performance Security from him as called for in the Contract. EMD is not required to be submitted by those Bidders who are registered with the Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation (NSIC) or any Department of MoD or MoD itself. The EMD will be forfeited if the bidder withdraws or amends, impairs or derogates from the tender in any respect within the validity period of their tender.

### Part II – Essential Details of Items/Services Required

1. **Schedule of Requirements.** List of items / services required is as follows:-

#### **Name/Type of item/services/description of stores Qty required**

- (a) Two (02) in number Crash Fire Tender (CFT) BS-IV emission norms compliant, with accessories as per relevant specification and two years maintenance spares for the vehicle. List of compliance parameters of CFT is placed at **Enclosure-1** to this Tender Enquiry

2. **Technical Details.**

- (a) Specifications/drawings, as applicable  
(b) Technical details with technical parameters
- } Refer to table below

<u>Sr</u>	<u>Specs / Ref No</u>	<u>Description of Stores</u>	<u>Specifications</u>	<u>Denom</u>	<u>Qty</u>
(i)	---	Crash Fire Tender(CFT)	DGAQA/GSE/329 ISSUE NIL DATED Jul 17	Nos	02
COLOUR: Colour of CFT as per ICAO standard.					
FOR OBTAINING DETAILS OF SPEC / DRAWINGS DIRECTLY CONTACT OFFICE OF DGAQA/GSE, 'H' BLOCK, NEW DELHI – 110016, TEL: 23014922, FAX: 011-23014914					
ITEM IS TO BE SUPPLIED AS PER DGAQA SPECIFICATIONS REF NO. DGAQA/GSE/329 Issue Nil Dated Jul 17					

3. **Requirement of Installation/Commissioning.** Crash Fire Tender (CFT) is to be commissioned at the premises of the Consignee Unit after delivery. The commissioning report is to be signed by the representatives of the Vendor and the Consignee Unit. The warranty period of the CFT shall begin from the date of successful commissioning of CFT at premises of the Consignee Unit. A copy of the commissioning report is also required to be submitted to the Payment Agency along with the bills for payment. The installation and commissioning would include:-

- (a) Requirement of Factory Acceptance Trials (FAT) – Yes.
- (b) Harbor Acceptance Trial (HAT) and Sea Acceptance Trial (SAT) – User Trial at consignee end.
- (c) Requirement of Technical Documentation – Yes.
- (d) Nature of assistance required after completion of warranty – Yes, Assistance in terms of spares and service is required on request.
- (e) Requirement of pre-site/equipment inspection – Yes, as specified by DGAQA/GSE.
- (f) Joint Performance Trails \ Joint Report Inspection by firm rep and ICG rep.
- (g) Any other details, as considered necessary – Nil.

4. **Tenderers are also requested for the following:-**

- (a) The Tenderer is to quote complete equipment including **BS IV** compliance chassis and super structure.
- (b) The firms are to comply with the technical specifications and parameters of CFT as per **Enclosures-1** to this Tender Enquiry and certificate this effect is to be submitted along with the Technical Bids.
- (c) Approved technical literature as per specification requirements shall be supplied by the contractor to consignee along with equipment. If the supplier fails to supply literature up to 25% supply of main equipment order, 5% payment will be withheld for non-supply of literature.
- (d) Transportation charges for delivery of CFT at destination as per Consignee Details (Part-II Para 7 of RFP) shall be quoted alongwith bill.
- (e) Two years maintenance spares shall be quoted separately excluding taxes .giving prices for item and cost quoted should remain valid excluding taxes.
- (f) Accessories supplied shall be procured from registered sources, wherever available.
- (g) **Submission of Drawings.** Three complete sets of drawings showing Technical specifications of material, dimensions & all relevant details of General Assembly, Super structure, flow diagrams etc. will be submitted by the firm to **DGAQA/GSE within 30 days of the receipt of Supply Order** for approval as specified in CFT specification DGAQA/GSE/329 Issue Nil Dated Jul 17.
- (h) **Training** Manufacturer of CFT shall impart training to the operators of the unit holding CFT, free of charge, either at OEM factory or at the Consignee's premises as decided by CGHQ. The training shall be imparted to at least two operators of the unit for a period of one week. A training program will be prepared by the user unit i.e. ICGAS Ratnagiri in consultation with the supplier so that it is conducted just before the dispatch of equipment to user unit. The training will cover following aspects:-
- (i) Operation of equipment/CFT
- (ii) Trouble shooting
- (iii) Any other subject desired by the operator (Assembly/dismantling will be done at least three times with complete identification of all components for a duration of minimum one week.
- (j) **Interchangeability and Minimum Inventory.** The firms should ensure interchangeability amongst components assemblies, sub assemblies and parts in case of chassis as well as fabricated parts, irrespective of fabricators (In case of more than one fabricator against one order are involved).
- (k) Literature user hand Book and identification Part list is to be prepared as per DGAQA/GSE/329 Issue Nil Dated Jul 17 can be obtained from Directorate of standardization, integrated Headquarters of Ministry of Defence (Navy), New Delhi on payment.
- (l) Accepted Pilot sample will be retained for guidance in QA/Production of bulk till acceptance of CFT.
- (m) Place of Quality Assurance will be the firm's premises.
- (n) The firm should quote for accessories against existing entries at **Appendix 'A' of Enclosure 1 of RFP.**
5. **Two-Bid System.** In respect of Two-Bid system, the Bidders are required to furnish **Clause by Clause Compliance of Specifications** bringing out clearly the deviations from specification, if any. All the deviations are to be mentioned in the compliance statement in the following format only, along with Technical Bids:-

Para of RFP/SOTR specifications item-wise	Specification of item offered	Compliance to RFP specification – whether Yes/No	In case of noncompliance, deviation from RFP/SOTR to be specified in unambiguous terms

## 6. Delivery Period (DP)

- (a) **Prototype:-** The CFT, qty 01 is to be manufactured as per specifications and offered to the inspection agency within eight (08) months from the date of the contract. The prototype testing would be carried out at OEM premises by a team of ICG and DGAQA.
- (b) **User/Field trials of Prototype:-** The item will be checked as per the TASK Directive issued by CGHQ. The trials will be carried out at a designated consignee premises within **30 days** after issuance of Task Directive by the buyer.
- (c) **Supply Status:-** The vendor is required to furnish a monthly progress report of CFT to consignee, till supplies are completed.

### Note

Timely Delivery will be the essence of the supply order. The Delivery Period stipulation in the Supply Order/Purchase Order is one of the most important procurement objectives as timely availability of item is vital, particularly for the Department of Defence. The stores are considered to have been delivered only when these are handed over to the consignee after due inspection by the designated Inspecting Agency. Please note that Contract can be cancelled unilaterally by the Buyer in case items are not received within the contracted delivery period. Extension of contracted delivery period will be at the sole discretion of the Buyer, with applicability of LD clause. The schedule of delivery period is **365 days** from the date of Supply Order.

## 7. Consignee details.

The Officer-in-Charge / The Commanding Officer  
 ICGAS Ratnagiri  
 MIDC Area, Airport Road  
 Ratnagiri – 415 639  
 Tel.: 02352-224555, Fax: 02352-224088

## Part III - Standard Conditions of RFP

**The Bidder is required to give confirmation of their acceptance of the Standard Conditions of the Request for Proposal mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder (i.e. Seller in the Contract) as selected by the Buyer. Failure to do so may result in rejection of the Bid submitted by the Bidder.**

1. **Law.** The Contract shall be considered and made in accordance with the laws of the Republic of India. The Contract shall be governed by and interpreted in accordance with the laws of the Republic of India.
2. **Effective Date of the supply order.** The Contract shall come into effect on the date of signatures of both the parties on the contract except when some other effective date is mutually agreed to and specifically indicated/provided in the Contract. The deliveries and supplies and performance of the services shall commence from the effective date of the contract.
3. **Arbitration.** All disputes or differences arising out of or in connection with the Supply Order shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to construction or performance, which cannot be settled amicably, may be resolved through arbitration. The standard clause of arbitration is as per Forms DPM-7, DPM-8 and DPM-9 (Available in MoD website and can be provided on request).
4. **Penalty for use of Undue influence.** The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Government of India for showing or forbearing to show favour or disfavour to any person in relation to the present Contract or any other Contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the Contract and all or any other Contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller.

Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/ penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

5. **Agents / Agency Commission.** The Seller confirms and declares to the Buyer that the Seller is the original manufacturer of the stores/ referred to in this supply order and has not engaged any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries, whether officially or unofficially, to the award of the contract to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable to refund that amount to the Buyer. The seller will also be debarred from entering into any supply Contract with the Government of India for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such an event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% per annum above LIBOR rate. The Buyer will also have the right to recover any such amount from any contracts concluded earlier with the Government of India.
6. **Access to Books of Accounts.** In case it is found to the satisfaction of the Buyer that the seller has engaged an Agent or paid commission or influenced any person to obtain the contract in clauses relating to Agents/Agency Commission and penalty for use of undue influence, the Seller, on a specific request of the Buyer, shall provide necessary information/inspection of the relevant financial documents/information.
7. **Non-disclosure of Contract documents.** Except with the written consent of the Buyer/seller, other party shall not disclose the contract or any provision, specification, plan, design, pattern, sample or information thereof to any third party.
8. **Liquidated Damages.** In the event of the Seller's failure to submit the Bonds, Guarantees and Documents, supply the stores/goods and conduct trials, installation of equipment, training, etc as specified in this contract, the Buyer may, at his discretion, withhold any payment until the completion of the contract. The BUYER may also deduct from the SELLER as agreed, liquidated damages to the sum of 0.5% of the contract price of the delayed/undelivered stores/services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than 10% of the value of delayed stores.
9. **Termination of Contract.** The Buyer shall have the right to terminate this Contract in part or in full in any of the following cases:-
  - (a) The delivery of the material is delayed for causes not attributable to Force Majeure for more than **03 months** after the scheduled date of delivery.
  - (b) The Seller is declared bankrupt or becomes insolvent.
  - (c) The delivery of material is delayed due to causes of Force Majeure by more than **06 months** provided Force Majeure clause is included in contract.
  - (d) The Buyer has noticed that the Seller has utilised the services of any Indian/Foreign agent in getting this contract and paid any commission to such individual/company etc.
  - (e) As per decision of the Arbitration Tribunal.
10. **Notices.** Any notice required or permitted by the contract shall be written in the English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is sent.
11. **Transfer and Sub-letting.** The seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Contract or any part thereof.
12. **Patents and other Industrial Property Rights.** The prices stated in the present Contract shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other industrial property rights. The Seller shall indemnify the Buyer against all

claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

13. **Amendments.** No provision of present supply order shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this supply order and which expressly states to amend the present Contract.

14. **Taxes and Duties in respect of Indigenous Bidders.**

(a) **General**

(i) If Bidder desires to ask for excise duty or Sales Tax / VAT extra, the same must be specifically stated. In the absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same will be entertained.

(ii) If reimbursement of any Duty/Tax is intended as extra over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duty/tax will be entreated after the opening of tenders.

(iii) If a Bidder chooses to quote a price inclusive of any duty/tax and does not confirm inclusive of such duty/tax so included is firm and final, he should clearly indicate the rate of such duty/tax and quantum of such duty/tax included in the price. Failure to do so may result in ignoring of such offers summarily.

(iv) If a Bidder is exempted from payment of any duty/tax upto any value of supplies from them, he should clearly state that no such duty/tax will be charged by him up to the limit of exemption which he may have. If any concession is available in regard to rate/quantum of any Duty/tax, it should be brought out clearly. Stipulations like, the said duty/tax was presently not applicable but the same will be charged if it becomes leviable later on, will not be accepted unless in such cases it is clearly stated by a Bidder that such duty/tax will not be charged by him even if the same becomes applicable later on. In respect of the Bidders, who fail to comply with this requirement, their quoted prices shall be loaded with the quantum of such duty/tax which is normally applicable on the item in question for the purpose of comparing their prices with other Bidders.

(i) Any change in any duty/tax upward/downward as a result of any statutory variation in excise taking place within Supply order terms shall be allowed to the extent of actual quantum of such duty/tax paid by the supplier. Similarly, in case of downward revision in any duty/tax, the actual quantum of reduction of such duty/tax shall be reimbursed to the Buyer by the Seller. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the Seller.

(b)	<b>Customs Duty</b>	<b>Blank</b>
(c)	<b>Excise Duty</b>	<b>Blank</b>
(d)	<b>Sales Tax / VAT</b>	<b>Blank</b>
(e)	<b>Octroi Duty &amp; Local Taxes</b>	<b>Blank</b>
(f)	<b>GST: @ 28 % (As on date)</b>	

**Part IV - Special Conditions of RFP**

**The Bidder is required to give confirmation of their acceptance of Special Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder (i.e. Seller in the Contract) as elected by the Buyer. Failure to do so may result in rejection of Bid submitted by the Bidder.**

1. **Performance Guarantee.**

(a) **In case of Indigenous Seller.** The Bidder will be required to furnish a Performance Guarantee by way of Bank Guarantee through a public sector bank authorized to conduct government business for a sum

of Rs.----- (Approx. 10% of the contract value) **within 30 days** of receipt of the confirmed order. Performance Bank Guarantee should be valid **up to 60 days** beyond the date of warranty. The specimen of PBG is given in Form DPM-15 (Available in MoD website and can be provided on request).

2. The Performance Bank Guarantee will be subject to encashment by the Buyer, in case the conditions regarding adherence the delivery schedule, settlement of claims and other provisions of the Supply Order are not fulfilled by the seller.

3. **Repeat Order Clause.** The contract will have a Repeat Order Clause, wherein the Buyer can order up to 50% quantity of the items under the present contract within six month from the date of supply successful completion of this contract, the cost, term & conditions remaining the same. The Bidder is to confirm acceptance of this clause. It will be entirely the discretion of the Buyer to place the Repeat order or not.

4. **Payment Terms for Indigenous Sellers.** It will be mandatory for the Bidders to indicate their bank account numbers and other relevant e-payment details so that payments could be made through ECS/EFT mechanism instead of payment through cheques, wherever feasible. A copy of the model mandate form prescribed by RBI to be submitted by Bidders for receiving payments through ECS is at Form DPM-11 (Available in Indian Coast Guard website and can be given on request). The payment will be made as per the following terms, on production of the requisite documents:-

(a) 95% Payment against Inspection note, Proof of dispatch, duly supported by Xerox copy of the Bank Guarantee and against Consignee's provisional receipt.

(b) Balance of 5% will be paid on receipt of items in good condition by consignee along with user's certificate of complete Installation and successful commissioning.

5. **Advance Payments.** No advance payment(s) will be made by the buyer.

6. **Paying Authority.**

(a) **Indigenous Sellers** - The Principal Controller of Defence Accounts (Navy), Coast Guard Section No.1, Cooperage Road, Post Box No, 689, Mumbai-400039. The payment of bills will be made on submission of the following documents by the Seller to Coast Guard Headquarters, New Delhi for onward dispatch to the Paying Authority, The Principal Controller of Defence Accounts (Navy), Mumbai - 400 025 along with the bill:-

- i. Ink-signed copy of contingent bill / Seller's bill.
- ii. Ink-signed copy of Commercial invoice / Seller's bill.
- iii. Copy of Supply Order with U.O. number and date of IFA's concurrence, where required under delegation of powers.
- iv. CRVs in duplicate.
- v. Inspection note.
- vi. Claim for statutory and other levies to be supported with requisite documents / proof of payment such as Excise duty challan, Customs duty clearance certificate, Octroi receipt, proof of payment for EPF/ESIC contribution with nominal roll of Beneficiaries, etc as applicable.
- vii. Exemption certificate for Excise duty / Customs duty, if applicable
- viii. Bank guarantee for advance, if any.
- ix. Guarantee / Warranty certificate.
- x. Performance Bank guarantee / Indemnity bond where applicable.
- xi. DP extension letter with CFA's sanction, U.O. number and date of IFA's concurrence, where required under delegation of powers, indicating whether extension is with or without LD.
- xii. Details for electronic payment viz Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code, MICR code.
- xiii. Any other document / certificate that may be provided for in the Supply order.
- xiv. User Acceptance.
- xv. Photocopy of PBG.

7. **Risk & Expense clause.**

a. Should the stores or any installment thereof not be delivered within the time or times specified in the contract documents, or if defective delivery is made in respect of the stores or any installment thereof, the Buyer shall after granting the Seller 45 days to cure the breach, be at liberty, without prejudice to the right



to recover liquidated damages as a remedy for breach of contract, to declare the contract as cancelled either wholly or to the extent of such default.

b. Should the stores or any installment thereof not perform in accordance with the specifications / parameters provided by the SELLER during the check proof tests to be done in the BUYER's country, the BUYER shall be at liberty, without prejudice to any other remedies for breach of contract, to cancel the contract wholly or to the extent of such default.

c. In case of a material breach that was not remedied within 45 days, the BUYER shall, having given the right of first refusal to the SELLER be at liberty to purchase, manufacture, or procure from any other source as he thinks fit, other stores of the same or similar description to make good:-

i. Such default.

ii. In the event of the contract being wholly determined the balance of the stores remaining to be delivered there under.

d. Any excess of the purchase price, cost of manufacturer, or value of any stores procured from any other supplier as the case may be, over the contract price appropriate to such default or balance shall be recoverable from the SELLER.

#### 8. Force Majeure clause.-

a. Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.

b. In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.

c. The party for which it becomes impossible to meet obligations under this contract due to Force Majeure conditions, is to notify in written form the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from the moment of their beginning.

d. Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.

e. If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

9. Specification. The following Specification clause will form part of the contract placed on successful Bidder - The Seller guarantees to meet the **Technical specifications which can be obtained from Directorate of GSE, DGAQA, New Delhi on payment of Rs, 500/-** and to incorporate the modifications to the existing design configuration to meet the specific requirement of the Buyer Services as per modifications/requirements recommended after the Maintenance Evaluation Trials. All technical literature and drawings shall be amended as the modifications by the Seller before supply to the Buyer. The Seller, in consultation with the Buyer, may carry out technical up-gradation/alterations in the design, drawings and specifications due to change in manufacturing procedures, indigenisation or obsolescence. This will, however, not in any way, adversely affect the end specifications of the equipment. Changes in technical details, drawings repair and maintenance techniques along with necessary tools as a result of up-gradation/alterations will be provided to the Buyer free of cost within **30 days** of affecting such up-gradation/alterations.

10. Interchangeability and Minimum Inventory. The firm should ensure Interchangeability amongst components assemblies, sub assemblies and parts in case of chassis as well as fabricated parts.

11. OEM Certificate In case the Bidder is not the OEM, the agreement certificate with the OEM for sourcing the spares shall be mandatory. However, where OEMs do not exist, minor aggregates and spares can be sourced from authorized indigenous vendors subject to quality certification.

12. **Earliest Acceptable Year of Manufacture:** 2016 or later Life Certificate is to be enclosed with the Bill.
13. **Transportation.** CFT is required to be delivered at consignees address as mentioned in para 7 of Part-II of Contract inclusive of Packing, Forwarding, Freight charges, Transit Insurance and any other charges as applicable.
14. **Quality:** The quality of the stores delivered according to the present contracts shall correspond to the technical conditions and standards valid for the deliveries of the same stores for in Seller's country or specifications enumerated as per RFP and shall also include therein modification to the stores suggested by the USER / DGAQA. Such modifications will be mutually agreed to. The Seller shall confirm that the stores to be supplied under this Contract shall be new i.e. not manufactured before (Year of Contract), and shall incorporate all the latest improvements and modifications thereto.
15. **Quality Assurance :** After the Supply Order is finalized the Seller would be required to provide the Standard Acceptance Test Procedure (ATP) to DGAQA (Inspection Agency). DGAQA reserves the right to modify the ATP. Seller would be required to provide all test facilities at his premises for acceptance and inspection by DGAQA. The item should be of the latest manufacture, conforming to the current production standard and having 100% defined life at the time of delivery.
16. **Quality Assurance Authority:** The designated Inspection Authority for CFT is: - **DGAQA/GSE or his authorised representative. Tele: 011- 23014922, FAX: 011-23014914. The mode of Inspection will be Departmental Inspection.**
17. **Pre-Dispatch Inspection.** The following Pre-dispatch Inspection clause will form part of the Contract placed on successful Bidder:-
- (a) The **DGAQA** representative will carry out Pre-Dispatch Inspection (PDI) of the Stores/equipment in order to check their compliance with specifications in accordance with its usual standard procedures. Upon successful completion of such PDI, the Seller and Buyer will issue and sign a Certificate of Conformity as per the specimen at Form DPM-21 (Available in MoD website and can be given on request.
- (b) The Seller shall intimate the Buyer at least **forty five (45) days** before the scheduled date of PDI. The Buyer will send his authorized representative(s) to attend the PDI.
- (c) The Buyer reserves the right not to attend the PDI or to request for postponement of the beginning of the PDI by a maximum of **fifteen (15) days** from the date fixed for such PDI in order to allow his representative(s) to attend such tests, in which cases he shall inform in writing the Seller within 15 days before the date of the beginning of the PDI. Should the buyer request for such postponement, liquidated damages, if any, shall not apply. In case the Buyer informs the Seller within the period mentioned hereinabove that he cannot attend the PDI or in case the Buyer does not come at postponed date requested by him for performance of the PDI as mentioned above, the Seller shall be entitled to carry out said tests alone as scheduled. The Certificate of Conformity and the Acceptance Test Report will be signed by the Seller's QA representative alone and such documents bearing the sole signature of the Seller's QA representative shall have the same value and effect as if they have been signed by both the parties. In case Buyer does not elect to attend the PDI, the Buyer shall intimate the Seller in writing that it writing that it does not wish to attend the PDI.
- (d) The Seller shall provide all facilities, access and assistance to the Buyer's representative for safety and convenience in the performance of their duties in the Seller's country.
- (e) The Seller shall provide Acceptance Test Procedure to the Buyer's QA Agency within one month from the signing of the Contract.
18. **Joint Receipt Inspection.** The following Joint Receipt Inspection clause will form part of the contract placed on successful Bidder:-
- (a) The Parties agree that the Joint Receipt Inspection (JRI) of delivered goods shall be conducted on arrival at location to be nominated by the Buyer representative. JRI shall be completed within 90 days arrival of good at the Port Consignee. JRI will consist of:-
- (i) Quantitative checking to verify that the quantities of the delivered goods correspond to the quantities defined in this contract and the invoices.
- (ii) Completed functional checking of the stores/equipment as per specifications in the contract and as per procedures and tests laid down by Buyer and DGAQA representative but functional checking of spares shall not be done.

(b) JRI will be carried out by the Buyer's and consignee representative(s). The Buyer will invite the Seller with a prior notice of a minimum of **fifteen (15) days** to attend the JRI for the delivered goods. The Seller shall have the right not to attend the JRI. The bio Data of the Seller's representative will need to be communicated **fifteen (15) days** prior to the dispatch of goods to the Buyer for obtaining necessary security clearance in accordance with the rules applicable in the Buyer's country.

(c) Upon completion of each JRI, JRI proceedings and Acceptance Certificate will be signed by both the parties. In case the Seller's representative is not present, the JRI proceedings and Acceptance Certificate shall be signed by the Buyer's representative only and the same shall be binding on the Seller. Copy of JRI proceedings and Acceptance Certificate shall be dispatched to the Seller within **30 days** of completion of the JRI. In case of deficiencies in quantity and quality defects, details of these shall be recorded in the JRI proceedings, Acceptance Certificate shall not be issued, and claims raised as per the Article on Claims in the contract. In case of claims Acceptance Certificate shall be issued by Buyer's representative after all claims raised during JRI are settled. If the Buyer does not perform the JRI as mentioned above for reasons exclusively attributable to him, the JRI in India shall be deemed to have been performed and the stores/equipment fully accepted.

19. **Franking clause.**

a. **Franking Clause in the case of Acceptance of Goods** "The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the supply order.

b. **Franking Clause in the case of Rejection of Goods** "The fact that the goods have been inspected after the delivery and rejected by the Inspecting Officer will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract.

20. **Claims.** The following Claims clause will form part of the Contract placed on successful Bidder :-

a. The claims may be presented either: (i) on quantity of the stores, where the quantity does not correspond to the quantity shown in the Packing List/Insufficiency in packing, or (ii) on quality of the stores, where quality does not correspond to the quality mentioned in the contract.

b. The quantity claims for deficiency of quantity shall be presented within 45 days of supply of items and acceptance of vehicles. The quantity claim shall be submitted to the Seller as per Form DPM-22 (Available in MoD website and can be given on request).

c. The quality claims for defects or deficiencies in quality noticed during acceptance/Receipt be presented within 45 days of completion of acceptance of vehicles. Quality claims shall be presented for defects or deficiencies in quality noticed during warranty period earliest but not later than 45 days after expiry of the guarantee period. The quality claims shall be submitted to the Seller as per Form DPM-23 (Available in MoD website and can be given on request).

d. The description and quantity of the stores are to be furnished to the Seller along with concrete reasons for making the claims. Copies of all the justifying documents shall be enclosed to the presented claim. The Seller will settle the claims within 45 days from the date of the receipt of the claim at the Seller's office, subject to acceptance of the claim by the Seller. In case no response is received during this period the claim will be deemed to have been accepted.

e. The Seller shall collect the defective or rejected vehicles from the location nominated by the Buyer and deliver the repaired or replaced goods at the same location under Seller's arrangement.

f. Claims may also be settled by reduction of cost of vehicles under claim from bonds submitted by the Seller or payment of claim amount by Seller through demand draft drawn on an Indian Bank, in favour of Principal Controller/Controller of Defence Accounts concerned.

g. The quality claims will be raised solely by the Buyer and without any certification/countersignature by the Seller's representative stationed in India.

21. **Warranty.** The following warranty will form part of the contract:-

a. Except as otherwise provided in the invitation tender, the Seller hereby declares that the goods, stores articles sold/supplied to the Buyer under this Supply Order shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars contained/mentioned in Supply Order. The Seller hereby guarantees that the said

goods/stores/articles would continue to conform to the description and quality aforesaid for a period of **24 months from the date of commissioning of Crash Fire Tender (CFT)** notwithstanding the fact that the Buyer may have inspected and/or approved the said goods/stores/articles, if during the aforesaid period of 24 months the said vehicles be discovered not to conform to the description and quality aforesaid not giving satisfactory performance or have deteriorated, and the decision of the Buyer in that behalf shall be final and binding on the Seller and the Buyer shall be entitled to call upon the Seller to rectify the goods/stores/articles or such portion thereof as is found to be defective by the Buyer within a reasonable period, or such specified period as may be allowed by the Buyer in his discretion on application made thereof by the Seller, and in such an event, the above period shall apply to the goods/stores/articles rectified from the date of rectification mentioned in warranty thereof, otherwise the Seller shall pay to the Buyer such compensation as may arise by reason of the breach of the warranty therein contained.

b. Guarantee that they will supply spare parts, if and when required on agreed basis for an agreed price. The agreed basis could be and including but without any limitation an agreed discount on the published catalogue or an agreed percentage of profit on the landed cost.

c. Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the Buyer of the equipment so that the latter may undertake the balance of the lifetime requirements.

d. Warranty to the effect that they will make available the blue prints of drawings of the spares if and when required in connection with the main equipment.

22. **Product Support.** The following Product Support clause will form part of the contract placed on successful Bidder:-

(a) The Seller agrees to provide Product Support for the stores, assemblies/subassemblies, fitment items and consumables, Special Maintenance Tools (SMT)/Special Test Equipment (STE) subcontracted from other agencies/manufacture by the Seller for a maximum period of **15 years including warranty period after the delivery of Crash Fire Tender (CFT)**.

(b) In the event of any obsolescence during the above mentioned period of product support in respect of any component or sub-system, mutual consultation between the Seller and Buyer will be undertaken to arrive at an acceptable solution including additional cost, if any.

(c) Any improvement/modification/up gradation being undertaken by the Seller or their sub suppliers on the stores/equipment being purchased under the Contract will be communicated by the Seller to the Buyer and, if required by Buyer, these will be carried out by the Seller at Buyer's cost.

23. **Sufficiency Clause.** In the event of consumption of spares exceeding the quantities recommended by the manufacturer for 02 years maintenance period, the firm should be committed to supply the additional spares free of cost.

24. **Consignee's Right of Rejection.** Notwithstanding the fact that an item may have been inspected prior to dispatch, the consignee will have the right to reject it, in whole or part, if it is observed that the item supplied does not conform to the specifications or has been damaged. Such rejection will be communicated to the supplier within 90 days of the item reaching the consignee's premise. If an item is rejected, the supplier is required to replace the item within a period determined by the supplier, which should not be less than **45 days**, filing which he shall make financial restitution base don't he order value. However, in all such cases the provisions contained in the International Chamber of Commerce Publication, INCOTERM 2000, including that regarding change of the right of property, as amended from time to time, will be considered as foreign contracts are governed by international laws.

25. **Air Lift.** The following Airlift clause will form part of the contract placed successful Bidder – Should the Buyer intended to airlift all or some of the stores, the Seller shall pack the stores accordingly on receipt of an intimation to that effect from the Buyer. Such deliveries will be agreed upon will in advance and paid for as may be mutually agreed.

26. **Packing and Marking.** The following Packing and Marking clause will form part of the contract placed on successful Bidder:-

(a) The Seller shall prove packing and preservation of the equipment and spares/ goods contracted so as to ensure their safety against damage in conditions of land, sea and air transportation, transshipment, storage and weather hazards during transportation, subject to proper cargo handling. The Seller shall ensure that the stores are packed in containers, which are made sufficiently strong, and with seasoned wood. The packing cases should have hooks for lifting by crane/ fork lift truck. Tags with proper marking shall be fastened to the special equipment, which cannot be packed.

- (b) The packing of the equipment and spares/ goods shall conform to the requirements of specifications and standards in force in the territory of the Seller's country.
- (c) Each spare, tool and accessory shall be packed in separate cartons. A label in English shall be pasted on the carton indicating the under mentioned details of the items contained in the carton. A tag in English with said information shall also be attached to six samples of the item. If quantity contracted is less than six then tag shall be affixed to complete quantity contracted of the item. The cartons shall then be packed in packing cases as required.
- (i) Part Number
  - (ii) Nomenclature
  - (iii) Contract annex number
  - (iv) Annex serial number
  - (v) Quality contracted
- (d) One copy of the packing list in English shall be inserted in each cargo package and the full set of the packing lists shall be placed in Case No.1, painted in a yellow colour.
- (e) The Seller shall mark each package with indelible paint in the English language as follows:-
- (i) EXPORT
  - (ii) Contract No \_\_\_\_\_
  - (iii) Consignee \_\_\_\_\_
  - (iv) Port/ airport of destination \_\_\_\_\_
  - (v) Ultimate consignee \_\_\_\_\_
  - (vi) SELLER \_\_\_\_\_
  - (vii) Package No. \_\_\_\_\_
  - (viii) Gross/ Net Weight \_\_\_\_\_
  - (ix) Overall dimensions/ Volume \_\_\_\_\_
  - (x) The Seller's marking \_\_\_\_\_
- (f) If necessary, each package shall be marked with warning inscriptions : <TOP>, " Do not turn over", category of cargo etc.
- (g) Should any special equipment be returned to the Seller by the Buyer, the latter shall provide normal packing, which protects the equipment and spares/ goods from the damage of deterioration during transportation by land, air or sea. In this case the Buyer shall finalize the marking with the Seller.

27. **Engineering Support Package (ESP) Clause.** The following ESP clause will form part of the Contract placed on successful Bidder:-

(a) **Repair Philosophy.** The Engineering Support Philosophy shall conform to the repair philosophy as follows:

(i) **Unit Level Repairs.** These are repairs carried out within the unit holding this equipment with tools generally held within the unit or supplied by the manufacturer with each equipment or as per scaling of 1:10 or any other scaling recommended by the manufacturer as per population held in the unit. These pertain to cleaning, lubrication, minor repair and replacement of components and minor assemblies that can be carried in field without any sophisticated tools or test equipment. For carrying out such repairs, the manufacturer is required to provide the following:-

(ii) Table of tools and equipment (TOTE) with each equipment including operators manual.

(iii) Scaling of special tools and spares as mentioned above including maintenance manual.

28. **Manufacturers Recommended List of Spares (MRLS).** Based on the explanation given above, Bidders are requested to provide MRLS to sustain the equipment for a period of **05 years** for various levels of repair as per format given at **Form DPM-19** (Available in MoD website and can be given on request). Bidders will be required to provide these both with Technical and Commercial proposals. While with the commercial proposal, the actual costs of each component/spare will be provided, in the case of Technical Proposal these will be reflected as Low Cost/ Medium Cost/High Cost. **The cost column is to be left blank in the Technical Proposal.** A guideline for this purpose is as under:-

- (a) **Low Cost.** Less than 2 % of the unit cost of the equipment/sub system.
- (b) **Medium Cost.** 2 to 10% of the unit cost of the equipment/sub system.
- (c) **High Cost.** Greater than 10 % of the unit cost of equipment/subsystem.

**NOTE:** If the complete equipment comprises a number of different sub systems, for example, it is coming mounted on a vehicle or is provided with a stand for mounting or is inclusive of a generator or an air conditioner or has a sight, the MRLS must be provided separately for each such sub system.

29. **Technical Literature.** Two complete sets of the following documents per Mechanical Runway Sweeper to the consignee unit along with the delivery of the MRS :-

- (a) Maintenance Manual (bilingual in English and Hindi).
- (b) Operators Manual (bilingual in English and Hindi).
- (c) Warranty Certificate for each unit.
- (d) Illustrated Part Catalogue.
- (e) CD(s)/DVD(s) containing Maintenance Manual, Operators Manual and Illustrated Parts Catalogue in Adobe Acrobat format with links for quick access to various maintenance as well as operational aspects and for quick access to spares inventory identification/management.
- (f) **An additional set containing a copy of documents each at serial (a) to (e) above is to be dispatched to Directorate of Air Staff, Coast Guard Headquarters , National Stadium Complex, New Delhi - 110001.**

30. **Price Variation (PV) Clause.** The following PV clause will form part of the contract placed on successful Bidder (Note – DGS&D) Manual provides Standardized Price Variation Clauses. Any of those clauses could be considered for inclusion. A sample clause is indicated below):-

(a) The formula for Price Variation should ordinarily include a fixed element, a material element and a labour element. The figures representing the material element and the labour element should reflect the corresponding proportion of input costs, while the fixed element may range from 10 to 25 %. That portion of the price represented by the fixed element, will not be subject to variation. The portions of the price represented by the material element and labour element along will attract Price Variation. The formula for price variation will thus be:-

$$P1 = P0 \{ F + a [M1 / M0] + b [L1 / L0] - P0 \}$$

Where P1 is then adjustment amount payable to the supplier (a minus figure will indicate a reduction in the Contract Price).

P0 is the Contract Price at the base level.

F is the Fixed element not subject to Price Variation.

a is the assigned percentage to the material element in the Contract Price.

b is the assigned percentage to the labour element in the Contract Price.

L0 and L1 are the wage indices at the base month and year and at the month and year of calculation respectively.

M0 and M1 are the material indices at the base month and year and at the month and year of calculation respectively.

If more than one major item of material is involved, the material element can be broken up into two or three components such as Mx, My, Mz. Where price variation clause has to be provided for services (with insignificant inputs of materials) as for example, in getting Technical Assistance normally paid in the form of per diem rates, the price variation formula should have only two elements, viz. A high fixed element and a labour element. The fixed element can in such cases be 50 % or more, depending on the mark-up by the supplier of the Per Diem rate vis-a-vis the wage rates.

(a) Following conditions would be applicable to Price Adjustment :-

- (i) Base dates shall be due dates of opening of price bids.
- (ii) Date of adjustment shall be mid point of manufacture.
- (ii) No price increase is allowed beyond original DP unless the delay is attributable to the Buyer.
- (iii) Total adjustment will be subject to maximum ceiling \_\_\_\_ %.

No price adjustment shall be payable on the portion of contract price paid to the Seller as an advance payment.

## **PART V - EVALUATION CRITERIA & PRICE BID ISSUES**

1. **Evaluation Criteria:** - The broad guidelines for evaluation of Bids will be as follows:-

- (a) Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying

requirements of the RFP, both technically and commercially.

(b) In respect of Two-Bid system, the technical Bids forwarded by the Bidders will be evaluated by the Buyer with reference to the technical characteristics of the equipment as mentioned in the RFP. The compliance of Technical Bids would be determined on the basis of the parameters specified in the RFP. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.

(c) The Lowest Bid will be decided item wise based upon the lowest price quoted by the particular Bidder as per the Price Format given at Para 2 below. The consideration of taxes and duties in evaluation process will be as follows:

(d) In cases where only indigenous Bidders are competing, all taxes and duties (including those for which exemption certificates are issued) quoted by the Bidders will be considered. The ultimate cost to the Buyer would be the deciding factor for ranking of Bids.

(e) Blank.

(f) The Bidders are required to spell out the rates of Customs duty, Excise duty, VAT, Service Tax, etc in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices. If reimbursement of Customs duty / Excise Duty / VAT is intended as extra, over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duties will be entreated after the opening of tenders. If a Bidder chooses to quote a price inclusive of any duty and does not confirm inclusive of such duty so included is firm and final, he should clearly indicate the rate of such duty and quantum of excise duty included in the price. Failure to do so may result in ignoring of such offers summarily. If a Bidder is exempted from payment of Customs duty / Excise Duty / VAT duty upto any value of supplies from them, they should clearly state that no excise duty will be charged by them up to the limit of exemption which they may have. If any concession is available in regard to rate/quantum of Customs duty / Excise Duty / VAT, it should be brought out clearly. Stipulations like, excise duty was presently not applicable but the same will be charged if it becomes leviable later on, will not be accepted unless in such cases it is clearly stated by a Bidder that excise duty will not be charged by him even if the same becomes applicable later on. In respect of the Bidders who fail to comply with this requirement, their quoted prices shall be loaded with the quantum of excise duty which is normally applicable on the item in question for the purpose of comparing their prices with other Bidders. The same logic applies to Customs duty and VAT also.

(g) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.

(h) Any other criteria as applicable to suit a particular case.

(j) Blank.

(k) The Lowest Acceptable Bid will be considered further for placement of contract / Supply Order after complete clarification and price negotiations as decided by the Buyer. The Buyer will have the right to award contracts to different Bidders for being lowest in particular items. The Buyer also reserves the right to do Apportionment of Quantity, if it is convinced that Lowest Bidder is not in a position to supply full quantity in stipulated time.

(l) Blank.

2. **Price Bid Format:-** The Price Bid Format is given below and Bidder are required to fill this up correctly with full details, as required under Part-II of RFP( the format indicated below is only as an illustration).. This format should be filled up with items/requirements as mentioned in Part II of RFP :-

Basic cost of the item:-

(a) Item(s)

	Item	Unit	Price	Qty	Total
(i)	A				
(ii)	B				
(iii)	C				
(iv)	Total of Basic Price(s)				

- (b) Accessories – NA
- (c) Installation Commissioning – NA
- (d) Training – NA
- (e) Technical Literature – NA
- (f) Tools – NA
- (g) AMC – NA
- (h) Any Other requirement

3. **Additional information in Price Bid on Taxes and duties**

- (a) Is Excise Duty Extra?
- (b) If yes, mention the following:-
  - (i) Total value of item on which Excise Duty is leviable:
  - (ii) Rate of Excise duty (item-wise if different ED is applicable):
  - (iii) Surcharge on Excise duty, if applicable?
  - (iv) Total value of excise duty payable:
- (c) Is Excise Duty Exemption (EDE) required?
- (d) If yes, then mention and enclose the following:
  - (i) Excise notification number under which EDE can be given:
- (e) Is VAT extra?
- (f) If yes, then mention the following:-
  - (i) Total value on which VAT is leviable:
  - (ii) Rate of VAT:
  - (iii) Total value of VAT leviable:
- (g). Is Service Tax extra?
- (h) If yes, then mention the following:-
  - (j) Total value of Services on which Service Tax leviable:
  - (ii) Rate of service Tax livable:
  - (iii) Total value of Service Tax leviable:
- (j) Is Custom Duty Exemption (CDE) required: NA
- (k) If yes, then mention the following:- NA
  - (i) Custom notification number under which CDE can be given (Enclose a copy)
  - (ii) CIF value of stores to be imported:
  - (iii) Rate of Customs Duty payable:
  - (iv) Total amount of Customs Duty payable:
- (l) Octroi/Entry taxes:
- (m). Any other Taxes / Duties / Overheads / Other costs:



**CRASH FIRE TENDER – TECHNICAL COMPLIANCE MATRIX  
REF DGAQA/GSE/329 ISSUE NIL DATED JUL 17**

**SPECIFICATIONS/DRAWINGS AND TECHNICAL DETAILS WITH TECHNICAL  
PARAMETERS**

SI No.	Clause No.	Essential QRs	Technically Complied/ Not Complied	Remarks
1	3	<p><b><u>MATERIAL SELECTION AND TREATMENT</u></b></p> <p><b>3.1</b> The choice of materials to be used for the construction of the appliance shall be made with a view to combine lightness with strength and durability.</p> <p><b>3.2</b> Timber shall NOT BE USED IN 'BODY –Construction'.</p> <p><b>3.3</b> The appliance is intended for use in tropical conditions with constant high humidity and heat. This shall be given full consideration while selecting the materials and, for this reason, use of rubber or other similar materials shall be avoided as far as possible. When it is unavoidable to use, these, the parts made out of these shall, be easily replaceable and shall be easily available.</p> <p><b>3.4</b> All parts which form waterways or come into contact with water shall be of corrosion resisting material or suitably treated with corrosion resistant compound etc. all metal parts exposed to atmosphere shall either be corrosion resisting material or treated suitably to resist corrosion.</p> <p><b>3.5</b> Ferrous metal shall not be used for chromium plated fittings and the plating of all such fittings shall be extra heavy quality.</p>		
2.	4	<p><b><u>GENERAL REQUIREMENTS</u></b></p> <p><b>4.1</b> The appliance shall carry 8500 litres of water and 1000 litres of foam compound for foam production, the pump being capable of delivering not less than 3200 litres of water per minute at a minimum pressure of 8.5 Kg per sq.cm and also supplementary extinguishing agent and other accessories.</p> <p><b>4.2</b> The appliance shall be capable of delivering not less than 3200 litres of water foam solution) per minute converted into foam through a combination of monitor and side line and not less than 2000 litre of water foam solution per minute converted into foam through the side lines alone when the monitor is not in use or not less than 2200 litres of water per minute converted into foam through the monitor alone. It shall be capable of producing foam while the appliance is creeping or moving without any drop in foam output.</p> <p><b>4.2.1</b> The monitor and the hand lines must employ the self-aspirating type of foam production system where aeration is done at the branch pipe. The expansion ratio of the foam produced shall not less than eight times with the use of the foam compound to Indian standard specification No. IS 4989(1974) to give the performance indicated in para 4.2.</p> <p><b>4.2.2</b> The foam induction shall be automatic i.e., if the branch is in operation , all further addition/removal of braches shall automatically adjust the rate of foam compound induction within a variation of 0.5%, the induction ratio not exceeding 6 %.</p>		

		<p><b>4.3</b> A hose reel service shall be provided on the appliance. In addition to the water carried on it, it should also be possible to use water from a hydrant or a static supply.</p> <p><b>4.4</b> The supplementary agent used for fire fighting shall be Carbon- dioxide.</p> <p><b>4.5</b> The unit shall be designed to be as compact as possible, compatible with ease of accessibility to all service parts. The pump/foam making equipment controls shall be so arranged that on man can drive foam or water from the driver's compartment or pump control panel, as required.</p> <p><b>4.6</b> Lever type valve controls shall be preferred throughout unless it is impracticable in any case.</p> <p><b>4.7</b> The appliance shall be supplied complete with equipment and spares mentioned in Appendix 'A'</p> <p><b>4.8</b> All gauges etc: shall be calibrated in Metric units.</p> <p><b>4.9</b> The appliance, shall be equipped with all accessories necessary to clear traffic, clear fire hazard on the approach path, protect itself from fire while in operation, be suitably provided to effect entry into various type of aircraft and carry facilities for evacuation and rescue operations.</p>		
3	5	<p><b>DESIGN AND CONSTRUCTION</b></p> <p><b>5.1 CHASSIS</b></p> <p><b>5.1.1</b> The chassis shall be selected to allow enough safety margin of at least 500 kg, after appliance is fully loaded to the design specification given herein with full complement of crew- five members. It shall be of 4x4 or 6x6 all round single wheel chassis specifically cleared for cross country use a fire appliance. Right hand drive would be preferable.</p> <p><b>5.1.2</b> The construction of the body shall be such that the road clearance shall be about 12 % of vehicle wheel base, but however, not less than 36 cms and shall not increase the overall width to more 2.50 metres.</p> <p><b>5.1.3</b> The angle of approach and departure should not be less than 30 degree.</p> <p><b>5.1.4</b> The weight shall be distributed equally over all wheels within 10%variation between axles and 5 % from side with tyre loads limited to provide the highest practicable level of performance on slippery or rough terrain. The centre of gravity of the vehicle shall be kept as low as possible under all conditions of loading. The sides slope allowed shall be 20 % both ways with Gradeability of 35%.</p> <p><b>5.1.5</b> Drag hooks or eyes of adequate strength shall be fitted to all chassis members at front and rear.</p> <p><b>5.1.6</b> The lubricating nipples shall be located at accessible and protected positions. Where nipples are not fitted on or adjacent to their bearings etc. and are connected to them by pipes, plates shall be provided near the nipples to indicate the points which they serve.</p> <p><b>5.1.7</b> The drive shall provide that transmission of power from the engine flywheel to the wheels of the vehicle with such multiplication of torques that the vehicle is capable of travelling at the specified acceleration and speed. The transmission shall either be automatic or manual. In the case of automatic transmission the operation of the pump at the rated RPM should not affect the creeping capabilities of the vehicle.</p> <p><b>5.1.8</b> The chassis shall be equipped with power assistance steering. The steering mechanism shall be so designed as to permit manual steering also sufficient to bring the vehicle to a safe stop in the event of failure of power assistance. The power steering shall be</p>		

	<p>of sufficient capacity so that not more than 7 kg pull is required on the steering wheel in order to turn the steering wheel from lock to lock with the engine running. The turning circle shall not exceed 30 M.</p> <p><b>5.1.9</b> The vehicle brake system will be such that the braking tests specified in clause 7.1 (B) are fully met. A dual system brake should be used ensuring brake on at least one axle in any emergency.</p> <p><b>5.1.10</b> The tyre size and tread shall be such, as to ensure satisfactory floatation and traction during cross country runs. The tyre inflation pressure should not exceed 3.5 kg per sq. cm. without affecting acceleration and safety characteristics.</p> <p><b>5.1.11</b> The diesel chassis- engine shall have adequate power to ensure that, fully loaded, vehicle shall easily attain a cruising speed of not less than 90 Km per hour through the gears and acceleration of 80 km/ hr in not more than 45 seconds on paved surface without gradient, without engine preheating. The maximum speed attainable shall not be less than 100 KPH. The vehicle should be able to cover a distance of 3 Kms in not less than 3 minutes from cold start as defined below. Spare wheel, tyres and tubes shall also be supplied with the appliance. They will, however, not be required to be carried on the tender.</p> <p><b>5.1.12</b> A two speed auxiliary transmission and transfer case should be fitted for better paved surface and cross country performance, along with traction locks, hydraulically/pneumatically operated.</p>		
	<p><b>5.2 ENGINE</b></p> <p><b>5.2.1</b> The vehicle engine shall be diesel driven and able to develop sufficient power to achieve the required rate of acceleration of 80 km/hr in 45 seconds when fully loaded on dry paved surfaces without gradient, without engine pre-heating in ambient temperature varying between 4 degree centigrade and 50 degree C and at elevation up to 600 meters. The maximum speed obtained shall not be less than 100 Kms/hr. The vehicle should be able to cover a distance of 3 Kms in the fully loaded conditions in not more than 3 minutes from cold start as defined in para 4.2.2. In addition, to meet the above stipulation the engine should have sufficient HP to achieve the power ratio of 15 KW (20 BHP)/tone of GVW in order to ensure the general performance required for the crash tender.</p> <p><b>5.2.2</b> The engine shall be capable of quick start without preheating even under very cold condition i.e. the minimum temperature will be around zero degree centigrade.</p> <p><b>5.2.3</b> The electrical system shall be efficiently suppressed to obviate any disturbance /interference on VHF R/T equipment.</p> <p><b>5.2.4</b> When the pump is powered by the vehicle engine it should be driven through a suitable mechanical power – take – off (PTO). The PTO should be so designed that it transmits the full requirements of power for driving the pump with a 10% reserve capacity. The power transmission should be interrupted even though the transmission gears may be shifted or the clutch released or the transmission is placed in any of its speed ranges. Provision shall be made in the design of the drive system or control, to prevent damage to the drive on lurching of the vehicle when the transmission is shifted from neutral to either forward or reverse speed ranges while simultaneously pumping.</p> <p><b>5.2.5</b> When a power take off pump drive is used, there shall be sufficient engine power both to operate the pump at the required rate of discharge (118 KW (150 BHP) and to propel the vehicle while</p>		

	<p>creeping.</p> <p><b>5.2.6</b> The engine shall be equipped with a governor which shall be set at not more than the maximum permissible RPM recommended for the engine at no load.</p> <p><b>5.2.7</b> Suitable gauges for cooling water and lubricating systems approximately marked with normal operating temperature, shall be provide, and located on the instrument panel in the driving compartment, and also on the pump operating control panel.</p> <p><b>5.2.8</b> The engine exhaust shall be fitted in the driver's cab to operate when the pressure in the air pressure reservoir drops below safe limit for operation of brakes and front wheel drive engagement.</p> <p><b>5.2.9</b> The rate of which the pressure loss occurs must not exceed 0.07 kg per cm<sup>2</sup> per hour for the first 12 hours after the reservoir has been charged to its maximum working pressure. A satisfactory anti freezer shall also be provide for the braking system In addition to the warning device, a pressure gauge, to indicate air pressure in the high pressure reservoir, shall also be provided in the driving compartment.</p> <p><b>5.2.10</b> To enable the driver/operator to use the correct engine speed for various operations, such as priming pumping etc., and engine revolution counter shall be fitted in the driving compartment and also on each pump operating control panel.</p>		
	<p><b>5.3</b>     <b><u>SUSPENSION</u></b></p> <p><b>5.3.1</b> The suspension system shall be designed to allow the vehicles, loaded or unloaded, to travel at high speeds over road surfaces or over rough, unimproved terrain. Design of axle and suspension system shall be such that the total unstrung weight of the vehicle will not be greater than 20% of the gross weight of the vehicle when fully loaded. The suspension system should be such that the chassis and super-structure are unaffected by the terrain over which the vehicle is travelling.</p>		
	<p><b>5.4</b>     <b><u>FUEL SYSTEM</u></b></p> <p><b>5.4.1</b> The fuel tank shall have a capacity ;of not less than 130 litres and a fuel tank contents gauge shall preferable be provided in the driving compartment, the filling orifice of the fuel tank shall be not less than 75 mm in diameter and shall be in and accessible position.</p>		
	<p><b>5.5</b>     <b><u>ELECTRICAL SYSTEM</u></b></p> <p><b>5.5.1</b> A heavy duty alternator shall be fitted to supply the vehicle's 24 volts electrical system. The alternator shall be supplied and fitted with the necessary voltage control unit. The crank-shaft to alternator drive ratio shall be such that a minimum alternator output of 18 amps shall be achieved at idle rpm of the engine (App. 600 rpm) and 35 amps, at 800 rpm engine speed. The system shall be so constructed and installed that no interference occurs to VHF R/T equipment fitted to the vehicle. The electrical system shall be 24 volts throughout.</p> <p><b>5.5.2</b> The battery capacity shall be not less than 150 AH at 29 hr rating. The battery shall be fitted in and accessible position.</p> <p><b>5.5.3</b> A trickle charger shall be fitted and it shall be fitted with a socket for connection to 230 volts AC supply. A red pilot lamp, to indicate when the battery is being charged from an external supply, shall be provided. The charger shall preferably be fitted with automatic out-out to operate when the battery is fully charged. The socket for connection to the external supply shall be so fitted that the plug will pull itself out without damage to leads if it is inadvertently left in before moving the vehicle.</p>		

	<p><b>5.5.4</b> All important electrical circuits shall have separate fuses suitably indicated, and grouped into a common fuse box which shall be located in an accessible position. Provision shall be made to carry spare fuses in the fuse box.</p>		
	<p><b>5.6</b> <b><u>WATER TANK</u></b></p> <p><b>5.6.1</b> A water tank of 8500 litres capacity shall be mounted on the chassis. It shall be fabricated out of mild steel (thickness to be as follows: Base plate 4.5 mm and sides including baffles 3 mm) or any other suitable material of equal strength and durability, If mild steel or of other material, liable to corrode, it shall be suitably treated with corrosion resisting compound. It shall be suitably baffled to prevent surge while the vehicle is accelerating, cornering and braking, and shall be so designed and mounted as to bring the centre of gravity as low as possible in the chassis. It shall be semi-elliptical in shape and the mounting shall be of the three point flexible type to prevent the tank's distortion due to the chassis flexion. The mounting shall permit full contents of the tank to flow into the pump.</p> <p><b>5.6.2</b> Suitable eyes shall be provided on the shell of the tank to enable the tank to be lifted off the vehicle for repairs/ replacement as necessary.</p> <p><b>5.6.3</b> The tank shall be fitted with a filling orifice, a drain cock and a cleaning hole. The filling orifice shall be of not less than 25 cms. Diameter and shall be fitted with a removable/ strainer and a filler can clearly marked 'water' – preferably cast in metal. The drain cock and pipe shall be of not less than 75 mm clear water way throughout. The drain pipe shall be taken down to a point well below the chassis without reducing the effective ground clearance (36 cms) when fully loaded, and shall discharge away from the wheels. A cleaning hole of not less than 45 cms diameter and fitted with a removable cover shall be provided over the sump unless the top of the tank itself is removable.</p> <p><b>5.6.4</b> Two overflow pipes, of not less than 75 mm internal diameter each, shall be fitted to the tank. The discharge ends of the overflow pipes shall be taken down to a point well below the chassis without reducing the effective ground clearance (36 cms when fully loaded, and shall discharge away from the wheels. The pipes shall be designed, or other means provided, to ensure that water will overflow through these only whilst refilling the tank, but no water shall overflow through these pipes when the appliance is in motion, is standing on uneven ground, and brakes are applied to the moving appliance.</p> <p><b>5.6.5</b> Four filling pipes (hydrant connections), each with an internal diameter of not less than 63 mm fitted to the tank. Each of these shall be fitted with a 63 mm instantaneous make coupling incorporating a strainer. Two of these inlets shall be fitted on each side of the pump control panel. Fool-proof arrangements shall be made to prevent pressurization of the water tank while refilling through the filling pipes. The inlets of the filling pipes shall be fitted on or near the pump control panels.</p> <p><b>5.6.6</b> Dial type water level indicators for the water tank shall be fitted in the driving compartment and also on the pump control panels.</p> <p><b>5.6.7</b> The tank shall be connected to the pump and hose reel in such a manner that pressurization of water tank or water tank-pump connection is not possible when pumping water from and outside source of supply.</p>		

	<p><b>5.6.8</b> The plumbing between the tank and the pump shall have a clear and unobstructed water-way of not less than 140 mm throughout without any obstruction. The draw-off shall be protected by a wire screen filter and shall preferably be also fitted with an anti-vortex device. Arrangements shall be made for venting the tank to the atmosphere when water is being drawn off from it.</p> <p><b>5.6.9</b> The plumbing between the pump and the hose-reel shall have a clear and unobstructed water way of not less than 25 mm through-out without and obstruction.</p> <p><b>5.6.10</b> All plumbing shall be reasonably accessible for maintenance purposes. Drain cocks shall be provided where necessary and controls for these shall be readily accessible and so arranged as to prevent the cocks from being opened by vibration. The direction in which the valve/cocks opens/closes shall be clearly marked near each valve/cock.</p> <p><b>5.7 HOSE REELS</b></p> <p><b>5.7.1</b> One first aid hose reel shall be provided and mounted so as to be accessible for use from either side of the appliance. Swiveling guide rollers shall be fitted, where necessary to prevent the tubing from kinking.</p> <p><b>5.7.2</b> The reel shall be provided with not less than 60 m of 19 mm bore tubing terminating in a dual – purpose shut-off nozzle. The tubing shall be made up of not more than three pieces and no piece shall be less than 20 m in length. Where it is necessary to join pieces to make use the length of 60 m hermaphrodite couplings of approved design shall be used for connection. The working pressure of the tubing shall not be less than 14 Kg. per Sq. Cm.</p> <p><b>5.7.3</b> The reel shall be provided with friction brakes to prevent over-run of tubing without affecting easy run of the reel.</p> <p><b>5.7.4</b> Flow to the reels should be controlled by manually operated ball type valves located suitably for ease in operation.</p>		
	<p><b>5.8 PUMP</b></p> <p><b>5.8.1</b> The pump shall preferably be made of any suitable alloy, compatible with even light water, besides Indian made foam compound, with stainless steel shaft suitable for use with brackish water. The pump shall be capable of delivering not less than 3200 litres per minute of water at a pressure not less than 8.5 Kg/Sq. Cm. The pump shall preferably be of the single stage and closed impeller type where the impeller is hydraulically balanced to reduce end thrust. The pump shaft shall preferably be designed to run on two deep groove ball bearings lubricated by oil bath to ensure long trouble-free service. A mechanical seal shall be provided which shall be capable of running dry for long periods without damage. The pump design shall be such that the desired outputs indicated in this specification shall be obtained at maximum efficiency.</p> <p><b>5.8.2</b> The pump shall be mid-ship mounted. The pump control panels shall be located on either side of the appliance, in addition to that positioned at the cab.</p> <p><b>5.8.3</b> The suction inlet and delivery outlets of the pump shall, as far as possible, be fitted on or near the pump control panels on both sides of the appliance.</p> <p><b>5.8.4</b> A removable strainer and blank cap shall be provided for the suction inlet (s) for the pump.</p> <p><b>5.8.5</b> The suction inlet shall be fitted with a standard round thread connection.</p> <p><b>5.8.6</b> The delivery outlets of the pump shall terminate in standard 63mm female instantaneous coupling incorporation a blank cap and</p>		

	<p>moans for relieving pressure between the valve and the cap. The aforesaid standard 63mm female instantaneous coupling shall be exactly in accordance with Indian Standard Specifications No. 903 (ISI-903). The outlets shall preferably be fitted with lover type quick closing clack valves.</p> <p><b>5.8.7</b> Plumbing if any, for deliveries and the monitor, shall be adequate in dimension to ensure that it shall feed adequately the foam production mixture at its maximum rates of output.</p>		
	<p><b>5.9 Priming of Pump</b></p> <p><b>5.9.1</b> The premier shall be automatic in action and it shall disengage automatically as soon as the pump is primed. It shall be capable of lifting water at least to 7.3 mm at a rate of not less than 30 cm/second.</p>		
	<p><b>5.10 Foam Equipment</b></p> <p><b>5.10.1</b> Foam compound tank: A foam compound tank of 1000 litres capacity shall be mounted on the chassis in addition to the water tank and as a separate and distinct unit which can be removed separately for replacement.</p> <p><b>5.10.1.1</b> The foam compound tank shall be of the rigid type preferably fabricated out of stainless steel by welded construction.</p> <p><b>5.10.1.2</b> The tank shall have a filling orifice of not less than 150 mm diameter with a removable strainer fitted to it. The strainer shall be of such material as shall not be affected by constant contact with the foam compound and its total screening area shall be adequate to permit quick filling of foam compound in to the tank. The filler cap shall be clearly marked, foam, preferably by pressing, casting or embossing.</p> <p><b>5.10.1.3</b> The rigid tank fitted shall have its tip dished and a through provided to enable easy filling from 20 litre drums. Suitably sharp edged tin opener may also be provided at the foam tank filling mount for puncturing the foam compound drum for facilitating quick filling of the foam compound directly from the drums into the tank. The tank shall be suitably baffled to prevent surge while the vehicle is in motion/standing on uneven ground or brakes are applied to the moving appliance. The design of the tank shall incorporate a removable sump fitted with a drain valve. The foam compound draw-off tube shall be positioned in the centre of the sump in such a manner that foreign matter or sludge shall not pass in to the compound line. The draw-off tube shall be fitted with a gauge strainer of suitable material mesh, size, and adequate straining area. The tank top shall be removable and it shall be ensured that the joint between the tip and the body of the tank is leak-proof.</p> <p>Rigid tanks shall be flexible mounted unless attached to a rigid structure. The tank shall be separate and distinct from the body and shall be easily removable as a unit.</p> <p><b>5.10.1.4</b> Means shall be provided for automatic wanting of the foam compound tank when the foam is being produced or the tank is being filled. This shall not be incorporated with the cap. The device employed shall be as simple as possible and shall not get clogged easily during normal use of the appliance.</p> <p><b>5.10.1.5</b> The draw-off tube shall be connected to the foam compound proportionator/inductor and pump, as necessary, and an automatic flow control valve shall be incorporated in it so as to maintain a constant minimum induction rate of 5% with varying foam output. The plumbing for this purpose shall have a clear and unobstructed passage of not less than 50 mm throughout without</p>		

	<p>any construction and shall:-</p> <ul style="list-style-type: none"> <li>a) be as short as possible.</li> <li>b) be capable of being easily dismantled for internal cleaning.</li> <li>c) be provided with means of thorough flushing after use.</li> <li>d) not form 'U' bend or abrupt angle at any portion and be capable of being drained easily without dismantling.</li> </ul> <p><b>5.10.1.6</b> A suitable transfer pump shall be provided for transferring foam compound from drums to the foam compound tank without causing any frothing in the tank. Necessary connection shall also be provided for transferring the foam compound through this pump.</p> <p><b>5.10.1.7</b> Provision shall also be made for drawing foam compound into the foam producing system from an external source through a pick up tube while producing foam.</p>		
	<p><b>5.10.2</b> <u><b>FOAM COMPOUND PROPORTIONATOR / INDUCTOR</b></u></p> <p><b>5.10.2.1</b> Automatic Proportionate arrangements shall be provided where the induction ratio of foam compound/water solution and flow of water are automatically varied as per demand, merely by opening and closing the monitor/handlines. This shall be achieved without any complex system of linkage that may be susceptible to distortion due to chassis flexion. The system shall be reliable and shall not require frequent calibration checks.</p>		
	<p><b>5.10.3</b> <u><b>Foam Monitor</b></u></p> <p><b>5.10.3.1</b> A foam monitor shall be mounted on the roof of the cab in such a manner that it can be manually operated by a member of the crew or by the driver from inside the crew compartment thus enabling the vehicle to be capable of operation by one man in an emergency. The monitor shall be capable of traversing through 360° in a horizontal plane, elevating from horizontal to 45° and depressing from horizontal to less than 15° and fully rotating in both directions. The monitor shall be fitted with a deflector to enable it to lay a wide carpet of foam for quick coverage of spill fires when necessary. The change from jet to spray shall be instantaneous by the operation of a simple lever. The monitor should be a revolving one and shall be so positioned on the roof of the cab that the foam produced could be directed towards a fire at a minimum distance of 12 metres ahead of the cab when the monitor is at its maximum depression from horizontal.</p> <p><b>5.10.3.2</b> The monitor should be of the self-aspirating type with a flow rate of at least 2200 litres per minute of water at 10 Kg/sq. cm. It shall have an expansion ratio of not less than 8, using foam compound to specifications No. IS 4989 – 1974.</p> <p><b>5.10.3.3</b> The aggregate foam discharge shall be not less than 24000 litres per minute through a combination of monitor and upto 2 hand lines or 17600 litres per minute through monitor only. The appliances shall be capable of yielding this latter discharge while it is creeping.</p> <p><b>5.10.3.4</b> The monitor shall be capable of projecting the foam discharge to an effective distance of not less than 60 metres in still air when operated at the designed pressure in a straight jet pattern without dripping.</p> <p><b>5.10.3.5</b> The foam producing equipment should be capable of being</p>		



		converted at a later date to suit use of the equipment with AFFF also, without major modification.		
		<p><b>5.10.4 Hand-Lines.</b></p> <p><b>5.10.4.1</b> Four hand-lines, two on either side of the appliance shall be provided. These shall terminate in foam making branch pipes, fitted with spray/jet attachments, and preferably also fitted with hand control. Each foam making branch pipe shall be capable of delivering not less than 500 litres of water foam solution per minute with an expansion of not less than 8 and minimum throw of 25 m when the hand-lines only are used simultaneously or at least two of them are used in combination with the monitor.</p> <p><b>5.10.4.2</b> The hand-lines shall be stowed in quick-release clamps or locker 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 ISI-636 II.</p> <p><b>5.10.4.3</b> The controls for the hand-line outlets shall be of the pneumatic type 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.</p>		
		<p><b>5.11 SUPPLEMENTARY EXTINGUISHING AGENT – CO<sup>2</sup>.</b></p> <p><b>5.11.1</b> The CO<sup>2</sup> equipment shall comprise of six cylinders each having a capacity of not less than 22.5 kg. with an aggregate capacity of 135 kg discharging through a common manifold into single CO<sup>2</sup> hose-reel with not less than 22 metre long high pressure hose of 12 mm bore minimum.</p> <p><b>5.11.2</b> 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.</p> <p><b>5.11.3</b> The discharge heads on the cylinders shall preferably be of the flooding type.</p> <p><b>5.11.4</b> A suitable discharge horn shall be fitted to the end of high pressure hose to ensure a discharge rate of approximately 45 kg. per minute. The discharge horn shall be replaceable by a well designed CO<sup>2</sup> extension applicator which shall form one of the ancillary equipment. The discharge horn / extension applicator shall be provided with a shut-off valve.</p> <p><b>5.11.5</b> The operating controls shall be fitted in the driving compartment at convenient position so that the driver can operate them when required from the Cab itself in addition to being operated externally.</p> <p><b>5.11.6</b> The CO<sup>2</sup> hose-reel shall be fitted in such a manner that as far as possible it is accessible from both sides of the appliance. Where necessary, swiveling guide rollers shall be fitted to prevent the hose from kinking. The reel shall also incorporate friction brakes.</p> <p><b>5.11.7</b> The CO<sup>2</sup> cylinder pull-off handle (s) shall be fitted in the respective locker and shall be duplicated in the driving compartment.</p>		
		<p><b>5.11.2 DRY POWDER</b></p> <p><b>5.11.2.1</b> A separate self- contained unit having a capacity of 2 of dry powder shall be provided. The expellant for the dry powder shall be carbon-di-oxide. The installation shall be connected to a high pressure hose of 25 mm dia and 22 metres long, ending in nozzle for straight jet or cloud with a capacity of not less than 2.25 kg. per second and a throw of 12 metres in the case of strait jet. The powder as well as the powder cylinder shall conform to relevant I.S.</p>		

	specification.		
	<p><b>5.11.3</b> <b>UNDER VEHICLE NOZZLE</b></p> <p><b>5.11.3.1</b> Suitably placed foam nozzles should be installed under the vehicle so that the tyres and underside of the vehicle are fully protected from fire damage in case of flash back. The total nozzle capacity should be around 400 litres/minute of foam and control should be possible from within the cab.</p>		
	<p><b>5.12</b> <b>INSTRUMENTS AND CONTROLS</b></p> <p><b>5.12.1</b> Adequately illuminated pump operating control panels shall be provided on either side of the appliance. Each of these shall include the following:-</p> <ul style="list-style-type: none"> <li>(a) Auxiliary throttle control of the engine.</li> <li>(b) Pump pressure gauge calibrated to 25 Kg/Sq.Cm.</li> <li>(c) Compound gauge calibrated as follows:- <ul style="list-style-type: none"> <li>i) Pressure from 0 to 10 Kg/sq.cm. in dack.</li> <li>ii) Vacuum from 0 to 760 mm of mercury in red on 2/3 of the gauge scale circumference.</li> </ul> </li> <li>d) Pump revolution counter.</li> <li>e) Engine lubricating oil temperature gauges.</li> <li>f) Engine oil pressure gauge or a warning glow lamp.</li> <li>g) Ammeter or a warning glow lamp.</li> <li>h) Water tank contents gauge calibrated in litres.</li> <li>j) Two 63 mm male instantaneous hydrant connections for filling pipes.</li> <li>k) Pump suction isolating control.</li> <li>l) Water tank isolating valve control.</li> <li>m) Two 63 mm female instantaneous delivery outlets of pump along with their control valves.</li> <li>n) Suction inlet of the pump.</li> <li>o) Control for using auxiliary foam compound pick-up tube.</li> <li>p) Control (s) for flushing out the foam making equipment and its plumbing.</li> </ul> <p>In addition to the above the following instrument and controls shall be provided in the driving compartment:-</p> <ul style="list-style-type: none"> <li>a) Hand throttle with; arrangement to lock it in any position, when required.</li> <li>b) Pressure Gauge calibrated to 25 Kg. Sq. Cm.</li> <li>c) Engine Revolution counter.</li> <li>d) Engine cooling water and lubricating oil temperature gauge.</li> </ul> <p><b>Note:-</b>In the case of air-cooled engines gauges for cylinder head temperature and lubricating oil temperature shall be provided.</p> <ul style="list-style-type: none"> <li>e) Engine oil pressure gauge or a warning glow lamp.</li> <li>f) Ammeter or warning glow lamp.</li> <li>g) Water Tank contents gauge calibrated in litres.</li> <li>h) Air pressure gauge for the braking system with warning device.</li> <li>i) Fuel Tank contents gauge calibrated in litres.</li> <li>j) Speedometer calibrated in Kms/Hour.</li> <li>k) Odometer calibrated in Kms.</li> <li>l) Controls for foam deliveries.</li> <li>m) Carbon-di-oxide equipment operating controls.</li> <li>n) FOAM Tank control valves.</li> <li>p) Water Tank Isolating Valve control.</li> </ul>		

**5.12 Body Work.**

**5.12.1** Enclosed accommodation for 5 men including the driver shall be provided in a fully enclosed flexibly mounted crew compartment. The design of the cab shall be such that it shall afford maximum possible vision for the crew and shall ensure adequate ventilation to avoid discomfort to crew under tropical conditions. There shall be ample space to enable the crew, except the driver, to put on protective clothing while on way to a call adequate lighting in the driving and crew's compartment shall be provided. Doors shall be provided on both sides of the appliance giving ready access to driver and crew. If the doors are hinged and open outwards, these shall be hung forward and have locks with double catch striking plates. These shall not be liable of being opened inadvertently from the inside. If the doors are of sliding type these shall be capable of being opened and closed speedily with means for positive locking in closed position. Where necessary, non-slip steps and grab rails/handles shall be provided to assist the driver to get in and out. Driver's seat shall be adjustable. All glasses fitted to window shall be splinter-proof safety glass. The construction of the cab shall be such that the roof shall support the weight of one man without damage. Dual sun visors and long arm outside fitting rear view mirrors shall be fitted to the cab. Safety belts shall be provided for each seat in the cab.

An illuminated 'Fire' sign shall also be fitted to top-centre-front of the cab (outside).

**5.12.3** The body work shall be designed so as to enclose as much as possible of the appliance without interfering with necessary accessibility, but, at the same time shall have clean lines.

**5.12.4** Lockers or other suitable accommodation shall be provided for all equipment detailed in Appendix 'A' to this specification. Lockers having external access shall be weather proof and self-draining to release all water following wash down etc. The locker design shall lend a pleasing appearance to the appliance, but not at the expense of functional suitability. Lockers shall be accessible from ground level to a man of average height (1.67). Lockers doors shall open in such a manner that they offer no injury hazard to the personnel in the open position and any stays or supports can be released by one man to close the doors. The top line of lockers shall provide a working platform for access to tank tops. All lockers shall be fitted with internal lighting which shall be capable of being automatically switched 'on' and 'off' by the opening and closing of the doors/lids. A master switch for isolating the locker lighting circuit shall also be fitted in the driving compartment.

**5.12.5** Grab rails and non-slip steps shall be provided to give access to the roof of the appliance and for easy and speedy removal and mounting of ladders.

**5.12.6** No part of the body work shall reduce the ground clearance to less than 36 cms for increase the overall width of the vehicle to more than 2.50 metres. The highest part of the appliance with the extension ladder and the monitor mounted on it shall not exceed 3.60 metres. The construction of superstructure shall not reduce the angles of approach and departure below 30°.

**5.12.7** A 7.5 m light hollow two-piece extension ladder shall be mounted on suitable gallows fitted with rollers and designed to facilitate easy and quick removal of the ladder by one man from the rear of the appliance. The head lock on the gallows shall be positive in action. No equipment shall be so positioned as to interfere with

		<p>the easy and independent removal of the extension ladder.</p> <p>In addition, two light hollow stretcher ladders shall be mounted separately on the appliance in such a way that these could be easily, quickly and independently removed when required. Details of this type of ladders proposed to be supplied with the appliance shall be supplied while quoting. Two spare ladders of this type shall be supplied with each appliance in addition to the two mounted on the appliance.</p>		
		<p><b>5.13 STABILITY</b></p> <p>The stability of the appliance shall be such that when under fully equipped and loaded condition equivalent weight of crew to be loaded in lieu of crew if the surface on which the appliance stands in tilted to either side the point at which over turning occurs is not passed at an angle of 35<sup>0</sup> from the horizontal.</p>		
4	6	<p><b>WORKMANSHIP AND FINISH</b></p> <p><b>6.1</b> The standard of workmanship and finish of all mechanical and other parts shall be such that the parts normally required to be replaced can be supplied and will fit correctly.</p> <p><b>6.2</b> The appliance shall be painted 'Fire Red' on the outside with the Indian Coast Guard Fire Service insignia painted in gold and black.</p> <p>The driving compartment, crew's compartment and inside of lockers shall be painted cream. Lockers shall be finished in shadow board painting to show the position of each piece of equipment.</p> <p>All other parts except engine shall be painted black.</p> <p>Necessary anti-corrosion and priming coats shall be applied before painting.</p>		
5	7	<p><b>INSTRUCTION BOOK(S) ACCESSORIES AND EQUIPMENT</b></p> <p><b>7.1</b> Instruction Book(s) – A set of illustrated books for the guidance of the user, including both operating and normal maintenance procedures, for the appliance, VHF R/T Battery Charger, rescue saws etc. shall include an itemised and illustrated spare parts list giving reference number to all wearing parts with a view to ensure that adequate number of such spare parts are made easily available, when necessary, It shall also include line diagrams showing all plumbing and connections between water tank, Foam Compound-tank, primer, heat exchanger and foam proportioning apparatus. One set of these books shall be supplied with the vehicle and two sets shall be dispatched to the Director of Air Staff Coast Guard Headquarters, Purana Quila Road, New Delhi.</p> <p><b>7.2 Spares</b> – A complete set of recommended spare parts for the chassis including spare wheel, tyre and tube, engine, foam equipment, pump, VHF R/T, battery charger, rescue saws etc. shall be supplied with each appliance.</p> <p><b>7.3 Accessories</b> – The following accessories shall be provided in addition to these normally fitted on the chassis-</p> <ol style="list-style-type: none"> <li><b>Fire Bell</b> – One of 250 mm (10 in.) mouth 'F' natural tone cerillon. Bell shall be mounted externally.</li> <li><b>One electrically operated Siren</b> – 24 Volts to be mounted externally.</li> <li><b>Fog Lamps – Two</b> These shall be low-mounted in front of the appliance.</li> <li><b>Reversing light – One</b> It shall be suitably situated to assist reversing.</li> <li><b>Airfield obstruction marking lights – Two</b> – One of these shall be fitted in front and the other at the rear of the appliance.</li> </ol>		

		<p>f. <b>Revolving beacon ray light – One.</b> It should be of blue colour and shall be capable of throwing beams of blue light round 360 with beams inclined upward, horizontally and downwards, It shall be mounted on, the cab roof and shall be operated from the vehicle's battery.</p> <p>g. Defrosting device shall be provided for the wind screens.</p> <p>h. <b>Tools</b> – All tools required for normal routine maintenance of the appliance, which are not included in the kit for chassis. These shall include two numbers 15 tons hydraulic Jacks.</p> <p>j) <b>Search Light – One.</b> It shall be adjustable to give a flood or beam light and shall be mounted in a convenient position on the appliance. But it shall be capable of being readily removed and mounted on a tripod away from the appliance. It shall be supplied complete with tripod and not less than 100 m. of TRS cable on reel mounted on the appliance. The cable shall be of suitable capacity so as to cause not more than 2 per cent voltage drop at the other end.</p> <p>k) <b>Spot Light – One.</b> It shall be adjustable and shall be mounted in a convenient position on the roof of the appliance.</p> <p>l) <b>VHF Radio Telephone Set.</b> A Self-contained VHF transmitting/ receiving set for communication between the Tower and the Crash tender is required to be installed. The equipment should be suitable for use in the tropics. Choice of two crystal controlled frequencies in the range 118 – 132 mc/s for simple working, using amplitude modulation, should be available. The transmitter power shall be of the order of 3-5 watts unmodulated. The actual working frequencies will be indicated later. The set should be supplied complete with a hand microphone housed in an unbreakable case with a press to talk switch, retainer for the microphone, aerial etc. The set will be operated by the fire foreman who is seated by the side of the driver of the vehicle. Spares for three years working should also be supplied with each vehicle. Full details of the equipment, spares, manual etc. should be furnished with the tender.</p> <p>m) <b>Windscreen Washer</b> – Fitted in a suitable location with controls in driving compartment.</p> <p>n) Self cancelling trafficators with switch in the driver compartment</p> <p><b>7.4 Equipment:-</b> The appliance shall be supplied complete with equipment in <b>Appendix 'A'</b>.</p>		
6	8	<p><b>TECHNICAL DOCUMENTATION</b></p> <p>Each CFT shall be supplied with following information in the booklet form as well as in soft copy.</p> <p>a) (i) Operating instruction (ii) Maintenance and overall manual servicing schedule including the level of maint., type of oil to be used in dif assy / sub asy etc. (iii) Electrical wiring diagram. (iv) Pneumatic Circuit Diagram. (v) Refueling/Defueling lay out diagram.</p> <p>b) Spare parts catalogue with exploded view of all components.</p>		

		<p>c) All the documents shall be printed on good quality paper and bound to withstand long periods.</p> <p>d) Two copies of each document should be, handed over to DGAQA and tow copies to consignee along with one copy with each of the equipment (Aircraft CFT).</p> <p>e) Inspection Report Firm has to prepare the inspection report giving all the details of the each component as per the Bill of Material. Report must consist of source of supply, broad T&gt;R&gt; acceptance criteria, acceptance authority, and acceptance certificate of CCOE Approval &amp; approved drawing. Stage Inspection Report, Internal Inspection Report, Performance Report, Environment Report &amp; any measure deviation mist also be provided.</p>		
7	9	<p><b>INSPECTION</b></p> <p>Offering of the Stores for Inspection. The supplier must encure the following prior to offering of the Stores for inspecstion.</p> <p>i) Validity of the sufficient delivery period at least 20% time of production.</p> <p>ii) Approval/provision clearance of the drawing from AHSP.</p> <p>iii) Availibility of in-house testing records and copy of the pre-inspection report to be forwarded to Inspecting Agency.</p>		
		<p><b>9.1 QUALITY ASSURANCE:</b></p> <p>To maintain the design inbuilt quality in the product the following measures are to be taken right from the inception of the product.</p> <p>i) Approval of GA Drawing by DGAQA.</p> <p>ii) Bill of Material stating nomenclature of component, drawing nos, part no., if any, qty, name of suppliers etc to be prepared.</p> <p>iii) All the stage inspection stages must be designated in consultation with DGAQA.</p> <p>iv) Raw material certificate.</p> <p>v) Test Certificate.</p> <p>vi) Stage Inspection Report.</p> <p>vii) Design calculation, if any.</p> <p>viii) Deviation/concession if any &amp; acceptance of the same in writing with DGASQA.</p> <p>ix) Critical sub assembly test.</p> <p>x) Performance check.</p> <p>xi) Encironmental Test.</p> <p>xii) Any other test which Inspector consider for better performance/ functioning of A/c CFT&gt;</p>		
		<p><b>9.2</b> i) The contractor/manufactures shall be fully responsible for the performance of all, inspection requirements as specified herein. Except as otherwise specified in the contract. The supplier may use his own, or any other facility for the performance of the inspection requirements specified herein unless disapproved y the inspecting authority.</p> <p>ii) Access to manufactures Works During the currency of the contract, the Inspecting Officer shall have free access to the manufacture's works and to examine the process, stage assembly and the finished product.</p>		
		<p><b>9.3</b> i) Test Facility : The contractor shall provide all necessary test facilities including fuel and oil etc for conducting test, acceptance tests at manufactures premises however for user's trials. the fuel shall be supplied by ICG at designated air base.</p>		

		<p>ii) The CFT shall be subjected to inspection during all stages of manufacture at the discretion of the Inspecting Officer.</p>		
		<p><b>9.4 CLASSIFICATION OF TEST</b>  The CFT shall be subjected to various test under the following classification of tests:-  a) Type Test  b) Acceptance Tests  The following tests shall be applied before accepting the vehicle. These shall be carried out at manufacturer's works or a place to be mutually agreed upon:  a. Road Tests to check chassis manufacturer's rating for acceleration, maximum speed, braking efficiency and turning circle. These shall be carried out with appliance fully loaded.  b. Braking should permit the vehicle to be brought to a stop in 9 metres (30 ft.) when travelling 32 Km. (20 miles) per hour fully loaded and manned on pavement, without any adverse effect on thee mounted equipment.  c. Stability test to check fulfillment of requirements of clause 4.14.  d. Pump tests to check pump manufacturer's rated output at varying pump pressures for a continuous period of 4 hours. During this test, the temperature of engine cooling water shall not exceed 85<sup>o</sup> C and that of lubricating oil 798.  e. Primer tests – The primer shall be tested with a vertical lift of 7.3 m. The rate at which the priming is done shall not be less than 30 cm./sec.  f. Foam making equipment tests – These shall be applied to check the induction ratio of foam compound total foam discharge rate ad expansion ratio of foam produced using the foam compound available in India as per specification.  g. Carbon-di-oxide - The system shall be tested to ensure its functioning as specified in this specification. Thee cylinders shall conform to relevant B.S. Specification on and the valves/ piping to relevant I.S. Specification.</p>		
		<p><b>9.5 PRE-RECEIPT INSPECTION BY THE CONSIGNEE</b>  The CFT shall be inspected by the consignee on receipt. Any transit damage, loss, discrepancy or defects shall be intimated by the consignee/ inspection Officer/ Indenter to the contractor. The damage/ defective items shall be replaced/ repaired free of cost by the contractor at the consignee's premises. Any loss/ discrepancy shall be made good by the contractor within 3 months, at his own cost.</p>		
		<p><b>9.6 INSPECTION</b>  Offering of the Stores for inspection. The supplier must ensure the following prior to offering of the Stores for inspection.  i) Sufficient time for inspection by DGAQA should be at least 20% time of prototype development and three weeks for <b>PDI</b>.  ii) Approval/ provision clearance of the drawing from AHSP.  iii) Availability of in-house testing records and copy of the pre-inspection report to be forwarded to Inspection Agency.</p>		
8	10	<p><b>DETAILS TO BE FURNISHED ALONGWITH THE QUOTATIONS</b>  The technical bid must be accompanied with following otherwise it shall be treated as invalid.  i) Submit details of experience on manufacture and supply</p>		

		<p>of Aircraft CFT Tendered must furnish copies of orders in the relevant field and proof of execution of orders with technical bid to quality for consideration.</p> <p>ii) Para wise compliance with regard to governing T.R. to Para wise compliance of T.R. copy shall not be considered.</p> <p>iii) Remarks in Para wise compliance "noted" is not to be considered. 'Noted' can be used only where change of earlier specified remark is amended due to advancement of technology etc.</p> <p>iv) Wherever not agreed detailed reason must be furnished.</p> <p>v) Deviation/Concession at any para with respect to raw material. Process, design, inspection, testing must be clarified. Supplier must ensure that all the drawings sketched details indicated in the specs are collected from DGAQA, prior to quotation. Supplier should also ensure that manufactures has purchased the correct T.R. prior to particular tender enquiry. Receipt for purchase of spec may please be enclosed to the Technical Bids.</p> <p>vi) No correspondence shall be entertained once the technical bids are submitted.</p> <p>vii) Technical details of following major sub assemblies must be furnished along with compliance report/ status.</p> <p>viii) Technical details of major sub assemblies are given at Annexure-I must be furnished along with compliance report.</p> <p><b>Note:</b> Technical bids including detailed drawings, design and chassis load calculations of all systems &amp; sub assemblies and the capability of the bidders to manufacture and supply the CFT strictly as per the T.R. will be evaluated thoroughly by a Technical evaluation committee. The detailed drawings, design and chassis load calculations of all systems and sub assemblies approved by PESO is to be submitted to DGAQA within 30 days of award of contract.</p>		
9	11	<p><b><u>MANUFACTURE'S CERTIFICATE AND GUARANTEE</u></b></p> <p><b>11.1</b> The manufacturer shall guarantee the material, workmanship and operation of the unit, excluding the chassis and other proprietary equipment. The period of guarantee shall be two year from the date of receipt of equipment.</p> <p><b>11.2</b> The guarantee period in respect of the chassis shall be in accordance with the chassis manufacture's stipulation.</p> <p><b>11.3</b> The manufacturer shall be responsible for replacing any parts which may become unserviceable, due to use of defective and sub-standard materials and bad workmanship, during the period of guarantee, free of all charges.</p> <p><b>11.4</b> The following certificates will be supplied with the tender documents against each offer/alternative offer:-</p> <ol style="list-style-type: none"> <li>1. Certificate from the chassis manufacturer that thee chassis/chassis equipment as offered in its final form and as used/supplied meets the requirements of this specification on specifically and mentioning the total number and break up of such chassis in use on Major Fire Fighting Vehicles with indication of length of service. This certificate should be accompanied by authenticated and detailed technical data on the chassis issued by the chassis manufacturer. Any modifications to the chassis to be carried out at the works of the mounted equipment manufacturer must be acceptable to the chassis manufacturer and certified as such without affecting the Warranty.</li> <li>2. A certificate from the Indian tyre manufacturer on adequacy of the tyres use must also be furnished, if</li> </ol>		



		<p>indigenous tyres are proposed to be used.</p> <p>3. Certified list of the manufacturers Customers' for Crash Fire Tenders generally confirming to the major aspects of these specifications/ requirements. All deviations in such machines when compared to this specification should be clearly mentioned.</p> <p>4. Certificate from approved authorities on the compatibility of the alloy proposed for foam and water system with AFFF, Foam compound according to ISI Specification 4989 (1969) and brackish water. Failure in furnishing these certificates will automatically be the cause of rejection of the tender.21</p> <p>In addition to the above certificates it is mandatory that questioner at <b>Appendix 'B'</b> is filled in by the tenderer for each offer/ alternate offered. The questionnaire must give all the information required in full detail. Failure to return this questionnaire fully filled in will also lead to rejection of tender. The questionnaire must be accompanied by a General Arrangement drawing giving important dimensions angles, etc. and a weight calculation sheet indicating weights, distribution of weights and actual axle loading. The pump characteristics curves.at various speeds and delivery shall also be supplied with each tender document.</p>																																						
10	12	<p><b>MARKING:</b></p> <p><b>12.1</b> Each appliance shall be clearly and permanently marked with the following preferably on a metal plate attached in the driving compartment and also near/on the pump operating control panels.</p> <p>a) Manufacturer's name or Trade Mark.</p> <p>b) Year of manufacturer.</p> <p>c) Capacity of pump (in 1 pm.) water tank (in litres) and foam compound tank (in litres).</p> <p>d) Engine and chassis number.</p> <p>e) A broad Arrow Pointing upwards.</p>																																						
		<p style="text-align: right;"><b>Appendix 'A'</b></p> <p><b>SCHEDULE IF EQUIPMENT TO BE SUPPLIED WITH THE APPLIANCE</b></p> <table border="1"> <thead> <tr> <th>SI No.</th> <th>Item</th> <th>Qty</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Armoured suction hose complete with round thread couplings to suit the lengths pump inlet – metre long.</td> <td>3</td> <td>In either case only 2 lengths will be 4.3 carried on the appliance</td> </tr> <tr> <td>2.</td> <td>Low level suction strainer for above</td> <td>1 pc.</td> <td>--</td> </tr> <tr> <td>3.</td> <td>Basket strainer for item 2</td> <td>1 pc.</td> <td>--</td> </tr> <tr> <td>4.</td> <td>Light Alley branch pipe</td> <td>4 pc.</td> <td>--</td> </tr> <tr> <td>5.</td> <td>Dual purpose jet and diffuser nozzle with instant connection</td> <td>4 pc.</td> <td>--</td> </tr> <tr> <td>6.</td> <td>Nozzle for light alley branch pipe sizes 12 mm, 15 mm, 19 mm &amp; 25 mm</td> <td>1pc. each</td> <td>--</td> </tr> <tr> <td>7.</td> <td>Dividing breachings made out of light alley.</td> <td>2pc</td> <td>--</td> </tr> <tr> <td>8.</td> <td>Collecting breachings made out of light alley.</td> <td>2pc s</td> <td>--</td> </tr> </tbody> </table>	SI No.	Item	Qty	Remarks	1.	Armoured suction hose complete with round thread couplings to suit the lengths pump inlet – metre long.	3	In either case only 2 lengths will be 4.3 carried on the appliance	2.	Low level suction strainer for above	1 pc.	--	3.	Basket strainer for item 2	1 pc.	--	4.	Light Alley branch pipe	4 pc.	--	5.	Dual purpose jet and diffuser nozzle with instant connection	4 pc.	--	6.	Nozzle for light alley branch pipe sizes 12 mm, 15 mm, 19 mm & 25 mm	1pc. each	--	7.	Dividing breachings made out of light alley.	2pc	--	8.	Collecting breachings made out of light alley.	2pc s	--		
SI No.	Item	Qty	Remarks																																					
1.	Armoured suction hose complete with round thread couplings to suit the lengths pump inlet – metre long.	3	In either case only 2 lengths will be 4.3 carried on the appliance																																					
2.	Low level suction strainer for above	1 pc.	--																																					
3.	Basket strainer for item 2	1 pc.	--																																					
4.	Light Alley branch pipe	4 pc.	--																																					
5.	Dual purpose jet and diffuser nozzle with instant connection	4 pc.	--																																					
6.	Nozzle for light alley branch pipe sizes 12 mm, 15 mm, 19 mm & 25 mm	1pc. each	--																																					
7.	Dividing breachings made out of light alley.	2pc	--																																					
8.	Collecting breachings made out of light alley.	2pc s	--																																					

9.	Suction wrenches	1 pr.	--	
10.	Nozzle spanner	2pcs	--	
11.	Long line, Terylene, 50 mm circumference, 30 metre long.	2 lengths	Only one of each will be carried on the appliance	
12.	Short line, Terylene, 50 mm circumference, 15 metre long.	2 lengths	--	
13.	Hose bandages, rubberized.	12 pcs	--	
14.	Hose clamps	6pcs	--	
15.	Multi Edged rescue axe, Small non-wedging.	2pcs	--	
16.	Multi Edged rescue axe, Large non-wedging.	2pcs		
17.	Hydraulic rescue tools complete in box of 6 tons capacity.	1 set	The smaller set will be carried on the appliance	
18.	Hydraulic rescue tools complete in box of 15 - 25 tons capacity.	1 set	--	
19.	Small portable hand winch complete with cable	1 set	--	
20.	Fire extinguisher, dry powder type, 9 Kg capacity each, suitable for fighting metal fires.	4 Nos	Provision will be made to carry two on the appliance	
21.	Light alley dual bead standpipes with instant outlets.	1pc	--	
22.	Hydrant valve key and bar	1pc	--	
23.	Self contained portable search/flood lights working on rechargeable batteries.	2 pcs	--	
24.	Protective clothing for fireman complete with gloves, boots and helmet with suitable face shield made out of material capable of reflecting at least 95 % of radiant heat at temperatures around 1500 to 2000 <sup>o</sup> C and also afford some protection against direct flame. The suit will be of sufficient size to accommodate a breathing apparatus to users.	2 Set	--	
25.	Insulated pliers tested to 20,000 volts	2pcs	--	
26.	Sheers bolt cropper 18" x 25"	1pc	--	
27.	Hacksaw 30 mm adjustable with 6 spare blades each.	2pcs	--	
28.	Salving hook	2 Nos	--	

29.	Crowbar 1.68 metre long 37 mm dia.	2 Nos	--
30.	Grab Hook with chain and cable.	1 No.	--
31.	Portable petrol engine operated circular saw.	1 No.	--
32.	Sledge Hammer 5 Kg.	1 No.	--
33.	First Air Box	1 No.	--

**Questionnaire – Apendix ‘B’**

**Part A Chassis:**

- 1) Make : \_\_\_\_\_
- 2) Model: \_\_\_\_\_
- 3) Drive: 4 x4 or 6 x 6 \_\_\_\_\_
- 4) Weight: \_\_\_\_\_

	<u>Front Axle.</u>	<u>Rear Axle.</u>	<u>Total</u>
a) Dry Chassis	_____ Kg	_____ Kg	_____ Kg
b) Ready for use	_____ kg	_____ Kg	_____ Kg
c) Permissible	_____ Kg	_____ Kg	_____ Kg
d) Load / Type	_____	_____	_____

5) **Dimensions**

- a) Overall length : \_\_\_\_\_ M
- b) Overall width : \_\_\_\_\_ M
- c) Overall Height : \_\_\_\_\_ M
- d) Under Axle Clearance -Front : \_\_\_\_\_ mm  
Rear : \_\_\_\_\_ mm
- e) Chassis wheel base : \_\_\_\_\_ M
- f) Angle of Approach : \_\_\_\_\_
- f) Angle of Approach : \_\_\_\_\_ Degrees
- g) Angle of Departure : \_\_\_\_\_ Degrees

6) **Engine**

- a) Make \_\_\_\_\_
- b) Model \_\_\_\_\_
- c) Location \_\_\_\_\_
- d) No of Cylinders \_\_\_\_\_
- e) Maximum BHP (SAF) \_\_\_\_\_ (at) \_\_\_\_\_ RPM
- f) Maximum Torque. (SAF) Kg M \_\_\_\_\_ (at) \_\_\_\_\_ RPM
- g) Is engine governed for maximum speed and if so at what speed? \_\_\_\_\_
- h) Is the engine supercharge of normally aspirated.

7) **Fluid Coupling/Torque Converter**

- a) Make : \_\_\_\_\_
- b) Model : \_\_\_\_\_
- c) Rated Capacity : \_\_\_\_\_ Kg-M

8) **Gear Box**

- a) Make : \_\_\_\_\_
- b) Model : \_\_\_\_\_
- c) Type – Manual, semi automatic or fully automatic \_\_\_\_\_
- d) Rated Torque Capacity \_\_\_\_\_ Kg-M



14) **Electrical System**

- a) Voltage : i) Lighting \_\_\_\_\_ Volts  
 ii) Starting \_\_\_\_\_ Volts
- b) Alternator : i) Charging Rate \_\_\_\_\_ Amps @ 600  
 (Idling RPM)  
 ii) Charging Rate \_\_\_\_\_ Amps @ 800 RPM
- c) Batteries i) Number \_\_\_\_\_  
 ii) Capacity \_\_\_\_\_ Amp/Hr.

15) **Fuel System**

- a) Fuel Pump Type \_\_\_\_\_
- b) Fuel Tank Capacity \_\_\_\_\_ Litres.

16) **Exhaust System.**

- a) Turbocharged or Non-Turbocharged? \_\_\_\_\_

17) **Breaks**

- a) Type – Shoe of Disc \_\_\_\_\_ Front \_\_\_\_\_ Rear
- b) Braking Lining Areas \_\_\_\_\_ Sq. Cm \_\_\_\_\_ Sq. Cm.
- c) Type of application system \_\_\_\_\_

18) **Emergency Breaks**

- a) Type \_\_\_\_\_

19) **Steering**

- a) Make : \_\_\_\_\_
- b) Model : \_\_\_\_\_
- c) Is it power assisted ? \_\_\_\_\_
- d) Turning Radius \_\_\_\_\_ M

20) **Performance (Ready for use condition)**

- a) Maximum speed \_\_\_\_\_ KMPH (on paved surface)
- b) Acceleration time to 80 KMPH from rest \_\_\_\_\_ seconds.
- c) Breking distance from 32 MPH \_\_\_\_\_ M.
- d) 3 KM covered in \_\_\_\_\_ minutes (From cold start without preheating).

21) **Cab**

- a) Location \_\_\_\_\_
- b) Seating capacity \_\_\_\_\_
- c) Number of doors \_\_\_\_\_
- d) Type of glass used \_\_\_\_\_
- e) Is monitor access hatch provided? \_\_\_\_\_
- f) Is the Cab heat insulated? \_\_\_\_\_

**(Part B) Fire Fighting Equipment**1) **Body**

- a) Construction Material \_\_\_\_\_
- b) Location of ladders on Body \_\_\_\_\_
- c) Number of pump control panels and location. \_\_\_\_\_
- d) Location of Hose Reels \_\_\_\_\_

e) Location of Lockers \_\_\_\_\_.

2) **Pump**

- a) Make \_\_\_\_\_.
- b) Model \_\_\_\_\_.
- c) Materials of construction \_\_\_\_\_.
- d) Location \_\_\_\_\_.
- e) Performance \_\_\_\_\_.
- 1) \_\_\_\_\_ Litres/Min.at \_\_\_\_\_ Kg/Cm<sup>2</sup>
- 2) \_\_\_\_\_ Litres/Min.at \_\_\_\_\_ Kg/Cm<sup>2</sup>

3) **Pump Drive**

- a) Make : \_\_\_\_\_.
- b) Model : \_\_\_\_\_.
- c) Rated Torque Capacity \_\_\_\_\_ Kg-M.
- d) Location \_\_\_\_\_.
- e) Type of Clutch \_\_\_\_\_.
- f) Max. road speed at which it may be engaged \_\_\_\_\_ KMPH.
- g) Is power transmission to the pump uninterrupted while creeping? \_\_\_\_\_.
- h) Maximum road speed at which full pump output remains unaffected \_\_\_\_\_ KMPH.

4) **Type and quantity of Extinguishing Agents.**

- a) Co2 No. of cylinders with capacity \_\_\_\_\_.
- b) Kg. Weight provided \_\_\_\_\_.
- c) Type of Hose used \_\_\_\_\_.
- d) Testing pressure of the Hose \_\_\_\_\_ Kg/Sq. Cm.

5) **Water Tank**

- a) Location \_\_\_\_\_.
- b) Capacity \_\_\_\_\_ Litres.
- c) Number of Tanks \_\_\_\_\_.
- d) Construction Material \_\_\_\_\_.
- e) Protective coating material \_\_\_\_\_.
- f) Number of baffles
- 1) Transverse \_\_\_\_\_.
- 2) Longitudinal \_\_\_\_\_.
- g) Tank Fillers
- 1) Number \_\_\_\_\_.
- 2) Size \_\_\_\_\_.
- 3) Location \_\_\_\_\_.
- h) Type of coupling \_\_\_\_\_.

6) **Foam Tank**

- a) Location \_\_\_\_\_.
- b) Capacity \_\_\_\_\_ Litres.
- c) Number \_\_\_\_\_.
- d) Type \_\_\_\_\_.
- e) Construction Material \_\_\_\_\_.
- f) Filling Location \_\_\_\_\_.

- g) Location of Suction connection \_\_\_\_\_  
 i) Is it removable as a separate unit \_\_\_\_\_.

7) **Foam Proportionating System**

- a) Type of foam Proportionating System \_\_\_\_\_.  
 b) Foam compound water proportion variable from \_\_\_\_\_ to \_\_\_\_\_.  
 c) Foam compound piping material \_\_\_\_\_.  
 d) Is it automatic and can it control the ratio within  $\pm 5\%$  of the set value \_\_\_\_\_.  
 e) Frequency of calibration \_\_\_\_\_.

8) **Foam Monitor (Turret)**

- a) Make \_\_\_\_\_.  
 b) Location \_\_\_\_\_.  
 c) Maximum monitor foam capacity \_\_\_\_\_ Litres/Minute \_\_\_\_\_ Kg/Cm<sup>2</sup>.  
 d) Expansion Ratio \_\_\_\_\_.  
 e) Throw \_\_\_\_\_ M {Maximum (Jet Stream) in no wind condition}. f) Throw \_\_\_\_\_ M (Near Point).  
 g) Can it be used to form a fan spread pattern? If so what are the dimensions of the fan spread? \_\_\_\_\_.  
 h) Is it of the continuously rotating type? \_\_\_\_\_.  
 j) Angle of Elevation \_\_\_\_\_ Depression \_\_\_\_\_.

9) **Handlings**

- a) Number \_\_\_\_\_.  
 b) Location \_\_\_\_\_.  
 c) Hose Length/Reels \_\_\_\_\_ M.  
 d) Size \_\_\_\_\_ mm.  
 e) Reel mounting \_\_\_\_\_ ( Fixed or swing type).  
 f) Nozzle foam capacity \_\_\_\_\_ Litres/Min.  
 g) Expansion ratio \_\_\_\_\_.  
 h) Foam pattern:-  
 1) JET a) Throw \_\_\_\_\_ M.  
 b) Width \_\_\_\_\_ M.  
 c) Range \_\_\_\_\_ M.  
 2) SPREY a) Throw \_\_\_\_\_ M.  
 b) Width \_\_\_\_\_ M.  
 c) Range \_\_\_\_\_ M.

10) **Under Truck Nozzles**

- a) Number \_\_\_\_\_.  
 b) Location \_\_\_\_\_.  
 c) Foam \_\_\_\_\_ Litres/Min.  
 d) Control location \_\_\_\_\_.

**Part 'C' General**

- 1) Stability Angle \_\_\_\_\_ Degrees.  
 2) What is the cooling arrangement provided so that the engine while driving the pump does not overheat when the pump is driven at maximum rated capacity / zero output for a minimum of 4 hours continuously? \_\_\_\_\_.  
 3) What is the maximum guarantee engine \_\_\_\_\_.

		<p>coolant temperature rise when the pump is driven continuously for a minimum of 4 hours at an ambient temperature of 1200 F.</p> <p>4) Give details of all lubricants required for operation/maintenance of the Crash Fire Tender.</p> <p>5) List out special major equipment / tools required for the operation/maintenance of the Crash Fire Tender.</p>		
--	--	--	--	--