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अमृत महोत्सव

भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

By e-mail (Scanned Copy)/Post

File No. TE/2/2022-TECH/1007

Date: 01.03.2023

To,

M/s. Ambala Coach Builders,
Hissar Road, Ambala City,
Ambala, Haryana-134 003.
Email: acb4672003@gmail.com

Sub:	Supply of 09 Nos. Multipurpose Fire Tenders with 08 years Comprehensive Annual Maintenance Contract (CAMC) after 02 years Guarantee/Warranty period for use at various AAI airports in India
Ref.	(i) AAI E-Tender invited through NIC CPP Portal (Tender ID: 2022_AAI_117267_1)
	(ii) Pre-Bid Conference held on 21.06.2022 & response to Pre-bid Conference uploaded in NIC CPP Portal on 27.06.2022
	(iii) Your PQQ and Technical Bid Documents submitted through NIC CPP Portal, which was opened on 17/08/2022.
	(iv) Corrigendum No. 1, 2,3,4 & 5 published on the CPP portal on 08.06.2022, 16.06.2022, 30.06.2022, 11.07.2022 & 13.07.2022 respectively published on NIC CPP Portal.
	(v) AAI Shortfall documents sought on 17/10/2022 against your PQQ and Technical Bid Documents through NIC CPP Portal with due date of submission as 31/10/2022.
	(vi) Your reply to above request submitted through NIC CPP Portal on 31/10/2022.
	(vii) AAI Shortfall documents sought on 18/11/2022 against your PQQ and Technical Bid Documents through NIC CPP Portal with due date of submission as 30/11/2022.
	(viii) Your reply to above request submitted through NIC CPP Portal on 29/11/2022.
	(ix) AAI Shortfall documents sought on 26/12/2022 against your PQQ and Technical Bid Documents through NIC CPP Portal with due date of submission as 02/01/2023.
	(x) Your reply to above request submitted through email dated 02/01/2023.
	(xi) Your price offer after reverse auction on 19.01.2023.
	(xii) AAI Letter of Intent (LOI) dated 16.02.2023.
	(xiii) Your LOI Acknowledgment vide e-mail dated 16.02.2023.

Dear Sir,

1. Reference is made to the above and your offer submitted against above referred subject tender.
2. In this regard, Airports Authority of India (AAI), hereinafter referred to as purchaser, is pleased to place a purchase order for "Supply of 09 Nos. Multipurpose Fire Tenders with 08 years Comprehensive Annual Maintenance Contract (CAMC) after 02 years

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Guarantee/Warranty period for use at various AAI Airports in India.” as per the details given in Annexure-I (enclosed), on M/s. Ambala Coach Builders, Ambala hereinafter referred to as supplier. The Technical specifications shall be as the format attached as Annexure-III of this Purchase Order.

3. Price:

- 3.1 The Multipurpose Fire Tenders (MFT) shall be delivered by the Supplier at a total value of **Rs. 8,14,13,671.00 (Excluding GST)** as per the details mentioned in Para No. - 1 of **Annexure - I** of this Purchase Order.
- 3.2 The total CAMC Cost for MFTs shall be **Rs. 4,81,48,409.00 (Excluding GST)** as per the details mentioned in Para No. - 2 of **Annexure – I** of this Purchase Order.

4. Time Schedule:

Delivery period, Testing & Inspection of MFT, Payment Terms, Performance Bank Guarantee, Compensation for Delay and Guarantee / Warranty as per the **Annexure-II** of this Purchase Order.

5. Payment Terms:

As per clause 4 of **Annexure-II** of this Purchase Order.

6. Paying Authority:

The Payment Authority for supply and CAMC shall be General Manager (Finance) / Jt. GM / DGM (Finance), Airports Authority of India, R G Bhawan, New Delhi 110 003 and GM / Jt. GM / DGM (Fin) of Metro Airports or GM / Jt. GM / DGM(Fin) of RHQs or Jt. GM / DGM / AGM / SM(Fin) of airports respectively.

7. Project Manager:

DGM (Technical) shall act as Project Manager for the supply of MFT, who shall be responsible for the smooth implementation of the contract as per the Contract Agreement. However, the Engineer-In-Charge for CAMC of each MFT, the Technical Executive (Senior Most) or any other AAI officer duly authorized by the Airport Director of the consignee Airport.

8. Consignee:

- 8.1 The consignee for MFT shall be various airports as per Para 1.1 of Annexure – I attached to this Purchase Order.
- 8.2 Consignee Airports shall be responsible for proper receipt and coordination with the representatives of the firm for rectification of any defects in MFT during the Warranty & CAMC period, signing of Agreement for CAMC and its smooth implementation etc. The firm shall assume complete responsibility for supply, training and commissioning of MFT at consignee Airport and providing maintenance works during the guarantee/warranty and CAMC period.
- 8.3 The exact quantity of MFT to be dispatched and their location may subject to change. The final location shall be communicated by AAI before dispatch of MFT by the supplier. No extra payment shall be paid on this account.



9. **Mode of Transport, Freight & Insurance:**

- 9.1 The Supplier shall arrange, secure and maintain transit insurance policy for which AAI as beneficiary for inland transportation as may be necessary and for all such amounts to protect his interest as well as that of the purchaser against the risk as detailed herein.
- 9.2 The risk that are to be covered during the complete insurance period, shall include loss or damage during transit, theft, pilferage, riot, civil commotion where conditions exist, accidents of all kind, fire etc. The scope of insurance shall cover the entire value of the equipment from time to time.
- 9.3 In addition to the sub clause No. 9.1, the Supplier shall also arrange for Comprehensive insurance policy at his own cost for which AAI as beneficiary against each MFT supplied, which should have validity for a minimum period of 01 year covering loss, Own Damage, Third Party damage, theft, pilferage, riot, civil commotion, accidents of all kind, fire etc. where conditions exist.
- 9.4 Any loss or damage to the MFT due to mis-handling, transportation, till such time the MFT is delivered to the consignee shall be on Supplier's account. The Supplier shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/or replacement of the portion of equipment damaged or lost. The Supplier shall provide the purchaser with a copy of the insurance policy and documents taken out by him in pursuance of the contract. Such copies of the documents shall be submitted to the purchaser immediately after taking out such insurance policy.
- 9.5 AAI reserves the right for own arrangement of transportation and insurance.

10. **Change In Quantity & Variation in Prices:**

- 10.1 AAI may change the quantity or part thereof to be supplied by $\pm 30\%$ of the Tendered quantity (measurable) but within the overall deviation limit of 30% of the contract value during currency of the contract for supply (one year).
- 10.2 AAI may purchase extra items, substitute items as per site requirements up to overall limit of 30% of the contract value.
- 10.3 Prices quoted shall remain firm & fixed and no escalation due to any reason other than statutory variation will be allowed during the currency of the contract for supply.

11. **Signing of Contract Agreement:**

- 11.1 The successful bidder / Contractor, on acceptance of his tender by the Accepting Authority, shall sign the Contract Agreement within 15 days from the date of issue of purchase order and the Agreement shall consist of the notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof with any correspondence leading thereto. The format of Agreement shall be as per the ***Annexure-XI of Tender document***. No payment for the work done will be made unless contract in the form of agreement is signed by the contractor.
- 11.2 The contractor shall enter into the supplementary agreement at respective consignee Airport/Region within 15 days before the commencement of Contract for the CAMC. The format of supplementary agreement which shall be as per the ***Annexure-XIV of tender***

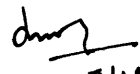


document. No payment for the work done will be made unless contract in the form of supplementary agreement for CAMC is signed by the contractor.

12. This Purchase Order including all of its Annexures shall form a part of the Contract Agreement and all terms & conditions mentioned in the tender Document and subsequent modifications circulated through corrigenda /addenda to the tender shall be a binding on both the parties i.e. Airports Authority of India & M/s. Ambala Coach Builders, Ambala.
13. A duplicate copy of this Purchase Order is enclosed herewith, which may be returned duly dated, stamped and signed on each page, to this office as a token of your acceptance of the contract.
14. The Contractor has to submit Performance Bank Guarantee (PBG) against supply and commissioning of MFT within 30 days of issue of this purchase order.
15. The contractor shall submit a detailed Bar Chart within 30 days from the date of issue of Purchase Order indicating activities with dates covering various key phases of procurement such as manufacturing of prototype, prototype inspection, Pre-Dispatch Inspection/Factory Acceptance Test, despatch of MFT, Delivery of the MFT at site etc.
16. The contractor has to submit one set of hard copy along with soft copy of complete Technical literature, brochures, design, drawings etc. along with the OEM Certificate & supporting documents complying with relevant applicable standards as mentioned in Section-D, before 02 months of scheduled prototype inspection.
17. Please acknowledge the receipt of this Purchase Order.

Yours faithfully,

For AIRPORTS AUTHORITY OF INDIA


01.03.23
(S Murali)

Joint General Manager (Technical)

AAI Office Complex, SAP,
New Delhi-110003
Tel No. +9111 24632978

Copy to:

1. The Regional Executive Director, NR/WR/SR/ER/NER, Airports Authority of India
2. The Airport Director: Chennai/Kolkata/ Srinagar/Jammu/Pune/Vizag/Bagdogra/Goa/Port Blair

Internal:

1. The Executive Director (Technical), AAI, CHQ, New Delhi.
2. The Executive Director (Finance)/General Manager (Finance)- Pre-Check Section, AAI, CHQ, New Delhi.
3. The General Manager (Tech)-II, AAI, CHQ, New Delhi.
4. The General Manager (Fire Services), AAI, CHQ, New Delhi.

File No. TE/2/2022-TECH

Date: 01.03.2023

Sub: Supply of 09 Nos. Multipurpose Fire Tenders with 08 years Comprehensive Annual Maintenance Contract (CAMC) after 02 years Guarantee/Warranty period for use at various AAI airports in India.

1. SUPPLY ITEMS

Sl. No.	Description	Qty. (Nos.)	Unit Price (INR)	Total Amount (INR)
01.	Basic Cost of MFTs excluding GST as per technical specification of AAI and technical offer accepted by AAI.	09	89,16,372.07	8,02,47,348.63
02.	Transportation Charges excluding GST from the Factory to the Consignee Airports.	09	As per para 1.1 below	5,96,369.55
03.	Transit Insurance Charges excluding GST from the Factory to the Consignee Airports.	09	As per para 1.1 below	5,69,952.69
Total Supply Cost of 09 Nos. MFTs excluding GST				8,14,13,670.87
Rounded to				8,14,13,671.00

1.1 Consignee Airports, Transportation and Transit Insurance Charges

Sl. No.	Consignee Airport	Qty.	Transportation Charges excluding GST (INR)	Transit Insurance Charges excluding GST (INR)
1	Chennai	01	88,659.31	63,328.08
2	Kolkata	01	64,413.70	63,328.08
3	Srinagar	01	21,712.48	63,328.08
4	Jammu	01	14,474.99	63,328.08
5	Pune	01	59,709.33	63,328.08
6	Vizag	01	72,374.94	63,328.08
7	Bagdogra	01	59,709.33	63,328.08
8	Goa	01	75,993.69	63,328.08
9	Port Blair	01	1,39,321.77	63,328.08
TOTAL		09	5,96,369.55	5,69,952.69

Note:

- The payment of the transportation charges and transit insurance charges shall be made as per actual on production of the documentary proof / invoices raised by the actual service provider(s) in the name of supplier subject to maximum as per charges indicated against each Consignee Airports in Para 1.1 above after receipt of MFT at site in good condition.
- In case the supplier opts to deliver the MFT without taking the services of transporter, in such cases the supplier shall be required to submit a certificate stating that MFTs have been transported by engaging the manpower and the requirement of documents from service provider i.e. transporter shall not be required.



2. COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMC) CHARGES:

Item	CAMC charges (excl. GST)
CAMC Charges for each MFT for 8 years after warranty period (excl. GST) in terms with Section C-1 & C-2 of Tender Document.	CAMC Charges for 1st year after warrantee period: ₹ 3,56,654.88 CAMC Charges for 2nd year after warrantee period: ₹ 4,45,818.60 CAMC Charges for 3rd year after warrantee period: ₹ 5,34,982.32 CAMC Charges for 4th year after warrantee period: ₹ 6,24,146.04 CAMC Charges for 5th year after warrantee period: ₹ 7,13,309.77 CAMC Charges for 6th year after warrantee period: ₹ 8,02,473.49 CAMC Charges for 7th year after warrantee period: ₹ 8,91,637.21 CAMC Charges for 8th year after warrantee period: ₹ 9,80,800.93 Total CAMC Charges for 8 years: ₹ 53,49,823.24
Total CAMC Cost excl. GST for 09 Nos. MFTs	₹ 53,49,823.24 x 09 Nos. = ₹ 4,81,48,409.16 Rounded off to Rs. 4,81,48,409.00

Note:

1. The above charges arrived in INR shall be inclusive of cost of repair and maintenance works, all spares parts, consumables, major/minor overhauling works (except diesel, petrol and Diesel Exhaust Fluid).
2. Statutory Tax Variation: Any Statutory variation on Tax rates shall be payable/reimbursable on actual basis on production of documentary evidence.
3. The above charges towards CAMC are exclusive of GST. The applicable amount of GST will be paid extra on actual basis on production of documentary evidence.
4. AAI at its discretion may re-position the MFT on permanent basis at "any other Airport" in India during the currency of contract and the contractor shall be responsible for providing the CAMC at the repositioned location @ CAMC Cost defined above. No extra amount shall be payable to contractor over and above the CAMC Cost.

2.1 Payment Methodology for CAMC Cost of MFTs:

- a) Monthly payment of CAMC for each MFT by respective consignee/Airport shall be released in INR to M/s. Ambala Coach Builders, Ambala.
- b) Necessary deduction in case of default in the service of CAMC in terms of Service Level Agreement at each airport for each MFT shall be made as per performance monitored on monthly basis by respective consignee/airport.
- c) Payment would be released after making any adjustments, withholdings, recoveries as per Service Level Agreement (SLA), if any which the firm might have rendered themselves as per the provisions of contracts.
- d) Following documents to be submitted along with the bills at consignee airports:
 - i) Duly filled and certified Service Level Agreement.
 - ii) Undertaking towards availability of minimum level of quantity of spare parts for Periodical / Preventive maintenance and breakdown maintenance.

2.2 SERVICE LEVEL AGREEMENT (SLA)

Sl. No.	Item Description	Non-compliance Penalty Point	Remarks
1.	Preparation of plan for Scheduled Maintenance (SM) & Preventive Maintenance (PM) and submission of the same at least 15 days before the commencement of the work.	2	Per quarter
2.	Execution of SM & PM as per schedule.	5	Per incident
3.	Monthly Serviceability of minimum 90% shall be maintained and if serviceability is - a. below 90% but upto 85% b. below 85% but upto 80% c. below 80 % but upto 75% d. Below 75%	2 3 4 5	Per month
4.	Completion of Repair & Maintenance in stipulated time (to attend with the available spares) To attend Major / Minor repairs: a. Rectification of Major repairs within 05 days b. Rectification of Minor repairs within 01 days	5 2	Per incident
5.	Occurrence of Repetitive breakdown/repair, fault in the same component	1	Per incident
6.	Possession of Airside Entry Pass (if applicable)	1	Per incident / person
7.	Adherence to technician uniform, PPE etc.	1	Per incident
8.	Non-Maintenance of minimum inventory level of consumables & spare parts required for scheduled / preventive / breakdown maintenance at respective consignee Airport.	4	Per month
9.	Visit of Authorized Service personnel at the end of each quarter	15	Per incident
10.	MIS & Value – added services	4	Per month

Note:

1. The total amount to be deducted per month is calculated by using the following formula.

Total deduction = Default amount* X Total No. of Non-compliance penalty point.

*Default amount for 1st year will be Rs. 2000/- and thereafter for subsequent years, it will be increased by considering an annual inflation of 6%.

2. If the serviceability falls below 75%, no payment shall be made to contractor against CAMC for the whole period of unserviceability on pro-rata basis and AAI may also proceed for alternative arrangement / carrying out of the repair work at the contractor's risk and expense without prejudice to any other right.

E-Office File No. TE/2/2022-TECH

Date: 01.03.2023

The Delivery Period, Testing & Inspection of MFTs, Payment terms, Performance Bank Guarantee, Compensation for Delay and Guarantee / Warrantee shall be as detailed below.

1. DELIVERY PERIOD:

- 1.1 Total time allowed for completion of supply of MFTs for entire quantity of the contract excluding the time taken by AAI if any which includes time taken by AAI in approval of documents as stipulated in para 2.27.1 (a) of Section-B of tender document , for carrying out prototype inspection, issuance of prototype clearance certificate, carrying out Pre-dispatch inspection/FAT and issuance of FAT clearance certificate & despatch instruction, is 12 (Twelve) months, which shall be reckoned from 15th day from the date of issue of Purchase Order.
- 1.2 Delivery of entire quantity of MFTs shall be required at various Airports as per the **Para 1.1 of Annexure-I of this Purchase Order.**
- 1.3 The firm shall offer total quantity of MFTs for FAT/Pre-Despatch Inspection in 03 (Three) Lots (maximum).
- 1.4 Prototype (one MFT) to be offered for inspection within 150 days, which shall be reckoned from 15th day from the date of issue of Purchase Order.
- 1.5 The bar chart shall be submitted by the contractor as given in Para 2.7.2 of Section-B of the tender document within 30 days from the date of issue of Purchase Order.
- 1.6 Pre-dispatch inspection shall be carried out by inspection team of Airport Authority of India. Dispatch instruction of the MFT shall be given by AAI inspection team based on the inspection of the MFT, if it is found in compliance with AAI technical specifications and performance parameters.
- 1.7 The successful bidder shall be solely responsible to ensure the following:
 - a. Sound packing of their items.
 - b. Transport of the items by the due date as specified in the contract.
 - c. Comprehensive Insurance of each MFT for a minimum period of 01 (one) year.
 - d. Insurance for inland transportation.
 - e. Receipt of equipment at site in good condition and handing over to Airport Director or his authorized representative of consignee airport.
 - f. Serviceability and operational fitness of MFT with all accessories and fire-fighting equipment, during the guarantee/warranty period and the CAMC period including the supply of spare parts, consumables, providing labour, major & minor overhaul, arrangement of tools etc. required for servicing, repair/maintenance of MFT shall be ensured by the contractor at his cost whereas the diesel, petrol and DEF required for the operation, will be provided by the AAI.

2. Tentative Consignee Airports/ Base Station:

The delivery of Multipurpose Fire Tenders (MFTs) will be made to the following airports (Indicative only). The exact quantity to be dispatched or location are subjected to change. The final location shall be communicated by AAI before dispatch of MFT by the supplier. No extra payment shall be paid in this account.



Sl. No.	Consignee Airport	Quantity of MFT to be supplied (No.)
1	Chennai	01
2	Kolkata	01
3	Srinagar	01
4	Jammu	01
5	Pune	01
6	Vizag	01
7	Bagdogra	01
8	Goa	01
9	Port Blair	01
	Total	09

Note: The final location may change and it will be communicated by AAI before dispatch of Multipurpose Fire Tender by the supplier.

3. TESTING AND INSPECTION OF MULTIPURPOSE FIRE TENDER:

3.1 Stages of Inspection:

- Prototype:** Prototype shall be developed for proving the performance of MFT before production of given quantity. Prototype shall be inspected as per **Annexure-III** of this Purchase Order / Section-D of Tender Document. The contractor shall intimate AAI after rectification of any shortcoming / suggestion in terms of NIT or operational requirement as brought out by AAI inspection team during inspection of prototype. After getting satisfactory report AAI will intimate the manufacturer for mass production of MFT. In case of non-compliance of Technical Specifications and Operational Performance as per Section-D of NIT, AAI holds the right to terminate the contract without any prejudice manner and forfeit the Performance Bank Guarantee, besides blacklisting of the firm.
- Factory Acceptance Test (FAT):** AAI will inspect each MFT as per **Annexure-III** of this Purchase Order / Section-E of Tender Document.
- Site Acceptance Test (SAT):** All Multipurpose Fire Tender will be tested at respective Site / Consignee Airport by AAI Inspection team as per the **Annexure-IV** before acceptance of the same. Non-performance of any test parameters should be rectified immediately before commissioning the MFT.

3.2 Facilities for Test and Examination:

The contractor shall at his own expense, offer to the Inspector all reasonable facilities as may be necessary for satisfying himself, that the equipment/execution of work is being and/or have been manufactured/executed in accordance with specifications laid down in the technical specifications attached to this tender document. The Inspector/Purchaser shall have full and free access at any time during the execution of the contract to the Contractor's works or site in case of execution of work for the purpose aforesaid, and he may require the contractor to make arrangements for inspection or work or any part thereof or any material at his premises or at any other place specified by the Inspector/Purchaser and if the contractor has been permitted to employ the service of a sub-contractor, reserve to the Inspector a similar right.

3.3 Cost of Inspection:

The contractor shall provide, without any extra charge, all materials, tools, labour and assistance of every kind which the Inspector/Purchaser may demand of him for any

test/inspection and examination which he shall require to be so made on the contractor's premises and shall bear and pay all costs attendant thereon. In case of inspection by Airports Authority of India appointed officers, the cost of traveling, boarding & lodging, of AAI inspecting officer(s) to the site of inspection shall be borne by AAI. In case, however the inspection needs to be repeated for the same lot or part thereof due to failure during first inspection then all expenditures towards third party inspection or all expenditure including traveling, boarding & lodging of AAI inspecting officer(s) for the repeat inspection will be to the account of contractor. If the contractor fails to comply with the conditions aforesaid, the Inspector/ Purchaser shall, in his sole, judgment be entitled to remove for test and examination all or any of the equipment manufactured by the Contractor to any premises other than his (Contractor's) and in all such cases the contractor shall bear the cost of transport and for carrying out such tests elsewhere. A certificate in writing of the Inspector/Purchaser that the contractor has failed to provide the facilities and the means, for test, inspection and examination shall be evidence of such failure.

3.4 Delivery of Stores for Test:

The contractor shall also provide and deliver for test, free of charge, at such place other than his premises as the Inspector/Purchaser may specify such equipment as he may require.

3.5 Method of Testing:

The Inspector shall have the right to put all the equipment and materials forming part of the same or any part thereof to such tests as he may think fit and proper. The contractor shall not be entitled to object on any ground whatsoever to the method of testing adopted by the Inspector.

3.6.1 Inspection / Testing and Inspection Certificate:

3.6.2 The AAI or his authorized representative or third party shall carry out pre-dispatch inspection in maximum 03 (three) lots of MFT at the factory premises of the contractor.

3.6.3 The contractor shall give 15 days' written notice of any equipment being ready for inspection/testing. Such inspection/tests shall be to the contractor's account except for the expenses by the Inspector.

3.6.4 The Inspector shall within 15 days from the date of inspection give notice in writing to the contractor of any objection to any equipment and workmanship, which in his opinion is not in accordance with the contract. The contractor shall give due consideration to such objections and shall either make the modification that may be necessary to meet the said objections or shall confirm in writing to Inspector that no modifications are necessary to comply with the contract.

3.6.5 When the FAT/Pre-Dispatch has been completed at contractor(s) work the Inspector shall issue a certificate to this effect within 15 days after completion on inspection/test. But if the tests are not witnessed by the Inspector, the certificate shall be issued within 15 days of the receipt of contractor's test certificate by the Inspector. Failure of the Inspector to issue such certificate shall not prevent the contractor from proceeding with the works.

3.6.6 Inspection by Inspector and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of the contractor.



- 3.6.7 Notification of result of inspection: Unless otherwise provided in the specification or schedule, the examination of the equipment or parts will be made as soon as practicable after the same have been submitted for inspection, and the result of the examinations will be notified to the contractor.

4. TERMS OF PAYMENT:

4.1 For Supply and commissioning of Multipurpose Fire Tenders

4.1.1

- (i) 70% of Basic Cost (incl. GST) and 100% of freight & insurance charges (as per actual restricted to quoted rate) including GST against receipt of goods at site in good condition (without any damage) and submission of following documents.
 - a) Original invoice + two copies.
 - b) Itemized packing list in original + two copies.
 - c) Certificate of Factory Acceptance Test (if done by AAI) or QC issued by QC Department of supplier.
 - d) Proof of Dispatch
 - e) Documentary proof / Invoice raised by the actual service provider (Insurance firm).
 - f) Documentary proof / Invoice raised by the actual service provider (Freight operator)/ Self-certificate from contractor stating that Multipurpose Fire Tenders have been transported by engaging the manpower by the contractor.
 - g) Goods Receipt certificate for receipt of goods at site in good condition (without any damage) as per Annexure-B of this Purchase Order.
- ii) Balance 30% of Basic Cost (incl. GST) will be released on completion of commissioning and training and on submission of following documents:
 - a) Commissioning & Training Certificate as per Annexure-C of this Purchase order.
 - b) Price list of spares, components, accessories etc.

- 4.1.2 Payment would be released after adjusting any dues / withholdings / recoveries towards liquidated damages / compensation for delay, if any which the firm might have rendered them liable as per provision of contract. The payment of the transportation and transit insurance charges shall be made as per actual on production of the documentary proof / invoices raised by the actual service provider(s) in name of supplier subject to maximum as per approved tendered rates after receipt of equipment at site.

- 4.1.3 Recoveries as applicable shall be made in case of deliveries of wrong equipment in place of the equipment as per the dispatch instructions, including all applicable duties and taxes. In the event of rejection of non-conforming goods, the contractor shall be allowed to replace the non-conformities within the specified time. If the contractor fails to do so within the specified time, the AAI shall have the right to invoke the Performance Bank Guarantee.

4.2 For Comprehensive Annual Maintenance Contract (CAMC) of MFT: -

- i) Monthly payment by each consignee/Airport Director/In charge -Airport shall be made in terms & condition of Section-C1 for CAMC of Multipurpose Fire Tenders to the contractor.
- ii) Engineer-In-Charge reserves the right to release / hold the partial payment depending on the completed or uncompleted /activities & deduct the charges against CAMC based



on Service Level Agreement (SLA) as per para 2.2 of Annexure-I of this Purchase Order.

5. PERFORMANCE BANK GUARANTEE AND SECURITY DEPOSIT FOR COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMC)

5.1 Performance Guarantee for Supply and Commissioning:

5.1.1 The performance guarantee is intended to secure the performance of the entire contract (supply & commissioning of equipment). However, it is not to be construed as limiting the damages stipulated in any other clauses of this contract.

5.1.2 The successful bidder awarded with the work is required to submit Performance Guarantee (PBG) which shall be furnished within 30 days from the date of issue of Purchase Order. In case the contractor fails to deposit PBG within the stipulated period, no payment for the work done in r/o first running account bill will be released to the contractor until submission of PBG. Moreover, interest @ 12% per annum on Performance Bank Guarantee amount would be levied (Non-refundable) for delayed period of submission and shall be deducted from the first bill payable to the contractor. The Performance Bank Guarantee shall be submitted in the form of irrevocable Bank Guarantee of an amount of Rs. 28,82,044/- which is 03% (Three Percent) of the supply cost of 09 Nos. MFTs (including GST), as per format given as **Annexure-A(i)** of this Purchase order from a Scheduled Commercial Bank (as per RBI schedule), having office in India.

5.1.3 The Performance Bank Guarantee shall remain valid for 90 days beyond the date of completion of all contractual obligations of the supplier, including Guarantee/Warranty (Defect Liability) period obligations. Guarantee/Warranty (Defect Liability) period will be reckoned from the date of commissioning of the last Multipurpose Fire Tender i.e. 09th Multipurpose Fire Tender. If the agency fails, to extend the validity of the Performance Bank Guarantee, the same can be encashed by AAI.

5.1.4 In case, the successful bidder fails to submit performance bank guarantee within 60 days of the issue of the Purchase Order, AAI reserve the right to forfeit the EMD and cancel the order.

5.1.5 The Performance Bank Guarantee will be forfeited and credited to the accounts of AAI in the event of a breach of contract by the contractor. It will be refunded to the contractor without interest, after duly performance and completion of the contract in all respects, after 90 (Ninety) days of completion of all such obligations including the Guarantee/Warranty under the contract.

5.1.6 The agency shall advise the branch of the bank, issuing Bank Guarantee, to send the original Bank Guarantee directly to the Airports Authority of India (AAI) under Registered post (A.D.). However, in exceptional cases, where the guarantee is to handed over directly to the AAI for any genuine reasons, the branch shall immediately send by Registered Post (A.D) an unstamped duplicate copy of the guarantee directly to the AAI with a covering letter with request to compare the same with the original received from their customer and confirm that it is in order. The agency shall also advise the issuing bank branch to incorporate the address etc. of the Regional/Controlling Branch of the issuing branch in a suitable space in the Bank Guarantee. The A.D. card shall be kept with the loan papers of the relevant guarantee.



5.1.7 The agency shall also advise the issuing bank branch that whenever any letter is issued by AAI to the Concerned Bank Branch, for confirmation of having issued the Guarantee, Branch must send the confirmation letter to the concerned authorities promptly without fail.

5.1.8 No other form of Performance Bank Guarantee than the above shall be acceptable.

5.2 Performance Bank Guarantee for Comprehensive Annual Maintenance Contract

Performance Bank guarantee for CAMC shall be submitted to the Technical-in-charge of respective Consignee Airport/Region, as per format given as **Annexure-A(ii)** from any scheduled Commercial Bank (as per RBI schedule), having office in India, for the values given below:

5.2.1 Bidder shall submit separate Performance Bank Guarantee (PBG) for each equipment for a value equal to Rs. 1,89,384/-, which is 03% (Three percent) of the total contract amount for CAMC of each equipment (including GST), at respective Consignee Airports/Regions and this PBG shall be valid for 90 days beyond the scheduled date of completion of CAMC period {i.e. validity shall be for 96 months + 90 days}. The bidder shall ensure that this Bank Guarantee is submitted at respective consignee Airport/ Regions before 30 days of commencement of CAMC of equipment at respective consignee Airport/ Regions.

5.2.2 In case the bidder fails to submit the PBG for CAMC within stipulated period, interest at 12% p.a. on Performance Guarantee amount would be levied (non-refundable) for delayed period of submission and shall be deducted from the first bill payable to the Contractor. In case, successful bidder fails to submit performance bank guarantee within 60 days of stipulated period, AAI reserves the right to forfeit the PBG for Supply and Commissioning and cancel the order for CAMC. Besides this, action may also be initiated for blacklisting/debarring the firm.

5.2.3 The format for Performance Bank Guarantee towards CAMC shall be as per **Annexure-A(ii)** of this Purchase Order. No other form of Bank Guarantee towards CAMC shall be acceptable to AAI.

5.2.4 The PBG submitted for CAMC of MFTs shall be released 90 days after satisfactory completion of CAMC period, without any interest.

5.2.5 If the contractor fails to furnish PBG against CAMC in the above referred form within the stipulated period, it shall be lawful for the purchaser to recover the amount from the running bills payable to the contractor for the executed work, if required.

5.3 The performance bank guarantee submitted initially towards supply and commissioning will be released 90 days after satisfactory completion of Guarantee/Warranty period, without any interest. The contractor shall submit the Performance Bank Guarantee for CAMC period and also successfully execute the supplementary agreement before releasing of Performance Bank Guarantee submitted towards supply at all respective Airports.

5.4 No interest will be paid by AAI on any of Performance bank guarantees.

5.5 If the Contractor fails to furnish PBG in the above forms, the Purchaser is entitled to: -
(i) Forfeit the EMD.



(ii) Cancel the contract or any part thereof and execute or authorize to execute the work at the risk and cost of the contractor.

5.6 Verification of Bank Guarantees:

- 5.6.1 Vendors shall ensure that Bank Guarantees shall be submitted to AAI directly by the issuing bank under Registered Post / Registered (A.D.) / Speed Post.
- 5.6.2 The submission of BG shall be in accordance with the **Annexure A(i)** for supply and commissioning at AAI, CHQ & **Annexure A(ii)** for CAMC at respective Consignee Airport/Region
- 5.6.3 The BG shall contain the name, designation and code number of the Bank officer(s) signing the guarantee(s); The BG shall contain the address and other details (including telephone no.) of the controlling officer of the controlling bank from the branch of the bank issuing the BG) for online verification of BG.

5.7 Verification through SFMS of ICICI Bank:

- 5.7.1 Verification of Bank Guarantees submitted by Bidders to AAI will be done through Structured Financial Messaging System (SFMS) of ICICI bank.
- 5.7.2 While submitting the documents to BG issuing bank, the vendor/customer/concessionaire will also submit letter to the issuing bank as per the format mentioned in the **Annexure-E**.
- 5.7.3 Based on the above inputs from the vendor, the BG confirmation message through SFMS will be triggered to the beneficiary bank i.e. ICICI bank and on the basis of unique identifier code, the BG confirmation mail will be received in the designated email ids issued to the respective units of AAI.
- 5.7.4 Successful bidder/vendor shall submit the Original BG document along with copy of the SFMS BG confirmation message sent by the BG issuing bank to ICICI bank.
- 5.7.5 In order to view online, it is necessary that BG issuing/amending bank send the BG advice in the form of message format IFN 760COV (BG Issuance) IFN 767COV (BG Amendment) via SFMS (Structured Financial Messaging System) as provided by RBI.
- 5.7.6 In the event of BG issuing/amending bank not sending the message IFN 760COV/ IFN 767COV or committing any error while capturing the details at least in the below field, BG confirmation through online portal would not be updated.
- 5.7.7 Please note that the issuing bank while issuing/amending the BG, should ensure that the unique identifier code of AAI is correctly captured in the message i.e. IFN 760COV/ IFN 767COV. Bank Details of AAI is provided below:
- 5.7.8 Vendor / successful bidder shall submit BG(PBG/BG-SD/FBG/EMD) in accordance with the bank details as indicated below:
CORPORATE NAME: AIRPORTS AUTHORITY OF INDIA
BANK NAME: ICICI BANK
IFSC CODE: ICIC0000007
BG ADVISING MESSAGE: IFN 760COV (BG ISSUE)
IFN 767COV (BG AMENDMENT) UNIQUE IDENTIFIER CODE: AAICORHQ



6. Compensation for Delay:

- 6.1 AAI reserves the right to cancel the order wholly or in part without any liability to pay cancellation charges and forfeit the EMD and or encash the performance Bank Guarantee in full absolutely, in case of failure by contractor to initiate and affect any delivery period or extended delivery period as accepted by AAI.
- 6.2 A sum equivalent to **0.5 (half) per cent per week** for the price of uncompleted portion / activity of the contract cost executed / completed beyond delivery & commissioning schedule shall be recovered as liquidated damages. The total damages shall not exceed 10 (Ten) per cent of the value of delayed goods. The liquidated damages shall be calculated on the base cost without the Govt. taxes and duties.
- 6.3 GST, as applicable shall be recovered in addition to LD.
- 6.4 The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this contract or any other contract with the Purchaser.

7. Guarantee/Warranty and Defects Liability Period:

- 7.1 One-point Guarantee/Warranty shall be extended by the contractor for all equipment/ appliances, components, subassemblies etc. supplied with the Multipurpose Fire Tender as per AAI Technical Specification (Section-D of tender document). The Guarantee/Warranty of engine, transmission, pump & other assemblies and all Accessories, Equipment & Tools etc., supplied along with Multipurpose Fire Tender and if any excess than notified in the tender, shall be passed on to the Airports Authority of India.
- 7.2 The contractor shall Guarantee/Warranty that all equipment shall be free from any defect due to the defective materials and bad workmanship and that the equipment shall operate satisfactorily and that the performance and efficiencies of the equipment shall be not less than the guarantee values. The Guarantee/Warranty shall be valid for a period of Two years from the date of commissioning of each Multipurpose Fire Tender at respective consignee place/airport. Part found defective during Guarantee/Warranty period shall be replaced/ rectified by the contractor without any charges whatsoever. The services of the contractor's personnel, if requisitioned during this period, for such work, shall be made available free of any cost to the Authority.
- 7.3 If the defects are not remedied as per Service Level Agreement (SLA), the Authority shall proceed to do so at the contractor's risk and expense without prejudice to any other right as well as the guarantee period of the equipment shall be extended as deemed fit.
- 7.4 The contractor shall furnish the following guarantees: -
"We warrant that everything supplied by us including all components fitted into the equipment manufactured by others also, shall be in all respects free from all defects and results in material, workmanship and manufacture and shall be of the highest grade and quality up to acceptable standards for all materials of the type ordered and shall be in full conformity with all the specifications, drawings or samples if any, and we shall be fully responsible for its efficient performance. This guarantee shall survive inspection for acceptance, and payment for the equipment, but shall expire (except in respect of the complaints notified to us) after 24 months for the MFT at various Airports in India exclusively from the date of commissioning of each Multipurpose Fire Tenders at



respective Consignee Airport. The complaints, if any, with respect to any defect as to materials, workmanship, manufacture, or performance of any of the equipment or any part or parts thereof shall be notified by the AAI in writing.

- 7.5 The contractor shall replace such of these parts which require replacement under these conditions free of costs, charges and expenses to the purchaser. In addition, the contractor shall be responsible for a period of 24 months for Multipurpose Fire Tender at various Airports in India exclusively from the date of commissioning of each Multipurpose Fire Tenders at respective Consignee Airport, for any defect that may develop or appear under the conditions provided for by the contractor or use thereof arising from faulty material design or workmanship in the equipment or any part thereof or faulty equipment of the contractor but not otherwise and shall remedy such defects as per Service Level Agreement (SLA) from the date of notification at his own cost, charges and expenses when called upon to do so by the AAI who shall state in writing in what respect the portion is faulty.
- 7.6 Any faulty components replaced or renewed under the clause shall also be guaranteed for a period of 24 months from the date of such replacements or removal or until the end of the above-mentioned period whichever is later. If any defect is not rectified within the said period as per SLA, the AAI may proceed to do the work at contractor's risk, acceptance and without prejudice to any other rights which the AAI may have on the contractor in respect of such character as may affect the replacement or renewals of such defects. Further, if the replacement or renewals are of such character as may affect the efficiency of the equipment, the AAI shall have the right to give the contractor within one month from such replacement or renewal, notice in writing for appropriate test to be carried out and should such test show to the satisfaction of the AAI that the equipment sustains the guarantee given in the contract, the cost of such test shall be borne by the AAI, should the guarantee be not sustained the cost of the test will be borne by the contractor.
- 7.7 All inspections, replacements, or rectifications carried out by the contractor during the Guarantee/warranty Period shall be at the cost, charges and expenses of the contractor subject to the same conditions as in the contract.
- 7.8 The contractor during the Guarantee/Warranty period shall furnish all labour, tools, test apparatus, transportation, materials, spare-parts, consumables and other necessities as required to carry out planned routine maintenance, periodic maintenance, preventive maintenance, corrective maintenance, break down maintenance etc. as required for smooth functioning of the system.



**TECHNICAL SPECIFICATIONS OF MFT & INSPECTION METHODOLOGY FOR
PROTOTYPE INSPECTION / FACTORY ACCEPTANCE TEST (FAT)**

Sl. No	Item Description	Make/Model/ Technical parameter as per the offer	Methodology of Inspection during Prototype/FAT	
			Parameter	Inspection Method for prototype/ FAT
1	Purpose & Scope: This specification is based on the requirements such as design, fabrication, workmanship and finish, Testing and Commissioning of Multipurpose Fire Tender (Water, Foam, DCP & CO2), which can maneuver easily for handling any fire exigencies of Terminal Building and other establishment on the Airport's city side.		--	Self-Certification
	The Bidder shall obtain necessary temporary registration from the concerned Regional Transport Authorities after purchase of the chassis and completion of body works. Registration of MFT should be done under the category "Fire Tender" for which applicable Road Taxes is at concessional rates if any or exempted unlike other commercial vehicle.		--	Self-Certification
	The Bidder shall take out necessary comprehensive insurance policy for a period of 01 (one) year as per the laid down IRDA norms.		--	Self-Certification
	The temporary registration, transit insurance, road tax, body building certificate, road worthiness, PUC, safety, Sale Letter Form No.21 & 22/22A etc., in the name of AAI as required under the Motor Vehicle Act shall be provided for carrying out permanent registration of MFT at consignee Airport.		--	Self-Certification
2	Vehicle Chassis: The Fire Tender shall be fabricated confirming to the following characteristics: 2.1 The MFT shall have the following overall dimensions: a. Wheel base: Not more than 4800 mm b. Turning circle radius: Not more than 10 m c. Road clearance: Not less than 220 mm d. Overall width: Not more than 2600 mm e. Overall Height: As per the RTO regulations.	Make: Ashok Leyland Model: Boss 1920	--	Check Technical Data Sheet of Chassis/self-certification
	2.2 The GVW shall be Minimum 18,000 kg.		--	- do-
	2.3 The truck chassis shall be of reputed Make with 4x2 (with rear dual wheel) & Right-Hand Drive, Air-conditioned cabin, manual transmission (synchromesh type), suitable suspension, power		--	-do-



	steering, brake system with ABS & diesel fuel tank capacity shall be minimum 200 liters.			
	2.4 Driver's cabin and hydraulic tilt angle shall comply with the design parameters of chassis manufacturer.		--	Self-Certification.
	2.5 The fully laden MFT shall attain a maximum speed not less than 72 Km/hr. on level road.		--	Functional Test
	2.6 Maximum time for acceleration from 0 to 64 Km/hr. in fully laden condition in ≤ 55 seconds.		--	Functional Test
	2.7 The fully laden MFT shall be capable of being started from rest on a gradient of 1 to 4.		--	Functional Test
	2.8 When travelling at 48 km/h on a level dry surface the foot brake shall be capable of stopping the vehicle within a distance of 15 m from the point at which the brake is applied. The hand brake shall be capable of holding the fully laden MFT on a dry surface with gradient of 1 in 4 when in neutral gear.		--	Functional Test
	2.9 A suitable bumper shall be provided at the front rigidly fixed to the super structural members by means of nut & bolts fabricated from minimum 200mm x 50 mm x 5 mm mild steel channel.		--	Visual Inspection/ Self-Certification/ Check quality control sheets
	2.10 A suitable bumper shall be provided at the rear rigidly fixed to the super structural members by means of nut & bolts fabricated from minimum 100mm x 50 mm x 5 mm mild steel channel.			
	2.11 A heavy-duty towing hook shall be provided and fitted in front & rear by means of nut and bolts.		--	Visual Inspection/self-Certification
3	Engine			
	3.1 Engine with a minimum 200 HP, shall be fitted with the Chassis of MFT and it shall comply with the latest emission norms: BS-VI or above.		--	Check data sheet
	3.2 The Engine shall be provided with cooling System to permit its continuous stationery running without overheating.		--	Check data sheet / self-certification
	3.3 The operating temperature of the engine cooling water shall be thermostatically controlled.			
	3.4 The oil in the oil sump shall be prevented from overheating.			
	3.5 Suitable gauge for cooling water and glow lamp for lubricating system shall be provided in the driver's cab and on the pump panel. This shall be marked with operating temperature.		--	Visual Inspection
	3.6 External filter shall be provided for the lubricating system and a tubular dipstick to gauge the level of oil in the oil sump shall be provided.		--	Visual Inspection
4	Main Pump	Make- Firefly		Visual Inspection/
	4.1 The Pump shall be rear mounted, single stage, centrifugal type coupled with suitable Power Take	Model- MFV-LP-1030	--	

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	Off (PTO) unit capable of delivering a minimum 3000 LPM at 8 bar. The pump shall be capable of delivering above performance with all strainers, external & internal with a suction lift of 3.0 meters at NTP condition.			Self-Certification/ Check quality control sheets/Technical Data Sheets
	4.2 The pump shall meet the following standards: a) CE marked in compliance with EN1028 b) UL approved in compliance with NFPA 1901			Certificates for compliance of EN 1028 & NFPA 1901 std.
	4.3 The pump volute, impeller, and wearing ring shall be made from gun metal confirming to Gr. II of IS: 318/198 and the pump shaft shall be made from stainless steel confirming to IS: 6603/1972.		--	Check data sheet/self-certificate
	4.4 The bearing housing shall be made of Cast Iron and all the stud and bolt coming in contact with water shall be of stainless steel.			-do-
	4.5 The bearing used in the pump shall be of reputed make i.e. preferably of SKF/NBC/NSK/NTN.			-do-
	4.6 The pump shall be provided with self-adjusting mechanical carbon seal with interface plate. The mechanical seal assembly shall withstand dry running of pump for a minimum period of 2 minutes without sustaining any damages.		--	Functional Test/self-Certification
	4.7 The pump design shall be modular type and shall not have gasket / packing. The arrangement shall be such that the carbon seal can be attended / removed without removing the pump body.		--	Self-Certification/ Visual Inspection
	4.8 The pump shall be provided with one suction inlet of 140 mm standard suction connection (IS:902) with internal strainer and blank cap. The strainer shall be retained firmly when in use but shall be easily removable. The mesh size of the pump inlet screen shall be smaller than the outlet size of the impeller. Pump shall be provided with two number of 63 mm standard hose couplings (IS:903) with screwed wheel type quick closing clack valves (IS:4928). The delivery valve spindle sealing shall not be of gland type.		--	Self-Certification/ Visual Inspection
	4.9 Blank caps delivery valve shall be fastened with chains. It should have adequate mechanism to relieve the pressure developed between the valve and the cap.		--	Visual Inspection
	4.10 The pump efficiency shall in such a way that the power and RPM required shall not be more than that available with the engine for stationary and continuous operation.		--	Self-Certification
	4.11 The pump shall be mounted at the rear of the vehicle connected to PTO by propeller shaft with universal and slip joints having sufficient number of bearing supports.		--	Visual Inspection/ Self-Certification
	4.12 A readily accessible drain valve that is marked with a label as to its function, shall be provided to allow for draining of water from the pump, water carrying lines and accessories.		--	Visual Inspection/ Self-Certification

	4.13 The wearing ring and other parts which may be subjected to frequent wear should be of renewable type.		--	Self-Certification
5	Ultra-High-Pressure Water Mist Pump (Auxiliary Pump) 5.1 CE certified plunger pump of 150 LPM @ 100 bar capacity shall be provided for water mist generation with delivery assembly consists of spray gun, high pressure hose of 60 meter with reel, etc.	Make- UDOR Model- GAMMA-IL-150	--	Check Technical data sheet /CE compliance certificate/ Visual Inspection
	5.2 A by-pass line for letting the water back to the tank shall be provided to release excess pressure generated due to shutting down of the hand lines.		--	Functional Test
	5.3 The pump suction line shall have inline filters and the delivery line shall also have pressure relief valve.		--	Self-Certification/ Visual Inspection
	5.4 The pump discharge line shall have pulsation dampener for smooth flow.		--	--do--
	5.5 Provision for induction of foam from external source shall be provided.		--	Functional Test/Visual Inspection
6	High pressure Hose Reel 6.1 Two Nos. high pressure hose reel with auto cum manual rewinding mechanism of at least 60m length (each) shall be provided and mounted so as to be accessible for use from either side of the appliance. The hose reel shall be terminating in high pressure fog/jet trigger type gun connected by quick connect couplings capable of discharging 75 LPM @ 100 bar in jet or fog pattern. The fog gun shall be made of SS.		--	Functional Test/ Visual Inspection
	6.2 This hose reel shall be connected to high pressure outlet of the pump with SS ball valve of suitable size.		--	Visual Inspection/Self certification
	6.3 The hose shall be prevented from kinking during firefighting operation.		--	Functional Test
	6.4 There shall not be any gland sealing for the hose reel & sealing shall be done by means of either oil seals or "O" rings.		--	Self-Certification/ Visual Inspection
	6.5 The hose reels shall be fitted with over brake or locking device.		--	Functional Test
	6.6 The hoses with appropriate diameter shall be used for the hose reel and it shall be rated for 130bar working pressure (180bar test pressure). The jet range shall not be less than 20m and the water droplets in the spray form shall be of 100 microns (approx.) at an angle of 45 deg.		--	Functional Test/ Check technical data sheet/ Self-Certification
	6.7 The hose reels shall be provided with high pressure fog/Jet Gun (trigger type) having EN Standard, which can be connected by instantaneous coupling.		--	Check Technical data sheet/ Self-Certification

	6.8 The weight of the gun assembly shall not be more than 4 kgs.		--	Check technical data sheet
7	Low Pressure Hose Reel: 7.1 Two hose reels (as per IS: 884) shall be provided at the rear of the appliance with 60 meters length of 20 mm bore hose connected by screw C-type quick release coupling, terminating with a control branch and 5 mm nozzle. 7.2 The reels shall be fitted with over brake or locking device.		--	Check technical data sheet/visual inspection Functional Test/visual inspection
8	Power Take Off (PTO) Unit: 8.1 The PTO of Main pump shall be heavy duty type of suitable gear ratio, capable of transmitting the full torque of engine. 8.2 The individual control lever for engaging/disengaging the Main and side PTO by pneumatic/hydraulic/electric system, shall be provided in the driver's cabin. 8.3 The PTO shall be mounted on heavy duty cross members and support brackets between the longitudinal members of the chassis frame. Oil level indicator and suitable drain plug at bottom shall be provided in the PTO. 8.4 A suitable cooling system shall be provided in the PTO to prevent the overheating during the continuous operation. 8.5 The Drive assembly component (shaft coupling etc.) shall be dynamically balanced. Necessary support for PTO Unit, propeller shaft coupling, universal joint etc. for power input to and output from PTO unit should be provided. 8.6 Side PTO shall be provided for driving Ultra High-Pressure Pump. It should be compatible with engine and pump characteristics. 8.7 The Engine shall provide sufficient power so as to drive both the pumps i.e. the centrifugal pump and Ultra High Pressure at their rated output alternatively through their respective PTOs.	Make: Firehawk Model: FM series PTO	--	Check technical data sheet/Self-Certification Functional Test Visual Inspection Check technical data sheet/Self-Certification Self-Certification Functional Test/PTO Manufacturer compatibility certificate Self-Certification/ Functional Test
9	Primer 9.1 The priming system of reciprocating type shall be provided for priming of centrifugal pump. 9.2 The priming system shall be fully automatic and capable of lifting the water from minimum depth of 7.0 meter (measured from water level to the center of pump inlet) in not more than 36 seconds when connected to 140 mm suction hose.	Make- Firefly Model- E-Primatic Primer	--	Check technical data sheet/ Self-Certification Functional Test

	9.3 The reciprocating pistons shall be made of stainless steel. The cylinders and priming valves housing shall be made from gunmetal.		--	Check technical data sheet/ Self-Certification
	9.4 The primer shall be capable of actuating by pressing a single button only when it is needed however the primer shall disengage automatically at a pump discharge pressure of more than 0.8 bar.		--	Functional Test
	9.5 It shall also be possible to perform the priming through manual mode by pressing single button.		--	Functional Test
10	Foam Proportionating Unit 10.1 The pick-up tube shall be connected to the foam compound, proportionator and pump, as necessary, and automatic control valve shall be incorporated in it so as to maintain a constant induction rate of not more than 6% with varying foam output.	Make- Firefly Model: RTP-180.	--	Functional Test/Self certification
	10.2 Foam proportionating system with foam induction device duly calibrated for three settings of metering as 1%, 3% & 6% shall be provided near the pump.		--	--do--
	10.3 The system shall be reliable and shall not require frequent calibration checks.		--	Self-Certification
11	Pipelines and valves 11.1 All pipelines shall be of stainless steel and all valves upto 50 mm size shall be 3 piece design stainless steel ball valves. All valves above 50 mm shall be standard butterfly valves.		--	Visual Inspection/ Self-Certification
	11.2 All piping shall be sized so as to have minimum pressure drop and achieve the required pressure and flow at various locations.		--	Self-Certification
	11.3 All piping shall be seamless and designed for 10% over the maximum pressures encountered in the pipe.		--	Self-Certification/ Check data sheet
	11.4 The piping shall be flanged for ease of maintenance. However, flange joints shall be kept to minimum.		--	Self-Certification
	11.5 All the lines shall be hydraulically tested at 1.5 times of the design pressure and pressure shall be held for 2 hours. In no case the lines shall be tested below 2.5 MPa.		--	Self-Certification/ Test certificate
	11.6 All lines shall be suitably supported so as to provide rigidity and avoid vibrations.		--	Self-Certification
	11.7 All lines less than 50 mm size can be socket welded to matching rating fittings.		--	--do--
	11.8 All lines above 50 mm size shall be butt welded with full penetration welds.		--	--do--
	11.9 All bolts, nuts and washers used shall be of stainless steel.		--	--do--
12	Water Tank 12.1 The capacity of water tank shall be 4500 litre. In additional a 2% expansion space shall be made in the tank. The bottom of tank body shall be minimum of 5 mm thick and side, top & baffles		--	Visual Inspection/ Check quality control

	shall be of minimum 4 mm thick, all made from SS 316L material. The filler cap will be clearly marked as WATER preferably by press embossing.			sheets/Technical data sheet
	12.2 The water tank shall be suitably mounted on the chassis keeping in view the proper load distribution, less shock and vibrations on the axles. The water tank shall be mounted on the unit on a subframe using high quality rubber metacones. The sub frame shall be made from anti-corrosive treated MS minimum 5-inch section and shall be bolted with the chassis using the high tensile bolts. "U" bolts shall not be used for mounting of the tanks on the chassis.		--	Visual Inspection/ Self-Certification
	12.3 The tank shall be suitably baffled with SS316L plates, 2 numbers fitted longitudinally and 2 numbers fitted transversely to prevent surge when the vehicle is braking, cornering or accelerating.		--	Visual Inspection/ Self-Certification
	12.4 The baffles shall be arranged in a manner to facilitate the passage of a man through the tank for cleaning purpose.		--	Visual Inspection
	12.5 The tank shall be mounted on minimum three cross members to counteract the stresses caused by chassis flexion and shall be so secured that it can be easily removed.		--	Visual Inspection/Self certification
	12.6 The water tank shall be provided with six chairs, three on either side for mounting the tank on the runner and chassis frame.		--	Visual Inspection
	12.7 Suitable eyes shall be provided on the shell of the tank to enable it to be lifted from the vehicle for repairs/replacement as and when required.		--	Visual Inspection
	12.8 The tank shall be fitted with a 100 mm bore overflow pipe.		--	Visual Inspection
	12.9 A 63 mm instantaneous hydrant connection, incorporating a strainer and NRV shall be provided close to the pump panel control for filling the tank through 75 mm bore pipe or feeding the hose reel equipment.		--	Visual Inspection/self-certification
	12.10 Minimum 140 mm bore pipe line shall be taken from the tank to the suction inlet of the pump incorporating minimum 140 mm quick action spherical type valve.		--	--do--
	12.11 Drain plugs or drain cocks shall be provided, wherever necessary.		--	Visual Inspection
	12.12 The open end of the overflow pipe shall be taken down to a point well below the chassis without affecting the effective ground clearance when fully loaded and shall discharge away from the wheels.		--	Visual Inspection
	12.13 Electronic LED water and foam indicators indicating the tank levels as EMPTY, ¼, ½, ¾ and FULL shall be provided on the pump control panel. These levels shall be indicated by number of glowing LED lights (No LED Lights means an empty tank and all LED Lights means full		--	Functional Test/Visual Inspection

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	tank). The indicators shall sense the fluid level in the tank with help of a pressure sensing probe. The indicators shall be located on the rear pump control panel in such a manner that the operator / Fireman can easily view the tank levels while being away from the vehicle. Repeater secondary level indicators shall be provided in the drivers cab to help the crew members to check the fluid from the cab while travelling. Visual level gauge of the glass tube shall be provided as calibrated to ¼, ½, ¾ and full (preferably calibrated in liters)			
	12.14 An inspection manhole of not less than 450 mm size shall be provided on the top. The manhole shall have a hinged cover so that the manhole shall also act as filling orifice. Cover shall be marked "Water".		--	Visual Inspection
	12.15 A cleaning hole of at least 250 mm diameter shall be provided at the bottom.		--	Visual Inspection
	12.16 The tank shall be connected with the pump and hose reel and valves shall be provided in such a way that any of the following operations are possible: a) Hydrant to tank b) Hydrant to reel c) Tank pump – high and low pressure hose reels d) Hydrant pump – low pressure hose reel; and e) Off		--	Visual Inspection
	12.17 The tank with its fitments shall withstand hydrostatic pressure of 0.3 bar.		--	Self-Certification
	12.18 The tank shall be fitted with a sludge trap and the bottom of tank shall have a slight slope towards the sludge trap.		--	Visual Inspection
	12.19 The entire area above the tank, suction hose lockers and rear of the vehicle shall be covered with 1.6mm aluminium chequered plates duly riveted firmly. The inner side portion of the lockers adjoining the water tank wall shall be paneled with 18 gauge aluminium chequered plate.		--	Visual Inspection/ Self-Certification
	12.20 Butt joints to be minimized and wherever used, should be radiographically tested.		--	Self-Certification
	12.21 Complete welding shall be done using TIG process.		--	Self-Certification
	12.22 The fastener of baffles plate shall be SS and they do not freeze due to rusting.		--	Visual Inspection/self-certification

	12.23 The tank shall have adequately sized Breather Valve.			--do--
	12.24 Centre of gravity should be maintained as low as possible.		--	Self-Certification
	12.25 The inlet line in the tank shall have an adequately strong deflection plate which will avoid the incoming jet of water from hitting the tank side or roof.		--	Visual Inspection/ Self-Certification
	12.26 All the nozzle from the tank shall have suitable reinforcement pad. Nozzle shall also have adequate stiffness to take the load from pumping.		--	Self-Certification
	12.27 Suitable stiffeners/die-pressing, if required, shall be provided to prevent surge while the vehicle is accelerating, cornering and braking.		--	Self-Certification
13	Foam tank			
	13.1 The capacity of foam tank shall be 500 litres. In addition, a 2% expansion space shall be made in the tank. The bottom of tank body shall be minimum of 5mm thick and side, top & baffles shall be of minimum 4 mm thick, all made from SS 316L. The foam tank shall be of rigid type welded construction.		--	Visual Inspection/ Check quality control sheets
	13.2 The foam tank shall be suitably mounted on the chassis keeping in view the proper load distribution, less shock and vibrations on the axles. The foam tank shall be mounted on the unit on a subframe using rubber metacones. The sub frame shall be made from anti corrosive treated MS minimum 5 inch section and shall be bolted with the chassis using the high tensile bolts. "U" bolts shall not be used for mounting of the tanks on the unit.		--	Visual Inspection/ Self-Certification
	13.3 The cleaning hole of 250 mm and drain pipe with a ball valve & plug incorporated in it shall be provided. The tank shall have filling orifice of not less than 150 mm diameter with a removable strainer fitted to it. The strainer shall be of such material as it will not be affected by constant contact with foam compound and its total screening area will be adequate to permit quick filling of foam compound into the tank. The filler cap will be clearly marked FOAM preferably by press embossing.		--	Visual Inspection
	13.4 The tank will be suitable baffled to prevent surge while the vehicle is in motion or standing on uneven ground or brakes are applied to the moving appliance. The design of the tank will incorporate removable sump fitted with a drain valve. The foam draw off tube will be positioned in the center of the sump in such a		--	Visual Inspection/ Self-Certification

	manner that foreign matter or sludge will not pass into the compound line.			
13.5	The pick-up tube will be fitted with a gauge strainer of suitable material, mesh, size & adequate straining area. The paneling over the tank top will be removable & it will be ensured that the joint between the paneling & the body of the tank is leak proof. The tank will be provided with breather (automatic type) in the tank.		--	Visual Inspection
13.6	Means will be provided for automatic venting of the foam tank when the tank is being filled. This will not be incorporated with the cap. The device employed will be simple & will not get clogged easily during normal use of the appliance.			
13.7	The draw off tube will be connected to the foam proportioner, as necessary, and automatic flow control valve shall be incorporated in it so as to maintain a constant induction rate of not more than 6 % with varying foam output with NRV in addition to the main control valve. The draw off pipe will be fitted with removable strainer of suitable material.		--	Visual Inspection
13.8	Provision will also be made for drawing foam compound into the foam producing system from an external source through a pick-up tube while producing foam.		--	Visual Inspection
13.9	Arrangement for filling from outside with the help of electrically operated foam transfer pump with control valve and also for supply of foam compound for operating external equipment with control valve shall be provided.		--	Visual Inspection
13.10	Suitable stiffeners/die-pressing, if required, shall be provided to prevent surge while the vehicle is accelerating, cornering and braking		--	Self-Certification
13.11	The tank shall be fitted with a sludge trap and the bottom of tank shall have a slight slope towards the sludge trap		--	Visual Inspection
13.12	The tank with its fittings shall withstand hydrostatic pressure of 0.3 bar.		--	Self-Certification
13.13	The inlet line in the tank shall have an adequately stronger deflector plate which will avoid the incoming jet of foam from hitting the tank side/roof.		--	Visual Inspection
13.14	The pressure/ vacuum vent shall not allow atmospheric air to enter the foam tank except		--	Self-Certification



	during the operation or to compensate for thermal fluctuation.			
	13.15 All the nozzle for the tank shall have suitable reinforcement pads. Nozzles shall also have adequate stiffness to take the load from the piping. The tank shall be provided with anti-vortex device at nozzle for pump suction		--	Self-Certification
	13.16 The fill tower opening shall be protected by completely sealed air tight cover.		--	Visual Inspection
14	Dry Chemical Powder System			
	14.1 Fire Extinguisher of 02 x 75 Kg capacity each DCP (Dry Chemical Powder) containing monoammonium phosphate shall be provided at a convenient position on the MFT.		--	Visual Inspection/Technical data sheet
	14.2 DCP extinguishing system shall have high pressure hose of 30 meter length with pistol type discharge nozzle.		--	-do-
	14.3 Each DCP cylinder shall be fitted with the Nitrogen expellant cylinder (10 litre water capacity) for discharging DCP.		--	-do-
	14.4 Each DCP & Nitrogen cylinders shall be relevant BIS/PESO certified and shall have universal filling connections. The cylinder shall be brand new and have clearance from PESO, Nagpur for re-filling, storing and operation.		--	Check third party certificate
15	Carbon Dioxide System			
	15.1 Two Nos. of 22.5 Kg capacity CO ₂ cylinders (one on each side of MFT) with one manifold shall be provided.		--	Visual Inspection/Technical data sheet
	15.2 The manifold of these CO ₂ cylinders shall be fitted with a 30 m long high-pressure hose and the cylinders shall be placed in lockers at a convenient position in the MFT.		--	-do-
	15.3 CO ₂ cylinders shall be relevant BIS/PESO certified and shall have universal filling connections. The cylinder shall be brand new and have clearance from PESO, Nagpur for re-filling, storing and operation		--	Check third party certificate
16	Foam cum Water Monitor	Make: ACB Model: Vehicle mounted-FCWM		
	16.1 A foam cum water monitor of reputed make with minimum discharge capacity of 2,250 LPM @ 7 bar shall be mounted on the top of the MFT at a suitable location in such a manner that it can be operated manually by a crew member and shall meet all the performance requirement as mentioned in Sl. No 16.		--	Functional Test/Self Certification/ Technical data sheet
	16.2 The monitor shall be capable of discharging water to an effective distance not less than 50 meter and projecting the foam discharge to an effective distance not less than 40 meter in still air condition when operated at 7 bar pressure.		--	Functional Test/ Self Certification



	16.3 The monitor shall be capable of traversing through 360 degree in horizontal plane, elevating from horizontal to +75 degree and depressing from horizontal to not less than minus 15 degree and fully rotation in both directions.		--	Functional Test/ Self Certification
	16.4 The monitor should have control valve and it will be provided with Jet/Spray type nozzle.		--	Functional Test/visual inspection
	16.5 The monitor shall be hydrostatically tested at the pressure of 23 Bar for 5 minutes.		--	Self- Certification/ Technical data sheet
	16.6 The monitor pipeline shall be supported suitably to avoid vibration and cracking.		--	Visual Inspection/ Self- Certification
17	Crew Cabin			
	17.1 The MFT shall be provided with separate cabin for accommodating four crews in addition to the original tiltable cabin provided by the Chassis manufacturer. There shall be two cabins out of which the tiltable cabin (OEM make) shall accommodate driver and crew leader (Total-02 Nos.) whereas the separate fabricated cabin (non-tiltable) shall accommodate 04 fire crews comfortably. The cabins shall be made for easy entry and exit of fire crew & driver.		--	Visual Inspection
	17.2 The crew cabin shall be manufactured from Aluminium Sheets of sufficient strength using Extruded Aluminium Profiles for support wherever necessary. The outer and inner panelling of the superstructure will be done from minimum 3 mm aluminium sheets.		--	Check quality control sheets/ self-certification
	17.3 The rear structure shall be manufactured from Aluminium Sheets of sufficient strength using Extruded Aluminium Profiles for support wherever necessary. The outer and inner panelling of the superstructure shall be of minimum 3 mm aluminium sheets and the complete top of the rear superstructure would be covered with minimum 3 mm aluminium sheets with suitable anti-skid material.		--	Check quality control sheets/ self-certification
	17.4 All the super-structural cross members and underframe cross members shall be painted with primer and two coats of chassis black paint.		--	Visual Inspection/ Self- Certification
	17.5 The flooring of crew cabin shall be fabricated from minimum 3 mm aluminum chequered plates except over the mudguard arch which shall be minimum 16 SWG aluminum		--	Visual Inspection/ Self- Certification

	chequered plate rigidly fixed to the under frame by means of nuts & bolts or riveting.			
17.6	Trap doors for topping up oil, etc. wherever necessary shall be provided.		--	Visual Inspection/ Self-Certification
17.7	Both the cabins (driver & crew) shall be air-conditioned with climate control system.		--	Visual Inspection/ Self-Certification
17.8	The crew cabin shall be fabricated in such a way that it should not affect the tilting mechanism of OEM's driver cabin and proper sealing shall be provided to prevent any leakage of water into the cabin(s) during normal and firefighting operation.		--	Visual Inspection/ Self-Certification
17.9	There shall be a spacious window(s) of maximum size of clear glass to exchange communication between both the cabins (driver cabin & crew cabin) during all weather conditions. The window shall also have the facility to exchange the operational items like PPE kit, walkie talkie etc.,		--	Visual Inspection/ Self-Certification
17.10	Suitable cushioning material if necessary, shall be provided between the driver cabin and crew cabin to avoid noise, vibration and road shock during the MFT operation.		--	Visual Inspection/ Self-Certification
17.11	The supplier shall ensure that aesthetic looks, rigidity and structural strength of the original cabin supplied by the OEM, shall be maintained.		--	Visual Inspection/ Self-Certification
17.12	The equipment lockers provided in the MFT, shall be fabricated by Corrosion Free Aluminium framework constructed with self-supported aluminium panels with welding work as required.		--	Visual Inspection/ Self-Certification
17.13	The profiles shall be strong, solid, all aluminium construction, light in weight & intrinsic rectangular design with distortion insensitive bearing.		--	Visual Inspection/ Self-Certification
17.14	Roof panels shall be made of aluminium padded plates. The roof should be strong enough for being walked-on and must be adequately supported for mounting of roof monitor (if applicable) for facilitating its operation. The intermediate walls and shelves shall be constructed from aluminium sheets panelled to the extruded aluminium profile structure.		--	Visual Inspection/ Self-Certification



	17.15 The requirement, if any, which are not covered under this specification but may be necessary to complete the MFT to fulfil the operation /performance requirement shall be provided by the supplier, to the full satisfaction of AAI.		--	Visual Inspection/ Self-Certification
18	Door & Window			
	18.1 The doors and windows with standard fittings of Original Chassis cabin i.e. Driver Cabin shall be of OEM fitted whereas the crew cabin shall be equipped/fitted with two doors i.e. one on each side.		--	Visual Inspection
	18.2 All doors of crew cabin shall be fitted on the super structural members each hung upon the three-member coach type stout hinged and fitted with best quality of handles.		--	Visual Inspection/ Self-Certification
	18.3 In addition to the automatic door locks, aluminum tower bolts of 20 mm shall be provided from inside the crew cabin doors and adequate grab handle(s) shall be provided for easy boarding and alighting from the vehicle.		--	Visual Inspection
	18.4 The window(s) provided in the doors of crew cabin, shall be fully liftable with winding regulator mechanism and shall be made of minimum 5 mm toughened & laminated glass.		--	Visual Inspection
	18.5 The windshield of driver cabin shall be of OEM fitted. Necessary arrangements shall be provided in the crew cabin to prevent dripping of foam / water on the windows during normal and fire-fighting operation.		--	Visual Inspection/ Self-Certification
	18.7 The grab handle shall be provided from inside the cabin preferably on door pillars.		--	Visual Inspection
19	Seats			
	19.1 The driver and co-driver seats shall be fully adjustable types both vertical upward & downward and horizontally forward & backward with safety belt. The seat assembly shall be of OEM fitted.		--	Visual Inspection/Self-certificate
	19.2 The seat & back rest shall be made of high-density latex foam upholstered in good quality in foam leather cloth.		--	Visual Inspection/ Self-Certification
	19.3 04 Nos. of cabin crew seats with safety belts shall be provided in the rear of the cabin which shall be rigidly fixed to the floor and shall be placed across the full width of the cabin.		--	Visual Inspection
	19.4 The fire crew seats shall be provided with high density latex foam upholstered in good quality in foam leather cloth.		--	Visual Inspection/ Self-Certification

	19.5 The crew seat shall have facility to integrate ready to use BA sets (02 Nos.) which shall be located to the backrest with quick release system so that it can be worn in running vehicle.		--	Visual Inspection
	19.6 Below the crew seat, two lockers shall be provided for keeping accessories.		--	Visual Inspection
20	Body Work			
	20.1 The material used for construction of body shall be new and free from all defects and imperfection that may affect the serviceability of finished product. The selection of material shall be made with a view to combine lightness with strength and durability.		--	Self-Certification
	20.2 The actual gross vehicle weight fully loaded with water, foam, DCP & CO2, all driver & crew members and fully equipped with fire accessories, tools, shall not exceed the maximum permissible weight of the chassis. The distribution of the load shall conform to the specification laid down by the original manufacturer.		--	Self-Certification
	20.3 The structure shall be so designed for the intended usage of the vehicle by avoiding any vibration/rattling/deformation during operation.		--	Self-Certification
	20.4 The stability of MFT shall be such that when under fully equipped and loaded condition (but excluding crew), if the surface on which the MFT stand is tilted to either side the point at which overturning occurs is not passed at an angle of 30° from the horizontal.		--	Functional Test/ Self-Certificate
	20.5 Two cat ladders made out of stainless-steel round or square pipe of minimum 25 mm diameter shall be provided. Number of steps shall be provided according to the height of the body.		--	Visual Inspection/ Self-Certificate
	20.6 Two number of 25 mm diameter aluminum pipe railing with sufficient number of aluminum double socket brackets shall be provided to the rear body over the deck.		--	Visual Inspection/ Self-Certificate
	20.7 Quick removable type wire mesh guard made from 25mm X 25mm size of mild steel frame shall be provided with steel wire mesh of 1.6 mm to all the glasses of driver cabin and crew cabin.		--	Visual Inspection
	20.8 Ladder Gallows: Gallows shall be provided to carry a 10.5 meter aluminum trussed type extension ladder. The design shall be such that the ladder can be released without difficulty		--	Functional Test



	from a reasonably accessible position and shall embody roller to permit easy withdrawal. Means shall also be provided for locking the ladder when stowed.			
21	Lockers 21.1 Sufficient number of lockers shall be provided at both the sides of the rear body for keeping delivery hoses, accessories, hose reel & other tools as per the list of schedules of equipment (except Sl. No. 1 & 2 in the list). The lockers shall be durable, maintenance free, weather and corrosion resistant and capable of opening in every position of the vehicle even in rough terrain or on slopes.		--	Visual Inspection/ Functional Test
	21.2 The lockers shall be arranged in such a manner that the load distribution shall be equal on both sides. The locker floor to be covered with minimum 2 mm thick aluminium chequered sheet duly tightened by suitable fasteners.		--	Self-Certification
	21.3 There shall be one full width locker & two half width lockers suitable size at a suitable location. One of the lockers shall be provided with sliding tray for keeping Hydraulic Rescue tools along with proper fastening arrangement. The lockers shall be divided into compartments & halves as per the requirement.		--	Visual Inspection
	21.4 All locker compartment shall be covered with aluminium rolling shutters. The shutters shall be made of extruded aluminium & duly powder coated for smooth finish and aesthetic look. This shutter shall be equipped with electromagnetic switch on the door tracks to provide automatic switch ON/OFF lockers light with sufficient illumination. The shutter shall be tight fitted with suitable rubber packing. A spring mechanism shall be fitted so that the shutters are held up at any point of opening. It should be easy to operate and shall ensure that the shutters can be easily pulled down.		--	Visual Inspection
	21.5 For all hose fitting like branch pipe, etc., quick release type couplings are provided which enables the operator to locate the desired equipment instantly and thereby save valuable time for firefighting operation. These couplings also ensure that none of the item damages the internal paneling and thereby increase the life of the MFT. Suitable clamps, brackets, holders, etc. shall be provided for all other items.		--	Visual Inspection



22	Control Panel near the pump The adequately illuminated control panel with gauges, control switch etc. shall be provided at the rear of the MFT near to the pump with the following controls. a) Electronic Throttle Control for engine b) Pressure gauge 0 to 20 kg/cm² (glycerin filled) c) Compound Gauge: i. Vacuum 0 to 75cm of Hg in Red ii. Pressure 0 to 15 kg/cm² in black d) Primer control for both automatic and manual mode. e) Water level indicator calibrated on empty, 1/4, 1/2, 3/4 & full tank. f) Foam Level indicator calibrated on empty, 1/4, 1/2, 3/4 & full tank. g) Foam proportionating valve. h) Main Tank Valve i) Foam tank valve j) Monitor Valve k) Delivery Valve l) Suction inlet m) Hose Reel Valve. n) Control valve hydrant connection		--	Visual Inspection
23	Control Panel for Ultra High-Pressure Pump: 23.1 The adequately illuminated control panel with gauges, control switch etc. shall be provided at the appropriate location in rear side of MFT with the following controls: a) Electronic Throttle Control for engine. b) Pressure gauge 0 to 150 kg/cm² (glycerin filled).		--	Visual Inspection
	23.2 The ON/OFF of High Pressure Pump shall be performed by the control valve provided on the fog gun.		--	Functional Test
24	Electrical Accessories 24.1 All-important electrical circuits shall have separate fuses suitably indicated and shall be grouped into a common fuse box located in accessible position in drivers cab and fitted with means for carrying spare fuses.		--	Visual Inspection
	24.2 All the wiring shall be monopole and shall not be exposed to atmosphere. Conduits shall be used wherever necessary.		--	Self-Certification
	24.3 All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab.		--	Functional Test
	24.4 A trickle type battery charger shall be provided for recharging the battery in situ. A red pilot lamp indicating when the batteries are being		--	Visual Inspection/ Functional Test

	charged from an external supply shall be provided.																																																												
	24.5 It shall have a mechanism for auto eject function to detach the charging power cable from the vehicle charging point upon starting the ignition of the vehicle.		--	Functional Test																																																									
	24.6 It shall also have an inbuilt air compressor which will charge the air tank of MFT while it is parked. The power connection cable plug shall be provided at suitable location on the truck so that easy attachment of power cable is possible.		--	Visual Inspection/ Functional Test																																																									
	Following electrical fitting shall be provided on the appliances at suitable locations:																																																												
	<table><tr><td>1</td><td>Head lamps</td><td>02 Nos.</td></tr><tr><td>2</td><td>Tail lamps</td><td>02</td></tr><tr><td>3</td><td>Fog lamps</td><td>02</td></tr><tr><td>4</td><td>Standard make LED Light Bar with inbuilt PA System and a multi tone siren & hooter</td><td>01</td></tr><tr><td>5</td><td>Search light with 30 meter cable reel</td><td>01</td></tr><tr><td>6</td><td>Spotlight (mounted near driving compartment)</td><td>01</td></tr><tr><td>7</td><td>Inspection lamp with bracket</td><td>01</td></tr><tr><td>8</td><td>Wind Screen wipers</td><td>02</td></tr><tr><td>9</td><td>Electrical Siren 12/24 V, double tone</td><td>01</td></tr><tr><td>10</td><td>Reverse light 02 Nos.</td><td>01 set</td></tr><tr><td>11</td><td>Clearance light to be fitted on both side in front & rear.</td><td>2+2</td></tr><tr><td>12</td><td>Rear reflector</td><td>02</td></tr><tr><td>13</td><td>Cabin light</td><td>04</td></tr><tr><td>14</td><td>Fire bell (250mm size) (IS 950_7.2.1.a)</td><td>01</td></tr><tr><td>15</td><td>Amber Blinker lights- situated on the top of drivers cabin.</td><td>02</td></tr><tr><td>16</td><td>Trafficators</td><td>06</td></tr><tr><td>17</td><td>Windscreen washer</td><td>02</td></tr><tr><td>18</td><td>Standard Tools & Accessories</td><td>1 set</td></tr><tr><td>19</td><td>Cab, instrument panel and locker light</td><td>As per the require ment</td></tr></table>	1	Head lamps	02 Nos.	2	Tail lamps	02	3	Fog lamps	02	4	Standard make LED Light Bar with inbuilt PA System and a multi tone siren & hooter	01	5	Search light with 30 meter cable reel	01	6	Spotlight (mounted near driving compartment)	01	7	Inspection lamp with bracket	01	8	Wind Screen wipers	02	9	Electrical Siren 12/24 V, double tone	01	10	Reverse light 02 Nos.	01 set	11	Clearance light to be fitted on both side in front & rear.	2+2	12	Rear reflector	02	13	Cabin light	04	14	Fire bell (250mm size) (IS 950_7.2.1.a)	01	15	Amber Blinker lights- situated on the top of drivers cabin.	02	16	Trafficators	06	17	Windscreen washer	02	18	Standard Tools & Accessories	1 set	19	Cab, instrument panel and locker light	As per the require ment		--	Visual Inspection
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25	Telescopic Light System 25.1 A compact low-profile lighting system, fitted with 04 Nos. LED lights of 200 watts (each) vertically elevated to a minimum 4.6 metre from ground shall be installed on the suitable side of the vehicle.	Make: Lighttech Model: LI-S55600DC	--	Visual Inspection/ Functional Test																																																									
	25.2 The telescopic lighting system shall be equipped with a control system that can be operated either		--	Functional Test																																																									

	by remote control or built-in control system provided in the vehicle/telescopic light.			
	25.3 Lighting shall be provided by a 12V or 24V DC with remote control. Directional lighting system with 360 degree rotation as well as tilt to provide total coverage.	24 V DC	--	Functional Test
	25.4 The total control shall allow one person to operate all the function of the light mast and accurately aim for complete directional positioning.		--	Functional Test
	25.5 All functions of light mast including extension and restoring original position, light ON/OFF, etc. shall be weather proof.		--	Self-Certification
	25.6 In addition, auto show, a one button command, automatically retracts, turns out the lights and stows the entire system to the compact transport position shall also be included in the remote controller.		--	Functional Test
26	Auxiliary Electrical Power Unit Generator of minimum 4.0 KVA capacity portable engine driven unit having manual and auto start facility, shall be mounted at suitable location with all necessary connections and control panel for providing power to the light mast as well as other electrically operated tools.	Make: Greaves Model: GPAIL-5 Diesel generator	--	Check technical data sheet/ Functional Test
27	Camera System: 27.1 There should be camera(s) fitted to the vehicle for rear view, front view and side view with a provision of recording the same for at least a month data. It should come with a display unit (minimum 7-inch LED screen) in driver cabin to view all camera(s) footage covering positions.		--	Visual Inspection/Functional Test/Self-Certificate
28	Cable winch 28.1 An electrically operated cable winch with minimum 6.5 ton pulling capacity (single layer) shall be provided and mounted in the front of the vehicle with suitable strong supports. The winch unit should be complete with minimum 5.5 HP, 12 V or 24 V, DC Series wound electric reversible motor for increased pulling power, rope drum, and 27 m heavy duty galvanized EIPS wire rope with replaceable self-locking clevis hook.	Make: Lighttec Model: LI-15000 DC	--	Check technical data sheet/ Functional Test
	28.2 The motor and solenoid shall be grounded to the battery. It shall have an automatic load holding brake system for more strength. For free spooling the clutch design shall be easy to use type with spring loaded pull and rotate system.		--	Functional Test/self-Certificate
	28.3 The rope drum shall not be more than 8 inches long having 3.5-inch dia. and shall be supplied with minimum 90 feet heavy duty galvanized		--	

	EIPS wire rope with replaceable self-locking clevis hook and would be mounted on the front bumper of the vehicle with suitable strong support and a four-way roller fairlead.			Visual Inspection/ Check data sheet/Self-Certificate
	28.4 The weight of the winch shall not be more than 55 Kg. A wireless remote for 12 V/24 V system or wired remote for 24 V system shall also be supplied with the unit.			Visual Inspection/ Check data sheet
29	Painting & Finishing of Fire tender 29.1 The basic structure material should be zinc coated and thereafter it shall be prepared by grinding the welded surfaces, priming the finished material with two zinc rich primer and then finally coated with a two-pack epoxy-based paint. Once the paneling is completed all the outside surfaces should be painted with a good quality paint system preferably Du-Point, Asian PPG, ICI Nerolac. Before final painting of fire tender 02 coats of anti-corrosion and primer coat will be applied.		--	Self-Certification
	29.2 The complete structure material shall be treated for anti-corrosion by epoxy primer (02 packs) Dupont, Asian PPG, ICI, Nerolac. 02 coats of epoxy paints shall be applied to the welded portion of structure.		--	Self-Certification
	29.3 The complete exterior of the vehicle shall be painted with complete PU paint system of make mentioned above as per the colour scheme to be provided by the AAI.		--	Self-Certification
	29.4 The internal painting of the lockers shall be done with two coats of grey synthetic enamel paints made by ICI, Dulux, Nerolac, Dupond, or Asian-PPG.		--	Self-Certification
	29.5 The name of Airports Authority of India, Airport Fire Service in Hindi & English and emblem shall be painted/stickered on both sides of MFT in letter of suitable size.		--	Visual Inspection
30	Marking / Name plates 30.1 All the lockers /cabins will be provided with stainless steel name plate with letter engraved on it boldly indicating the content.		--	Visual Inspection
	30.2 Each appliance shall be clearly and permanently marked with the following information; 30.2.1 Manufacturer's name or Trade mark, if any. 30.2.2 Serial number of the pump body and year of construction. 30.2.3 Capacity of pump, in litres per minute. 30.2.4 Capacity of water tank, in litres. 30.2.5 Nominal speed, in RPM 30.2.6 Transmission Ratio of Pump Gear. 30.2.7 Working pressure, in Bar.		--	Visual Inspection/ Self-Certification

	30.2.8 Direction of Rotation of pump shall be indicated by an arrow and this shall be permanently marked on the pump body. 30.2.9 Lubrication points, drainage device, etc. shall be color coded.			
31	Instruction Book 31.1 Instruction Book (s) for the guidance of user(s) including both operating and normal maintenance procedure shall be supplied. The book (s) shall include an itemized and illustrated spare parts list giving reference number of all the wearing parts. <u>General instructions</u> The following description of the pump shall be included in the instructions hand book; - General description - Range of usable ambient temperature. - Design & function of the pump, including important data (for example number of stages, shaft seal, primer materials, drainage, lubricant points). - Range of usable fluid temperatures. - Maximum operating pressure. - Information of operating controls. - Design function and use of safety protection device. - Shut off valves and pump connection. - Additional description for accessories. - Cross sectional drawings of the pump or exploded diagram - Maximum angle of inclination of operation.		--	Visual Inspection
32	<u>Installation & assembly</u> 32.1 The following instructions for installation/assembly shall be included in the installation handbook. 32.1.1 Instructions for installer / fabricator to make a complete risk assessment for the final Multi-Purpose Fire Tender. 32.1.2 Initial installation instruction 32.1.3 Data on installation site including - Space requirement for operation & maintenance. - Inspection instruction before start of installation - Details of base/foundation - Installation of pump assembly - Correct installation of safety devices & control system - Correct installation of pressure relief valve or other devices in accordance with pressure containing parts &		--	Visual Inspection

	components of the pump, if not supplied by the pump manufacturers. (g) Adjustable safety device shall be contained in enclosures that can only be opened by use of tools.			
33	Maintenance & Servicing: 33.1 The following instruction for maintenance and servicing of the pump shall be included in the instruction's hand book; i) Maintenance intervals and scope ii) Maintenance procedures and inspections including: a) List of Consumable items, spares and special tools. b) Monitoring during operation. c) Preventive action to be taken. d) Warning on risk arising from incorrect adjustment of safety devices. e) Warning on risk during operation. f) Tightening of fasteners.		--	Visual Inspection
34	Ladder with Gallows Aluminium extension ladder of 10.5m conforming to IS No 4571-1977 with latest amendment if any: The design shall be such that ladder can be released without difficulty from a reasonably accessible position and shall embody rollers to permit easy withdrawal. Means shall be provided for locking the ladder, when stored. The safety device, material used, test requirements, strength of rounds, sway extension making shall be in accordance with IS No. 4571-1977 with latest amendments if any. The design of the gallows shall be such that the ladder can be released without difficulty from a reasonably accessible position.	AM Make	--	Visual Inspection/ Self-Certification



Schedule of Equipment to be supplied by the Manufacturer and stowed in the Lockers of the MFT

Sl. No.	Item	Qty.	Make/Model/ Technical parameter as per the offer	Parameter	Inspection Method for prototype/ FAT
1.	Aluminum Extension Ladder (10.5 m) as per IS:4571	01		--	Check data sheet
2.	Suction hose of rubber of 140 mm diameter in 2.5 m lengths fitted with 140 mm suction hose couplings (IS: 3549)	04 Nos.		--	Check data sheet
3	Suction collecting head – 140 mm suction inlet, GM 2 way IS: 904:1983	01		--	Check data sheet
4	Suction Strainer 400 mm suction hose-Brass IS: 907:1984	01		--	Check data sheet
5	Dividing Breaching with controlled 63 mm instantaneous pattern –GM IS: 5131:2002	01		--	Check data sheet
6	Collecting Breaching 63 mm instantaneous pattern-GM IS: 905:1980	01		--	Check data sheet
7	Suction Wrench 400 mm suction hose coupling IS: 4643:1984	02		--	Check data sheet
8	Combined Key for hydrant cover & lower wall IS: 910:1980	02		--	Check data sheet
9	Hose Straps IS: 5612:1977 (Pt-1)	06		--	Check data sheet
10	Branch with revolving head, GM 63 mm size IS: 906:1988	01		--	Check data sheet
11	Nozzle plain of various sizes for 63 mm, 12 mm, 20 mm IS: 903:1993	One each		--	Check data sheet
12	Foam Branch-FB10 X type with pick up tube, GM IS:2097:1983	01		--	Check data sheet
13	Rope polyamide 32 mm dia for lowering line of 30 meter long with sealed ends	01		--	Visual Inspection
14	Rope polyamide 12 mm dia for guy line of 30 meter long with sealed ends	01		--	Visual Inspection
15	Hose Bandage IS: 5612:1977 (pt-2)	02		--	Check data sheet
16	Hose slings IS Standards	02		--	Check data sheet
17	Canvas gloves with anti-skid palms	01 pair		--	Visual Inspection
18	Axe large IS: 963:1963	02		--	Check data sheet
19	Pick Axe IS: 703:1968	01			
20	Fireman Axe IS:926	01			
21	Spade with wooden Handle	01		--	Visual Inspection
22	Crow Bar of 6 feet long 25 mm dia. (hexagonal) IS: 704:1968	01		--	Check data sheet
23	Adjustable Pipe Wrench 30 cm. (12 inch) long	01		--	Visual Inspection
24	Oil-can (Filler) standard capacity (200 to 300 ml)	01			
25	Sledge Hammer with wooden Handle (10 Kg)	01			
26	Sledge Hammer with wooden Handle (05 Kg)	01			
27	Suction Adaptor GM 140 mm Female X 63 mm male with lugs	01			
28	Adaptor 63 mm male to 38 mm female GM	01			



29	Adaptor 63 mm female to 63 mm female GM	01			
30	Tool kit (Double end spanner, ring spanner, screw driver and combination plier insulated)	01 set			
31	Belt Hook	01			
32	Selectable flow nozzle, made of aluminum alloy (hard anodized) light weight and easy handling having 63 mm size male instantaneous inlet. Nozzle shall have rubber moulded bumper and pistol grip handle, ball valve with shut of handle. Selectable flow capacity nozzle flow rate setting of approx. 200 to 250-350-475-600 LPM at 7 Bar, with good range hollow Jet, and dense fog in spray position and having an arrangement of low and medium expansion foam attachment. (weight 3 Kgs. Maximum)	01 Nos.	Make: Newage Model: Super fire-M Multi Gallonaze Nozzle.	--	Functional Test/ Check data sheet
33	Branch Pipe GM 63 mm male inlet IS: 903:1993	01		--	Check data sheet
34	Cap Hydrant Spindle	01		--	Visual Inspection
35	Cap Hydrant Spindle new pattern	01			
36	Chisel cold 1 inch dia. hexagonal 6 inch length, 8 inch.	One each			
37	Hose Clamp IS Standards	02			
38	Heavy duty insulator Bolt Cutter 600 mm long	01			
39	Hammer Ball Peen – 500 gms.	01			
40	Hook ceiling (preventer) with 3 meter long wooden handle	01			
41	Hook Anchor	01			
42	Knife Salvage with cover	01			
43	Plier Cutting	01			
44	Plier Insulated	01			
45	Rake - Three prong	01			
46	Hose Ramp (rubber) IS standard 20 ton capacity suitable for 2 lines	02		--	Check data sheet
47	Saw carpenter – 300 mm	01		--	Visual Inspection
48	Shovel with handle	01			
49	Nozzle spanner IS Standard	01		--	Check data sheet
50	Strainer wicker with canvas hood	01		--	Visual Inspection
51	Crow Bar 4 feet length 25 mm dia. (Hexagonal)	01			
52	Delivery Hose 63 mm dia. confirming to IS 636:1988 Type A in 30 meter length with GM male and female coupling. The hose and the couplings should be ISI marked.	04 Nos.		--	Check data sheet
53	Breathing Apparatus, open circuit positive pressure type with cylinder made of carbon composite material, having water capacity of 6.8litres, 300bar 45minute duration, back plate equipped with lung demand valve holder and 2 nd man connection originating, separating from pressure reducer, face mask, pressure reducer completes with harness with spare cylinder. The shelf life of the cylinder not less than 15 years with PESO approval SCBA set: CE	02	Make : JLD Model : CABA9500	--	Check data sheet/ Check third party certificate

	marked, EN 137: 2006 type 2 approval Facemask: EN 136: class 3. Cylinder: CE marked EN 12245 and PESO, Nagpur approved. Cylinder valve to be EN 144 approved. The complete set will be supplied with single molded FRP carrying box. A compact carrying FRP/Aluminized case/box/ should be provided for each set.				
54	HYDRAULIC SPREADER AND CUTTER WITH PUMP & ACCESSORIES One set of hydraulic spreader and cutter with pump and accessories as per Annexure-T shall be provided in each MFT.	01 set	Refer Annexure-T attached	--	Check data sheet/ Functional Test
55	Fire proximity overall suit: Material or fabric shall be inherent flame resistance colour royal navy blue make Karmal/Nomax certified from CE, EN standard 11612. Stitching also certified as per CE standard. Two Radium layers on each sleeve, one radium layer on waist, one layer below Knee on each side. CE certified elastic at the leg end (Jogger). Two pocket on chest with flap, pockets on thigh on each side, pocket on each side of Knee. Branded chain.	04 Nos.	Make: System 5S Model: Protecsafe	--	Check data sheet
56	Power Driven Saw driven by 02 Stroke petrol driven air cooled of output capacity not less than 04 HP shall be provided with 02 Nos. 350 mm blades (01 No. of diamond tip blade and 01 No. of carbide blade). The power-driven saw shall comply with ISO 19432 standard.	01 No.	Make: Sharpex Model: SPX-7500	--	Check data sheet/ Functional Test
57	Stepney tire with rim	01 Set		--	Visual Inspection
58	Hydraulic Jack (Bottle Type) for 20-ton capacity with Handle and safety lock	01		--	Check data sheet
59	Tyre Lever	01		--	Visual Inspection
60	Spare cylinders for Nitrogen (additional) – 10 litres water capacity	02 Nos.		--	Check third party certificate
61.	Spare cylinders for Breathing Apparatus (additional) – 6.8 litres	02 Nos.		--	
62	Zero Torque Nozzle with discharge of min. 450 LPM and with flow setting option	01 Nos.		--	Check data sheet
63	Heat Resistant Gloves	04 Pairs		--	Visual Inspection/ Check data sheet
64	First Aid Box (For minimum 10 persons.)	01 No.		--	Visual Inspection
65	Piercing Nozzle Branch	01 No.		--	Visual Inspection/ Check data sheet



Sl. No.	TECHNICAL SPECIFICATIONS FOR HYDRAULIC SPREADER AND CUTTER WITH PUMP & ACCESSORIES	Make/Model/Technical parameter as per the offer	Inspection Method for prototype/ FAT
1	General		
	The unit shall be safer for heavy duty performance during rescue and salvage operation. It should be certified as per EN 13204/NFPA 1936/equivalent (latest version).		Check data sheet/ Self-Certificate/ Functional Test
2	Pump Driven by Petrol Engine	Make : Lukas Model : P630SG	
2.1	Should be able to operate cutter and spreader at the same time at their maximum performance level.		-do-
2.2	Weight not more than 25 KG, fully / ready for operation as per EN 13204 /NFPA 1936/ equivalent (incl. couplings, engine oil, hydraulic oil and fuel).		-do-
2.3	Safety: Provision of safety valves at each stage is essential in addition to excess pressure release valve. The system shall comply with all safety requirements specified in EN: 982. and EN: 60204-1/equivalent.		-do-
2.4	The pump shall be 4-stroke air-cooled petrol engine with minimum 2.2 KW, with following additional features:		
	i. Single switch operation		-do-
	ii. Protection cap for spark plug		-do-
	iii. The hydraulic fuel reservoir shall be provided with a means to visually determine the Fluid level. Such means shall include but not limited to dip stick type indicator, sight gauges or remote fluid level gauges.		-do-
	iv. Electronic/Suitable Speed control Mechanism.		-do-
3	Hose		
3.1	The pump shall be supplied with a heavy duty hydraulic co-axial hose (Hose in Hose i.e. High-Pressure hose within return hose) suitable for operating all the tools having a working pressure of not more than 750 bar and tested to a pressure of not less than 2 times the working pressure coupled with single hose coupler.		-do-
3.2	The bursting pressure shall be 4 times the working pressure.		-do-
3.3	The hose and hose assembly shall have minimum resistance against abrasion, fluids and ozone as stated in EN: 853, 855, 856 and 857/equivalent.		-do-
3.4	The quantity of hose with instantaneous couplers preferably mounted on a hose reel shall be as follows:		
	a. 10 mtrs: 2 nos.		-do-
	b. 20 mtrs: 2 nos.		-do-
3.5	Hose shall be made of suitable components and design to perform the task without any personal		-do-



	safety hazard. The hose shall confirm to EN: 13204/NFPA 1936/equivalent.		
3.7	Shall have quick coupler to prevent inadvertent disconnection.		-do-
4	Cutter for Rescue (as per EN: 13204 / NFPA 1936 / equivalent)	Make: Lukas Model: S788	
4.1	Shall be made of anticorrosive material with the provision of carrying handles for operating the cutter in all directions for safe and easy operation.		-do-
4.2	The equipment shall be capable for using under water.		-do-
4.3	Weight shall not exceed more than 20 kg.		-do-
4.4	Cutting force not less than 100 tons and shall be able to cut A-36 Hot Rolled steel round bar of 40 mm.		-do-
4.5	Jaw width not less than 180 mm		-do-
4.6	Blade design: Any design certified by EN/NFPA/ equivalent for the desired level of performance.		-do-
4.7	Anodized for corrosion resistance.		-do-
4.8	Maximum Working Pressure: 750 bar		-do-
4.9	Testing pressure shall be 1.5 times of working pressure.		-do-
4.10	The equipment shall comply with the requirement of operating temperature as per the provisions of NFPA 1936.		-do-
5	Spreader for Rescue (as per EN: 13204/ NFPA 1936/ equivalent)	Make: Lukas Model: SP 555	
5.1	Should be made of anticorrosive material with the provision of carrying handles for operating the spreader in all directions for safe and easy operation.		-do-
5.2	Spreading force not less than 32 tons and not less than 4 tons measured at 25 mm from the tips as per EN 13204/NFPA 1936/equivalent.		-do-
5.3	Weight should not exceed more than 20 kgs		-do-
5.4	Spreading distance not less than 650 mm		-do-
5.5	Pulling force not less than 6.5 tons.		-do-
5.6	The equipment shall be capable for using under water.		-do-
5.7	Teeth double edged, should be capable of spreading & squeezing. Tips must have possibility to be changed without the use of tools.		-do-
5.8	Check valves for all operating parameters		-do-
5.9	Maximum working pressure 750 Bars		-do-
5.10	Testing pressure shall be 1.5 times of working pressure.		-do-
5.11	Quick lock system for tips & chain pulling set and adaptors		-do-
6	Chains		
6.1	Metallic provided with suitable eye and hook for the spreader.		-do-



6.2	Length: 02 Nos. of chain having minimum total length of 4.5 metres. However, none of the two chains should be less than 1.5 metres.		-do-
6.3	Strength: Shall be capable of working at more than the force exerted by spreader.		-do-
7	Telescopic RAM (as per EN: 13204/ NFPA 1936/equivalent)	Model: R422	
7.1	The ram cylinder shall be double acting hydraulically operated device of lightweight construction suitable for manual application with ease.		-do-
7.2	The telescopic ram shall be capable of lifting and spreading operation. Built in speed valve for faster operation.		-do-
7.3	The telescopic ram shall have following specification:		-do-
7.3.1.	Max. Spreading force 1st plug - Not less than 20 Ton		-do-
7.3.2.	Max. Spreading force 2nd plug - Not less than 08 Ton		-do-
7.3.3.	Length retracted - Not more than 575 mm		-do-
7.3.4.	Length extended - Minimum 1250 mm		-do-
7.3.5.	Stroke 1st plug - As per OEM's Design		-do-
7.3.6.	Stroke 2nd plug - As per OEM's Design		-do-
7.3.7.	Total stroke - Minimum 700 mm		-do-
7.3.8.	Weight - Not more than 22 kgs		-do-
7.4	Maximum working pressure 750 bars		-do-
7.5	Testing pressure shall be 1.5 times of working pressure.		-do-
8	Other Requirements		
8.1	Technical and Operational Manual: One set each of Technical and Operational Manuals shall be with each equipment.		-do-



PARAMETERS TO BE VERIFIED DURING SITE ACCEPTANCE TEST (SAT)

Sl. No	Description of Test	Status of Compliance	Remarks
1	The fully laden MFT shall attain a maximum speed not less than 72 Km/hr. on level road.		
2	Maximum time for acceleration from 0 to 64 Km/hr. in fully laden condition should not be more than 55 seconds.		
3	When travelling at 48 km/h on a level dry surface the foot brake shall be capable of stopping the vehicle within a distance of 15 meter from the point at which the brake is applied.		
4	The pump shall be run dry for a period of minimum two minutes at its rated RPM to check the integrity of mechanical carbon seal. After this test there shall not be any leakage of water through carbon seal.		
5	The monitor shall be tested for its throw for 50m for water and 40m for foam with water		
6	Priming Test: The primer shall be tested at a suction of vertical lift of 7m measured from water level to the centre of suction eye of the pump at a rate not less than 36 seconds.		
7	Test of Ultra High-Pressure Pump: The hand gun connected to hose reel, shall be capable of discharging 75 LPM @ 100 bar in jet or fog pattern.		

Note:

A committee consisting of one member (each) from Fire Department and any other Department(s) as nominated by Airport Director, shall conduct the Site Acceptance Test along with representative(s) of supplier.

Signature: Supplier Representative(s): _____

Name: _____, Designation: _____

AAI officials Signature _____

Name: _____, Designation: _____

Fire Department Official Signature _____

Name: _____, Designation: _____



PROFORMA FOR PERFORMANCE BANK GUARANTEE (BANK GUARANTEE BOND)
FOR SUPPLY

(To be stamped in accordance with stamp Act)

(The non-judicial stamp paper should be in the name of issuing bank)

To

Airports Authority of India

1. In consideration of the Chairman, AAI (hereinafter called "AAI") having offered to accept the terms and conditions of the proposed agreement between and.....[hereinafter called the said Contractor(s)] for the work.....(herein after "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs.....(Rupees.....only) as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement. We..... (indicate the name of the Bank) (hereinafter referred to as "the Bank") hereby undertake to pay to the Chairman, AAI an amount not exceeding Rs.....(Rupees..... only) on demand by AAI.

2. We..... (Indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from AAI stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made by AAI on the Bank through written communication shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees..... only).

3. We, the said Bank, further undertake to pay to the Chairman, AAI any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under his bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. We.....(Indicate the name of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of AAI under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of AAI certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We.....(indicate the name of the bank) further agree with AAI that AAI shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by AAI against in the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we



shall not be relived from our liability by reason of any such variation, or extensions being granted to the said contractor(s) or for any forbearance, act of omission on the part of AAI or any indulgence by the AAI to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We..... (Indicate the name of the bank) lastly undertake not to revoke this guarantee except with the previous consent of AAI in writing.
8. This guarantee shall be valid upto..... (**Guarantee/Warranty period + 90 Days**) unless extended on demand by AAI. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs..... (Rupees.....only) or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

In presence of:

Dated this _____ Day of _____

WITNESS

1 For and on behalf of (The Bank)

Signature _____

2 Name & Designation _____

Authorisation No. _____

Name & Place _____

Bank's Seal _____

The above Guarantee is accepted by Airports Authority of India. For and on behalf of Airports Authority of India.

Signature _____

Name _____

Designation _____

Dated _____



PROFORMA FOR PERFORMANCE BANK GUARANTEE (BANK GUARANTEE BOND)
FOR CAMC

(To be stamped in accordance with stamp Act)

(The non-judicial stamp paper should be in the name of issuing bank)

To

Airports Authority of India

1. In consideration of the Chairman, AAI (hereinafter called "AAI") having offered to accept the terms and conditions of the proposed agreement between and.....[hereinafter called the said Contractor(s)] for the work.....(her ein after "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs.....(Rupees.....only) as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement. We..... (indicate the name of the Bank) (hereinafter referred to as "the Bank") hereby undertake to pay to the Chairman, AAI an amount not exceeding Rs.....(Rupees..... only) on demand by AAI.
2. We..... (Indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from AAI stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made by AAI on the Bank through written communication shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees..... only).
3. We, the said Bank, further undertake to pay to the Chairman, AAI any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under his bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.
4. We.....(Indicate the name of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of AAI under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of AAI certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.
5. We.....(indicate the name of the bank) further agree with AAI that AAI shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by AAI against in the said contractor(s)



and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relived from our liability by reason of any such variation, or extensions being granted to the said contractor(s) or for any forbearance, act of omission on the part of AAI or any indulgence by the AAI to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We..... (Indicate the name of the bank) lastly undertake not to revoke this guarantee except with the previous consent of AAI in writing.
8. This guarantee shall be valid up to..... (96 months + 90 Days) unless extended on demand by AAI. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs..... (Rupees.....only) or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

In presence of:

Dated this _____ Day of _____

WITNESS

1 For and on behalf of (The Bank)

Signature _____

2 Name & Designation _____

Authorisation No. _____

Name & Place _____

Bank's Seal _____

The above Guarantee is accepted by Airports Authority of India. For and on behalf of Airports Authority of India.

Signature _____

Name _____

Designation _____

Dated _____



CERTIFICATE FOR RECEIPT OF MULTI PURPOSE FIRE TENDERS AT SITE

Sl. No.	Items as per packing List Duly Verified by FAT	Quantity	Quantity after Physical Verification at site

Note:

During physical verification of Multipurpose Fire Tenders, Technical In-charge or representative duly approved by Airport Director shall be present along with Supplier's representative(s).

This is to certify that _____ Airport has received _____ No. of Multipurpose Fire Tender(s) bearing Chassis No. _____ on (date) _____ along with standard fittings, Tools & Accessories from M/s. _____ in good condition.

Signature: Supplier Representative(s): _____

Name:

Designation:

Seal:

AAI: Representative of Technical Dept./representative duly approved by Airport Director

Signature _____

Name:

Designation:

Seal:



Commissioning & Training Certificate

This is to certify that No(s) of Multipurpose Fire Tender received on dated..... has been commissioned at Region / Airport on dated and Training was imparted toNos. of AAI Employees from..... to by Shri Designation of M/s.....

The Site Acceptance Test (SAT) is carried out as per the Annexure-IV of this Purchase Order/Section-G of Tender Document. The duly filled up and signed Performa (Annexure-IV of this PO/Section-G of Tender document) is attached herewith.

Also, the list of the official(s) to whom the training was imparted is as under.

Sl. No.	Name of AAI Official	Designation	Signature of AAI Official

Signature of Technical In-charge/
Representative duly approved by Airport Director

Region/Airport.....

Date



FORM OF SUPPLEMENTARY AGREEMENT

This Supplementary License Agreement is made at _____ on _____ day of _____ (month), 2025/26 executing and supplementing the agreement no. _____ dated _____ Supply and CAMC of _____ (hereinafter referred to as main agreement) by and between:

(1) Airports Authority of India (AAI), a body corporate constituted by the Central Government under the Airports Authority of India Act, 1994 and having its corporate office at Rajiv Gandhi Bhavan, Safdarjung Airport, New Delhi-110003 hereinafter called the 'Purchaser/Authority'/First Party (which term shall, unless excluded by or is repugnant to the context, be deemed to include its Chairman, or Member, Executive Directors, Airports Directors or Officers specified by competent authority in this behalf, and shall also include its successors and assigns) of the one part.

And

_____ hereinafter referred to as 'Supplier'/Other Party (which term shall unless excluded by or is repugnant to the context, be deemed to include its heirs, representatives, successors and assigns of the Supplier).

Authority and Supplier are individually referred to as 'Party' and collectively referred to as 'Parties'.

1. That WHEREAS the Supplier has substantially completed the supply of items described in and covered by the Main Agreement..... except the item mentioned in the schedule annexed to this Agreement; and whereas both the parties are desirous that the items mentioned in the schedule annexed to this agreement should be executed by the Supplier after the completion of supply of said equipment or after the completion of guarantee/ warranty period as covered by Main Agreement.
.....;
2. Whereas both parties have agreed to execute main agreement. Now this deed is witnessed as under:
 - a) That the Supplier shall and will execute the work covered by the items mentioned in the schedule annexed to this agreement at the rates and as per the terms and conditions of the Main Agreement..... whenever called upon to do so by the Technical-In-Charge, within stipulated period from the date hereof.
 - b) That the Supplier shall have absolutely no claim of whatsoever nature against Authority for doing the work mentioned in the schedule annexed to this Agreement as required under clause (a) above, except the Payment as stipulated in Clause _____ of Main Agreement.
 - c) That the Supplier shall be liable to execute all other items arising out of the Main Agreement which in the opinion of the Technical-In-Charge are necessary.
 - d) That the Supplier shall commence working on items mentioned in the schedule annexed to this Agreement within days from on the receipt of communication to the effect from the Technical-In-Charge or from any date fixed in the said communication and shall complete the work within the time fixed by the said Technical-In-Charge or as extended by him from time to time.



- e) That on the due execution and completion of this agreement by the parties, the bill of the Supplier in relation to the work already executed by Supplier under the Main Agreement shall be provisionally finalized by the first party and payment on account, if any amount is due, shall be made to the Supplier subject to Authority right to retain such amount as is considered reasonable as a security for the execution of the work mentioned in the scheduled annexed to this agreement and Authority shall have the right to deal with the said amount of security as it deems proper under the terms and conditions of the Main Agreement.
- f) Further, on the execution and completion of this supplementary agreement, the Supplier shall be entitled to claim back security deposit as mentioned in Clause (d) above relating to the work in question, subject to the right of the first party to retain such amount as he thinks reasonable as mentioned above soon after the CAMC period of month(s), as the case may be mentioned in Clause No. of the original agreement, is over.
- g) That the final bill relating to work under the Main agreement and Supplementary Agreement will be prepared separately after the completion of the work covered by both Agreements.

3. Except as modified by this agreement the Main Agreement shall remain in the full force and effect.

IN WITNESS WHEREOF THE ABOVE-MENTIONED PARTIES HAVE PUT THEIR signature on this day the

(Signature of Supplier)

(Signature of accepting authority)

For and on behalf of Chairman,
Airports Authority of India

(Signature of Witness)

Name & Address

of witness _____

(Signature of Witness)

Name & Address

of witness _____



Request letter: Transmission of Bank Guarantee Cover Message (To be submitted by applicant to BG issuing bank)

Date:

The Manager,

.....(Bank)

.....(Branch)

Sub: Inclusion of unique identifier code of AAI while transmitting BG cover messages where beneficiary bank is ICICI Bank (IFSC-ICIC0000007).

Dear Sir /Ma'am,

I/We,, request you to include unique identifier----- in field 7037 of the SFMS cover messages IFN COV 760 (for BG issuance) and IFNCOV 767 (for BG amendment) while transmitting the same to the beneficiary bank (ICICI Bank-IFSC• ICIC0000007).

Thanking you,

.....

(Vendor/Customer/Concessionaire)

