Rajasthan State Industrial Development & Investment Corporation Ltd.
(A Rajasthan Government Undertaking)
Kishangarh
Tel/Fax:
CIN No.: U13100RJ1969SGC001263
GSTIN: 08AABCR4695J1ZW
PAN: AABCR4695J
Email:

Notice Inviting e-Tender

No. 2026-27/Kishangarh/NIT no. 12 Date : 22-May-2026

RIICO invites tenders through on line tendering system for the following work:

- **Procurement of fire tender vehicle for Industrial area Khoda and Silora Phase I under the unit Kishangarh .**

from reputed contractors registered in appropriate class with RIICO Limited, Central/State Government Departments and their undertakings. The Tender/Bid shall only be submitted through online tendering system of www.eproc.rajasthan.gov.in The interested tenderers shall have to be enrolled/registered with portal of www.eproc.rajasthan.gov.in for participating in the Bidding process.

The schedule of dates is as follows:-

S.No.	Schedule	Date	Time
1.	Publishing date	**22-May-2026**	02:00 PM
2.	Document Download Start Date	25-May-2026	02:00 PM
3.	Document Download End Date	04-Jun-2026	06:00 PM
4.	Pre bid Meeting	-	-
5.	Tender Submission Start Date	25-May-2026	04:00 PM
6.	Tender submission End Date	04-Jun-2026	06:00 PM
7.	Tender Opening Date	05-Jun-2026	11:00 AM

The bidders have to deposit the requisite Bid Security Money, Tender fee and RISL Processing fee through SSO id of bidder/contractor.

Detail of tender:

Name of work	Approx. value of work (Rs. In lac)	Bid security Money (in Rs.)	Tender Fee	Period of completion
Procurement of fire tender vehicle for Industrial area Khoda and Silora Phase I under the unit Kishangarh	88	176,000.00	Rs. 2360/- as tender fee and Rs. 1500/- as RISL Processing fee	6 Months

Terms & Conditions:-

- Tender shall be submitted online only through www.eproc.rajasthan.gov.in
- No physical/offline Tender/bid shall be accepted.
- The contractors must have sufficient experience of execution of similar type of works in Govt. Departments/Public Enterprises.
- The completion period of the work shall be as mentioned above at respective S.Nos.
- The Corporation reserves right to cancel the BID without assigning any reason to the Bidder or anyone else.
- All taxes payable, if any, under the contract shall be paid by the Bidder.
- Conditional tenders and casual letters sent by the contractors will not be accepted.
- Any representation after opening of tenders, shall be ignored. These parties may be debarred from tendering in future for a specific period. Their bid security money in such cases will stand forfeited.
- Tenderers/Bidders are requested to read the instruction in the Tender Document/Bid before submitting the Tender/Bid online.
- The above terms & conditions of the NIT may also be seen on RIICO Website : www.riico.co.in along with BID invitation notice.
- The contract document consisting of detail specifications schedule of quantities of various classes of work/ items and detailed plan etc. can be seen in the unit office/ corporation any day expect of Sunday/ Holidays in Office Hours. The tender should always be placed in sealed cover bearing the name of the participating agency of the top of the envelop along with address and details of security money deposited.
- Tenders are to be submitted online in prescribed form which can be downloaded from the e-proc website.
- The Corporation reserves the right of deduction of security deposit (As applicable) from the monthly running/ final bill to be made to the agency on account of work done.
- * Tender Cost inclusive GST
- As per section 42(2) of chapter 4 of RRTP Act2012 , A bidder who
    a. Withdraws from the procurement process after opening of financial bids
    b. withdraws from the procurement process after being declared the successful bidder
    c. fails to enter into procurement contract after being declared the successful bidder

d. Fails to provide performance security or any other document or security required in terms of the bidding documents after being declared the successful bidder, without valid grounds

- Shall, in addition to the recourse available in the bidding documents or the contract, be punished with fine which may extend to fifty lakh rupees or ten per cent of the assessed value of procurement, whichever is less.

The security deposits will be refunded after the expiry of the period as applicable:

- The corporation accepts the bank guarantee also in lieu of security deposit being deducted from running bills of the contractor for the value of contract agreement of more than Rs. 100.00 Lac.
- The Corporation reserves the right of accept/ reject any or all the tender without assigning any reason what so ever and its decision will be final.
- The power of stipulating items of the work and for not getting executed any part/ whole will be with corporation and its decision will be final.
- Once tender documents are uploaded & Requisite fee is deposited through electronic transfer in RIICO account, refund of same is not claimable.
- The rates quoted by the contractor will remain valid up to 90 days from the date of receipt of tenders.
- For typographical error in the G-schedule, it shall be corrected as per specifications of BSR on which G-Schedule is based and the items in the G/H Schedule are inclusive of all lead and no extra payment shall be given in any case.
- Conditional tenders and casual letters send by the bidders/tenderers will not be accepted.
- Any representation after opening of tenders shall be ignored. These parties may be debarred from tendering in future for a specific period. Their bid security money in such case shall stand forfeited.
- The work will be got executed as per the detailed specification of prescribed BSR PWD/PHED/RUIDP(as applicable) Rajasthan City Circle/Rural circle, Jaipur.
- The contractor/ Agencies will arrange the water required for the construction on their own cost.
- The contractor/ agencies will abide by all safety rules and law of the estate labour laws etc. while execution of the work.
- In case of non commencement of work within 15 days of date of commencement mentioned in the work order, the work would be withdrawn and bid security money shall be forfeited without any notice.
- Tenderer will have to submit the necessary certificates of Mining Engineer & GST Invoice etc. other terms & conditions shall be as per contract agreement executed by tenderer.
- The contractor/tenderer will get registered their building labourers & other construction workers under the clause. The building and other construction workers (Regulation of employment and conditions of services (act 1996 and provide all other benefits & facilities as per act to labourers/workers.

- The Contractor/Agency will abide by the provisions in circular No. IPI/P(1)6/26/438 dated 27.07.2010, office order No. IPI/F-1(6)23/975 dated 09.12.2010 and office order No. IPI/F-2(6)23/976 dated 09.12.2010 & their amendments (if any) issued by the Corporation.
- Additional Performance Security (previously known as APG) shall taken/applied as per the provision of Rule 75 A of RTTP 2013 and its latest ammendments.
- Fifty percentage of the performance security shall be refunded to the contractor on completion of the work and passing of the final bill and the remaining fifty percentage of performance security shall be refunded on satisfactory completion of the defect liability period.
- Unit Office deploys movable anti-smog guns through contractor to curb the air pollution as per the policy / office order issued.

Signature of the Contractor.

Unit Head
Kishangarh

Memorandum

I/we hereby tender for the execution of the work for RIICO Ltd. of the work specified in the tender documents within time specified and rate quoted in the schedule in the quantities, in accordance with all specification design, drawings and instruction given in the tender documents. Should this tender be executed, I/ we hereby agreed to abide and to fulfil all terms and provisions of the general and special conditions of the contract. I/ we accept the absolute/ part forfeiture of Bid Security Money to the corporation of its successor in the office with prejudice to any other rights or remedies, should I/ we fails to satisfy the provisions of the tender documents as per the decision of the corporation.

The bitumen &other commodities will be arranged on store rates decided by the corporation on availability. However the corporation is not under any obligation to supply any material required at site. I/ we hereby accept all the terms and conditions of the notice and to execute the work.

Signature of the contractor
with full address :

Instruction to bidders for online submission of e-tender

- The bidders who are interested in bidding can download tender documents from http://eproc.rajasthan.gov.in
- Bidders who wish to participate in this tender will have to be registered on http://eproc.rajasthan.gov.in (bidders registered on eproc.rajasthan.gov.in before 30.09.2011 needs to be registered again). To participate in online tenders, bidders will have to procure Digital Signature Certificate (type II or III) as per information Technology Act-2000 using which they can sign their electronic bids. Bidders can procure the same from any CCA approved certifying agency i.e. TCS, safe-crypt, (n)Code, etc. or they may contact e-Procurement Cell, Department of IT&C, Government of Rajasthan for further assistance. Bidders who already have a valid Digital Certificate need not to procure a new Digital Certificate.
  Contact No. 0141-4022688 (Help desk 10 A.M. to 6 P.M. on all working days)
  e-mail: eproc@rajasthan.gov.in
  Address : e-Procurement Cell, RISL, Yojana Bhawan, Tilak Marg, C-Scheme, Jaipur.
  Bidder shall submit their offer on-line in electronic formats both for technical and financial proposals; however BSD, Tender fee and RISL Processing fee is to be deposited through RTGS/NEFT/Interbank transfer (through their bank account) and enclose the scanned copy of Unit Transaction Reference while submitting the bid.
- Before electronically submitting the tenders, it should be ensured that all the tender papers including conditions of contract are digitally signed by the tenderer.
- Training for the bidders on the usage of e-Tendering system is also being arranged by RISL on regular basis. Bidders interested for training may contact e-Procurement Cell, RISL for booking the training slot.
- Bidders are also advised to refer “Bidders manual” available under “Download” section for further details about the e-tendering process.

Bidders shall have to enter the documents in the “cover” as per the following order:

- In the Fee cover (in PDF/jpg format)
- Scanned copy of Contractors registration of appropriate class.
- In the Fee cover (in PDF/jpg format)
- Copy of payment of receipt or paid challan through SSO id of bidder/contractor.
- In the Technical document cover (in PDF/jpg format)

Scanned copy Tender Document (Except BOQ Sheet):

- **Finance cover (.xls format)**

The Bill of Quantity (BOQ) shall be upload after entering the percentage/rate in following BoQ :

S.No.	Schedule No.	Description of work
1	BoQ1	

2	BoQ1	

Bidders are requested not to edit or change any item or quantity.

RATES ARE TO BE FILLED ONLY ON BOQ (in .xls format) SHEETS ONLY

Special Note :

- **All bidders are advised not to wait for last date and submit their tender/bid at the earliest. The Corporation shall not be responsible for any inconvenience in website and NO extension in deposition of Tender/bid shall be allowed for any bidder.**

Annexure A

Compliance with the code of Integrity and No Conflict of Interest

Any person participating in a procurement process shall –

- Not offer any bribe , reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;
- Not misrepresent or omit the misleads or attempt to mislead so as to obtain a financial or other benefit or avoid an obligation ;
- Not indulge in in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
- Not misuse any information shared between the procuring Entity and the Bidders with an intent to gain unfair advantage in the procurement process;
- Not indulge in any coercion including impairing or threatening to do the same, directly or indirectly to any party or to its property to influence the procurement process;
- Not obstruct any investigation or audit of a procurement process;
- Disclose conflict of interest, if any and
- Disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring entity;

Conflict of Interest:-

The Bidder participating in bidding process must not have a Conflict of Interest. A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities contractual obligation or compliance with applicable laws and regulations.

i. A bidder may be considered to be in conflict of Interest with one or more parties in a bidding process if, including but not limited to:

- Have controlling partners/shareholders in common; or
- Receive or have received any direct or indirect subsidy from any of them; or
- Have the same legal representative for purpose of the Bid; or
- Have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the procuring Entity regarding the bidding process; or
- The Bidder participating in more than one Bid in a bidding process. Participation by a Bidder in more than one bid will result in the disqualification of all Bids which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a bidder, in more than one Bid; or

- The Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, works or Services that are the subject of the Bid; or
- Bidder or any of its affiliates has been hired (or is proposed to be hired) by the procuring Entity as Engineer in Charge / Consultant for the contract.

Annexure B

Declaration by the Bidder regarding Qualifications

Declaration by the Bidder

In relation to my/our Bid submitted to …….. for procurement of ……in response to their Notice inviting Bids No……..……..dated…… I/We hereby declare under Section 7 of Rajasthan Transparency in Public Procurement Act, 2012 that :

- I/We possess the necessary professional, technical, Financial and managerial resource and competence required by the Bidding Document issued by the procuring Entity;
- I/We are have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;
- I/We are not insolvent, in receivership, Bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/Our business activities suspended and not the subject of legal proceeding for any of the foregoing reasons;
- I/We do not have , and our directors and officers not have been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
- I/We do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

Date:

Place

Signature of Bidder
Name :
Designation
Address

Annexure C

Grievance redressal during Procurement Process

The designation and address of the first Appellate Authority is GM(Civil), RIICO Ltd

The Designation and address of the Appellate Authority is Financial Advisor, RIICO Ltd

- Filing an appeal
  If any Bidder or prospective bidder is aggrieved that any decision, action or Omission of the procuring entity is in contravention to the provisional of the Act, or the rules or the Guideline issued there under, he may file an appeal to first Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, Omission, as the case may be, clearly giving the specific grounds on which he feels aggrieved:
  Provided, that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings;
  Provided further that in case a procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filed only by a Bidder whose Technical Bid is found to be acceptable;
- The officer to whom an appeal is filed under Para (1) shall deal with the appeal as expeditiously as possible and shall Endeavour to dispose it of within thirty days from the date of the appeal.
- If the officer designated under Para (1) fails to dispose of the appeal filed within the period , specified in Para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the procuring Entity, as the case may be may file a second appeal to second Appellate Authority specified in the Bidder Document in the this behalf within fifteen days from the expiry of the period specified in Para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.
- **Appeal not to lie in certain cases**

  No appeal shall lie against any decision of the procuring Entity relating to the following matters, namely:

  - Determination of need of procurement ;
  - Provisions limiting participation of Bidders in the Bidders in the Bid Process;
  - The decision of whether or not to enter into negotiations
  - Cancellation of a procurement process;
  - Applicability of the provisions of confidentiality.
- Form of Appeal

- An appeal under Para (1) or (3) above shall be in the annexure form along with as many copies as there are respondents in the appeal.
- Every appeal shall be accompanied by an order appeal against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- Every appeal may be presented to First Appellate Authority or Second Appellate Authority as the case may be, in person or through registered post or authorized representative.

- Fee for filing appeal
  - Fee for first Appeal shall be Rs Two Thousand Five Hundred & for second appeal shall be Rs. Ten Thousand, which shall be non-refundable.
  - The fee shall be paid in the form of bank demand draft or banker's cheque of a scheduled bank in India payable in the name of Appellate authority concerned.
- Procedure for disposal of appeal
  - The First Appellate Authority or Second Appellate Authority as the may be upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
  - On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be, shall;
    - Hear all the parties to appeal present before him; and
    - Peruse or inspect documents, relevant records or copies there of relating to the matter.
- After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass and order in writing and provide the copy of order to the parties to appeal free of cost.
- The order passed under sub-clause (c) above shall also be placed on the State Public Procurement Portal.

FROM NO.1

[See Rule 83]

Memorandum of Appeal under the Rajasthan Transparency in Public Procurement Act, 2012

Appeal No. ……of …….. Before the ……(First/Second Appellate Authority)

- Particulars of the appellant :
    - Name of the appellant :
    - Official Address, if any:
    - Residential Address
- Name and address of the respondent (s):
    -
    -
    -
- Number and date of the order appealed against and name and designation of the officer/authority who passed the order (enclose copy), or a statement of a decision , action or omission of the procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved;
- If the Appellant proposed to be represented by a representative, the name and postal address of the representative;
- Number of affidavits and documents enclosed with the appeal;
- Grounds of appeal : ……(Supported by an affidavit)
- Prayer :
  …….

Place ……..

Appellant Signature

Date ……..

Annexure D

- **Correction of arithmetical errors**

  Provided that a Financial Bid is substantially responsive, the procuring Entity will correct arithmetical errors during evaluation of Financial Bids on the following basis;

  - If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall and the unit price shall be corrected;
  - It there is an error in a total corresponding to the addition or subtraction of prevails, the subtotal shall prevail and the total shall be corrected; and
  - If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above. If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid Securing declaration shall be executed.

- **Procuring Entity's Right to Vary Qualities**

  - If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Conditions of Contract.
  - In case of procurement of Goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of original order. However, the additional quantity shall not be more than 50% of the value of Goods of the original contract and shall be within one month from the date of expiry of last supply. If the supplier fails to do so, the Procuring Entity shall be free to arrange for the balance supply by limited Bidding or otherwise and the extra cost incurred shall be recovered from the suppliers.

- **Dividing quantities among more than one Bidder at the time of award (In case of procurement of Goods)**

  As a general rule al the quantities of the subject matter of procurement shall be procured from the Bidder, whose Bid is accepted. However, when it is considered and the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the Bidder, whose Bid is accepted, to deliver the entire quantity or when it is considered that the subject matter or procurement to be procured is critical and vital nature, in such case, the quantity may be divided between the Bidder in that order, in a fair, transparent and equitable manner at the rates of the Bidder, whose Bid is accepted.

MINIMUM CRITERIA FOR QUALIFICATION

(a) **The bidders should be in business of manufacturing of vehicle bodies for a minimum period of eight years and must have satisfactorily completed during the last *eight years(08 years)*, of similar nature. The applicant should not have abandoned any work nor should any of their contracts of the work have been rescind during the last eight years. The bidder may also opt the current financial year , in above mentioned eight year period , in that case the financial year 2017-18 & earlier years will not be considered for evaluation purpose.**

(b) **The bidders in the same name and style should have successfully (successfully means, getting the certificate of work executed as per satisfaction of the client) completed the fabrication of fire tender vehicles during last eight years and should have fabricated minimum 03 nos. of new fire vehicles (of size of 4500 litre or more) in any one of the last eight financial years.**

(A) MINIMUM QUANTITIES REQUIREMENTS:

1. **The bidder in the same name & style should have successfully (successfully means, getting the certificate of work executed as per satisfaction of the client) completed the fabrication of fire tenders vehicles during last eight years and should have fabricated minimum 03 nos. of new fire vehicles (of size of 4500 litre or more) in any one of the last eight financial years. The bidder may also opt the current financial year, in above mentioned eight years period, in that case the financial year 2017-18 & earlier years will not be considered for evaluation purpose.**

SECTION 3 (B)

SPECIAL TERMS & CONDITIONS AND DETAILED SPECIFICATIONS OF FIRE TENDER VEHICLE :

The Terms and Conditions of the contract shall prevail and shall be binding on the Contractor/Bidder and any change or variation expressed or impressed howsoever made shall be in-Operative unless expressly sanctioned by RIICO. The Contractor/Bidder shall be deemed to have fully informed himself and to have specific knowledge of the provisions under terms and conditions of this specification mentioned here under:

1. DEFINITION OF TERMS:-

(i). In constructing these general conditions and the annexed specification, the following words shall have the meaning here in assigned to them unless there is anything in the subject of context in consistent with such construction.

(ii). The **"RIICO"** shall mean the RAJASTHAN STATE INDUSTRISL DEVELOPMENT AND INVESTMENT CORPORATION LIMITED represented by Chairman/Managing Director and shall include their legal personal representative, successors and assignees.
(iii). The **"Bidder"** shall mean and include one or more persons or any firm or any company or body in corporate who has submitted the bid in response to "Invitation of Bid"

(iv). The **"Agency"** shall mean the bidder who's bid has been accepted by RIICO and shall include the bidder heirs, legal representative, successors and assignees approved by RIICO.

(v). The **"Engineer"** shall mean the Superintending Engineer, Executive Engineer, Assistant Engineer, Junior Engineer RIICO LTD., Jaipur or other Engineer or Officer for the time being or from time to time duly authorized and appointed in writing by the RIICO to act as Engineer or Inspector for the purpose of the contract.

(vi). **"Works"** mean and include the work or works to be done by the contractor under the contract.

(vii). The **"Specification"** shall mean the specification, specific conditions to the General Conditions of the contract schedule, if any.

(viii). The **"Site"** shall mean the place or places named in the contract and include, where applicable, the lands and buildings upon or in which the works are to be executed.

(ix). **"Writing"** shall include any manuscript type written or printed statement under or over signature or seal as the case may be.

(x) The **"Consignee"** shall mean any officer/official of the RIICO, all over jurisdiction of RIICO, performing the duties of the consignee.

(xi) **"Guarantee Period/Maintenance period"** shall mean the period during which the contractor shall remain liable for repair or replacement of any defective part of the works performed under the Contract.

(xii) Terms and expressions not herein defined shall have the same meaning as one assigned to them in the Indian Contract Act (Act IX of 1872) and falling that in the General Clause Act, 1897).

2. SCOPE & SPECIFICATION OF CONTRACT /WORK:-

3. Technical Specifications

A. Specifications and standards:-

i. The supplier shall ensure that the goods and related services comply with the technical specifications and other provisions of the contract.

ii. The supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the purchaser, by giving a notice of such disclaimer to the purchaser.

iii. The goods and related services supplied under this contract shall conform to the standards of the technical specifications, when no applicable standard is mentioned; the standards shall be equivalent or superior to the official standard whose application is appropriate to the country of origin of the goods.

iv. Wherever references are made in the contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in technical Specifications

v. During contract execution, any changes in any such codes and standards shall be applied only after approval by the Department and shall be treated in accordance with the conditions of contract

B. Schedule of equipment and technical specifications:

i. The bidders shall complete the schedule (s) and technical specifications for the goods and equipment to be supplied in their entirety so as to demonstrate their compliance with the requirements of the bidding documents.

ii. The materials, equipment and services to be supplied under the contract shall be like that use of such materials equipment and services shall not infringe or violate any industrial property or intellectual property rights or claims of any third party.

FUNCTIONAL REQUIREMENTS FOR FIRE FOAM TENDER CAPACITY (4500 +500) LITERS FOR FIRE BRIGADE USE on basis of IS 950-2012

S.No			Technical Requirement
1.	SCOPE	1.1	This standard lays down the requirements regarding material, design and construction, workmanship and finish, accessories and equipment of water tender, Type B for fire brigade use.
2.	REFERENCES	2.1	The standards listed at Annex A contain provisions which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated at **Annex A.**
3.	GENERAL REQUIREMENTS	3.1	The appliance shall incorporate a UL certified low and high pressure fire pump of 2000 liters/min at 7 kg/cm2 and 300 liters/min at 35 kg/cm2 capacity. The appliance shall carry a water tank of 4500 liters capacity upon suitable cabin chassis. It shall carry an extension ladder and shall be capable of towing a trailer pump.
		3.1.1	Fire fighting centrifugal pumps with priming devices shall confirm to the safety requirements and protection measures. Safety information on the following shall be contained in the fire Pump manual: a) Installation; b) Operation; c) Maintenance; and d) Marking.
		3.2	The water tender shall be fabricated in a manner so as to confirm to the following characteristics:

			c) The appliance shall have the following overall dimensions:- Wheel base : Not less than 4200 mm Turning circle: Not more than 20 m Overall width : Not more than 2.50 m *Note: The chassis shall meet the prevailing BS 6Phase 2 (BS 6 RDE) BS 6 compliant with RDE (Real Driving Emission) Standards emission norms and shall totally comply with the Central Motor Vehicle Rules as amended time to time.*
4.	MATERIAL	4.1	The choice of material to be used in the construction of the appliance shall be made with a view to combining lightness with strength and durability. The following choice of materials shall be followed: Pump casing and low pressure impeller: Lead tin bronze (Grade LTB 2 of IS 318) High pressure impeller: Phosphor-bronze or Stainless steel or Aluminium- bronze (IS 617) Impeller ring and impeller neck ring: Lead tin bronze (Grade LTB 2 of IS 318) Pump shaft: Stainless steel (Grade 04Cr18Ni10 of IS 6603) Pump panel: Aluminium sheets/chequered plates (IS 737) or Mild steel sheets (IS 513)
		4.2	All parts which form water ways or come into contact with water shall be of stainless steel. All metal parts exposed to atmosphere shall either be of corrosion-resisting material or suitably treated to resist corrosion.
		4.3	Lubricating nipples shall be provided, wherever necessary.
5.	DESIGN AND CONSTRUCTION	5.1	**Engine** The engine shall be provided with cooling system to permit its continuous stationery running without overheating. *Note: The chassis shall meet the prevailing BS 6 Phase 2 (BS 6 RDE) BS 6 compliant with RDE (Real Driving Emission) Standards emission norms and shall totally comply with the Central Motor Vehicle Rules as amended time to time.*
		5.2	**Electrical System** All important electrical circuits shall have separate fuses suitably indicated and shall be grouped into a common fuse box located in an accessible position in driver‘s cab and fitted with means for carrying spare fuses. The wiring shall be single pole and shall not be exposed to the atmosphere. Conduits shall be used, wherever necessary.
		5.3	**Water Tank** The capacity of water tank shall be 4500 liters. The tank body and baffles shall be of minimum 5 mm thick mild steel plates confirming to IS:2062
		5.3.1	A tank of required capacity constructed out of mild steel treated for anti-corrosion shall be suitably mounted on the chassis in a manner keeping in view the proper load distribution on the axles. A full length runner from behind the driver cabin till end of chassis frame shall be provided and made out of mild steel channel of 100 mm × 50 mm × 5 mm suitably fixed to the chassis frame with 6 mm thick mild steel plate and bolted to chassis frame wherever holes are available in the chassis frame and also with 16 mm ‗U‘ bolts and nuts. The tank shall be suitably baffled with minimum 2 nos of baffles fitted longitudinally and 1 numbers of baffles fitted transversely to prevent surge when the vehicle is breaking, cornering or accelerating. The baffles shall be arranged in a manner to facilitate the passage of a man throughout the tank for cleaning purpose. The tank shall be mounted on minimum three cross members to

			counter act the stresses caused by chassis flexion and shall be so secured that it can be easily removed. The water tank shall be provided with six chairs, three on either side for mounting the tank on the runner and chassis frame. The water tank shall be fixed to the chassis frame and runner with ‗U' clamps of 16 mm diameter with aluminium packing block and self-locking nuts. 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.
		5.3.2	The tank shall be fitted with a 50 mm bore overflow pipe. A 63 mm instantaneous hydrant connection, incorporating a strainer, shall be provided close to the pump panel control for filling the tank through 75 mm bore pipe work or feeding the hose reel equipment. Minimum 100 mm bore pipe line shall be taken from the tank to the suction inlet of the pump incorporating minimum 100 mm quick action spherical type valve. Separate valve(s) for performing the function shall be provided to control the flow of water to the hose reel equipment. Drain plugs or drain cocks shall be provided, wherever necessary.
		5.3.3	The mild steel plates used for the tank shall be given adequate anti-corrosive treatment of epoxy treatment consisting of one coat of primer with two coats of finish after preparing the surface by shot blasting from inside and outside after fabrication. 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.
		5.3.4	Dial gauge water level indicator for the tank shall be provided preferably in the driver's cab or a visual level gauge of the glass tube shall be provided at the control panel calibrated 1/4, 1/2, 3/4 and full (preferably calibrated in litre). Low water level buzzer shall be provided
		5.3.5	The tank shall have a bolted manhole of 450 mm diameter minimum and shall have a gun metal threaded ring and cap of 300 mm diameter for filling the water tank from the top. The manhole cover shall be made from 5 mm thick mild steel plate and epoxy coated from inside and outside. A cleaning hole of at least 250 mm diameter shall also be provided at the bottom.
		5.3.6	The tank shall be connected with the pump and hose reel and valve(s) shall be provided in such a way that any of the following operations are possible: a) Hydrant tank; b) Hydrant reel; c) Tank-pump — high pressure hose reels; d) Off.
		5.4	**Hose Reels** **High Pressure Hose Reels** Two high pressure hose reel to facilitate operation of the high pressure section of the fire pump shall be provided and mounted so as to be accessible for use from either side of the appliance. The hose shall be prevented from kinking. The hose shall be light weight PVC nylon braided hose and the working pressure of hose shall not be less than 70

			kg/cm2. The high pressure hose reels shall hold not less than 60 m of hose in one length, terminating in high pressure fog/jet trigger type gun connected by quick connect couplings. The fog gun shall be made of stainless steel or aluminium alloy. The inlet connection shall be of 20 mm and shall have a leak proof rotating type hose connector. The gun shall be of constant flow type and shall have a discharge capacity of 150 litre/min approximately. Provision shall be made in the gun controls to achieve combat mode (straight jet) or a fog shield in split second. The gun shall have the ability to work on pressure for 40 to 70 kg/cm2 without affecting discharge pattern. The weight of the gun assembly shall not be more than 4 kg. Plumbing between the pump and hose reel shall have clean and unobstructed water way of not less than 25 mm throughout.
		5.5	**Fire Pump** a) An UL/IRS/EL certified centrifugal high and low pressure pump shall be mounted at rear of the appliance. The low and high pressure sections of the pump may be either multi-stage or single-stage type. Anti-friction bearings external to the casing are provided so as to avoid any bearings within the pump casing. The gland shall be of the mechanical self-adjusting type. The impeller(s) of the low pressure section shall be closed type and shall be dynamically balanced. The impeller(s) of the high pressure sections shall be closed or regenerative type. A drain cock plug shall be provided at the bottom of the casing in a way to prevent the cock being opened due to vibrations. Studs, etc, used in the pump casing coming in contact with the water shall be stainless steel. The castings shall be without any blow holes, internal cracks, etc. The interior of the casting shall be smooth finished. The castings shall withstand the hydraulic pressure b) The pump shall be preferably completely covered. However, all the controls on the panel and the gauges shall be uncovered. The pump shall be coupled to the prime mover of the chassis through a power take-off cap able of transmitting full torque of the engine used for the appliance. All propeller shafts and all fittings used for coupling the PTO, pump, etc, shall be of the same size and type as used by the chassis manufacturer for the drive line. The PTO shall be of VAS/TATA/SYALL or equivalent. The PTO shall have a step up gear ratio of suitable to operate pump as per the standard of pump test and desired output of pump. A cooling coil made of copper pipe shall be provided in the bottom of the PTO casing. A control lever for engaging and disengaging the pump, with suitable locking devices, shall be provided in the driver‘s cab. c) The pump shall be designed to give its rated output with an engine and pump input at shaft speed safe enough to operate the engine. The pump capacity shall be: 2000 litre/min at 7 kg/cm2 and 250 litre/min at 25-35 kg/cm2 capacity The design of the pump shall be such that the normal pressure

			normal pressure to high pressure, preferably a single lever operation. However at any given pump/engine speed, the low pressure registered shall not exceed ¼th (one quarter) of the registered high pressure. A thermal relief valve (TRV) shall be fitted on the pump discharge side which will control the water temperature within the pump below 48°C (or 80°C - this version shall be used only when there is good operational reason) when the pump is operating in high rpm with closed discharge. The water discharged from the TRV shall be either taken back to water tank or safely piped away to waste with metallic pipe. The pump housing shall have provision to connect normal pressure hose reel and cooling water line. The pump shall give performance as per the standards, when working with strainers (except basket strainer) at 27 ± 5°C. d) Allowances for output i. 1% for every 2.5°C rise in water temperature, ii. 4% for every 300 m above mean sea level, and iii. No allowance shall be made for humidity up to 75 percent. However, deduction at the rate of 1% of every 5% change in humidity shall be made when humidity changes from 75 to 95 %. e) **Pump Test** When tested in accordance with pump specification, the efficiency shall not deviate from the value specified by the pump manufacturer by more than ± 5 percent. However in no case the efficiency of the pump shall be less than 60 percent. The pump shall run for a period of 3 h non-stop delivering the rated output at 7 kg/cm2 d for 1 h at 35 kg/cm2 with a lift of 3 m. During the test, the water shall not be replenished for the cooling system and the temperature of the engine oil shall not exceed 115°C or of the engine manufacturer rated temperature for continuous working, whichever is less. The engine shall show no sign of stress during the test. The temperature of the cooling water (radiator water) tank shall not exceed 85°C. The PTO sump oil temperature shall not exceed 100 percent of the manufacturers recommended temperature for the grade of oil used. The pump casing and impeller shall be subjected to hydraulic pressure of 2.1 MPa to detect leakage, perforation, etc.
		5.6	**Suction Inlet and Delivery Valves** a) The pump shall have suction inlet(s) having 100 mm standard suction connection (*see* IS 902) with internal strainer(s) and blank cap(s). The strainer(s) 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. b) The pump shall be provided with two delivery having 63 mm standard hose couplings (*see* IS 903) with screwed wheel type quick closing clack valve (*see* IS 4928). Blank caps fastened with chains and incorporating means to relieve pressure between the valve and the cap shall be provided one for each delivery valve. In the case of midship mounted pump, two or four delivery valves shall be provided at each panel. c) High-Pressure Filter: In case of regenerative impeller, the water going to high-pressure impeller suction shall be filtered before entering in to the high pressure impeller. A filter capable of filtering particle size up to 0.75 mm or less shall be used. This

			filter shall be of stainless steel and shall be easily accessible for cleaning.
		5.7	**Primer** a) The primer shall be capable of lifting water at least 7.0 m (measured from water level to the centre of pump) in not more than 24 s when connected with 100 mm suction hose shall be fully automatic. b) The primer shall be constructed of gun metal/ light alloy casting, shall have stainless steel shaft and shall be fitted with suitable lubricated bearing depending upon the type of primer.
		5.8	**Pipelines and Valves** a) All pipelines shall be of stainless steel and all valves up to 50 mm size shall be 3 piece design stainless steel ball valves. All valves above 50 mm shall be standard butterfly valves. b) All piping shall be sized so as to have minimum pressure drop and achieve the required pressure and flow at various locations. c) All piping shall be seamless and designed for 10 percent over the maximum pressures encountered in the pipe. d) The piping shall be flanged f or ease of maintenance. However, flange joints shall be kept to minimum. e) All lines shall be hydraulically tested at 1.5 times of the design pressure and pressure shall be held for 2 h. In no case the lines shall be tested below 2.5 MPa. f) All lines shall be suitably supported so as to provide rigidity and avoid vibrations. g) All lines less than 50 mm size can be socket welded to matching rating fittings. h) All lines above 50 mm size shall be butts welded with full penetration welds. i) All bolts, nuts and washers used shall be of stainless steel.
		5.9	**Control Panel** a) Adequately illuminated control panel shall be provided and positioned as follows: i) Rear mounted pump - One control panel at the rear of the appliance; and ii) Midship mounted pump - Two control panels, one on each side of the appliance. b) The control panel(s) shall include the following: i) Throttle control for engine; ii) Pressure gauge — 0-2 MPa; Pressure gauge — 0-5 MPa; iii) Compound gauge calibrated as under: 1) *Vacuum* — 0 to 75 cm Hg, preferably in black; 2) *Pressure* — 0 to 0.6 MPa, preferably in black; iv) Primer control (if the primer is not fully automatic); v) Gauge for cooling water and glow lamp for lubricating system; and vi) Cooling water circuit control. c) The following shall also be provided at a convenient position near the control panel(s): i) Water level indicator ; and ii) Control valve hydrant connection.
		5.10	**Water/Foam Monitor**

			One water-cum-foam monitor shall be provided on the top at suitable location. The monitor shall confirm to IS 8442.
		5.10.1	**Tiller bar controlled monitor** The monitor shall operate with a tiller bar for rotation and elevation adjustment, shall have full horizontal rotation with 365 degree travel with field chargeable rotation stops at 180 degree, 135 degree of vertical travel with field chargeable rotation stops at 45 degree above and 20 degree below horizontal, flow capacity of up to 500 GPM with no more than 19 PSI loss, maximum operating pressure of 200 PSI. The monitor shall be constructed from hard coat anodized aluminium with a silver powder coat interior and exterior finish. The monitor shall be configured with a 3‖ ANSI150 flange inlet adaptor to 2-1/2‖ NH quick disconnect with locking pin 2-1/2‖male NH outlet. The unit shall have a unique serial number. The fixed gallonage nozzle shall be designed for durability, ease to use and to deliver a high quality water or foam stream and performance. The stream shall be user adjustable from straight to a 120 degree fog pattern. The nozzle shall have a field removable stainless steel baffle to allow for flushing of debris, require no grease of maintenance and have UV resistance non corrosive components. The nozzle shall be suitable for foam solution application multi expansion air aspirating attachment. The nozzle body shall be constructed from hard coat anodized aluminium and configured with a 2-1/2‖female NH rigid rocker lug coupling, have a 500 GPM @100 PSI rating.
		5.11	**Body Work and Stowage** a) Cabin i. The chassis manufacturer factory built enclosed accommodation for two persons (Driver and officer) shall be provided and behind this cabin a crew compartment provided. Both the seats shall be independent. The driver‘s seat shall be adjustable and comfortable. The rear compartment of driver‘s cabin shall have one removable seat for full width of cab for 5 (five) crew members. The cab floor shall be covered with 3 mm thick aluminium chequered plate rigidly fixed to the frame cross members by means of nuts and bolts or riveting. Trap doors for topping up oil, etc, wherever necessary shall be provided. ii. One roof light shall be provided in the driver‘s cabin dwell vision and external rear view mirrors shall be fitted to the cab. iii. The driver cabin shall be provided two doors and crew compartment shall be provided two doors. The doors shall be generously sized for easy embarking/disembarking of crew members. All the doors shall be fitted on the super structural members, each hung upon three invisible coach type mild steel stout hinges and fitted with best quality handles. iv. The door handle on outside of driver seat shall have a locking arrangement. Other doors shall be lockable from inside. In addition to the door lock, aluminium tower bolt of 20 mm shall be provided for all the doors from inside, adequate grab rails shall be provided for easily boarding and alighting from the appliance. b) Seats i. The driver seat shall be adjustable type vertically, forward and backward. The officer seat shall be fixed type. Both the seats shall be rigidly fixed to the flooring by means of nuts and

			bolts. The seat cushion shall be of latex foam rubber 75 mm thick upholstered in good quality foam leather cloth. The back seat shall be of latex foam rubber 50 mm thick upholstered in good quality foam leather cloth. ii. Below the crew seat, two lockers shall be provided. One locker for battery box to accommodate two batteries and another for keeping accessories. The extra length of battery cable shall be provided by manufacturer. iii. The crew seat shall be rigidly fixed to floor by means of nuts and bolts, running full width of the vehicle suitable for sitting five firemen, covered with 75 mm × 50 mm cushion latex foam rubber upholstered in good quality foam leather of approved shade. iv. Below the crew seat, two lockers shall be provided, one for storage of batteries and another for keeping accessories. The extra length of battery cable shall be provided, if required. c) Rear Body i. The rear body shall be fabricated in continuation and in line. The under frame crew members shall be fabricated from the rolled mild steel channel of 100 mm × 50 mm × 5 mm size. ii. The mild steel runner of 100 mm × 50 mm × 5 mm size shall be provided over the chassis member for the uniform distribution of load over the chassis. Each cross members shall be secured to the chassis frame by 16 mm diameter _U' clamps with aluminium packing block and self-locking unit. Balata packing of thickness 12 mm shall be provided in between the chassis frame and across members. d) Super Structure i. The super structural of the cabin shall be constructed out of 2 mm mild steel 38 mm × 38 mm x 2 mm galvanized tube sections. The super structure shall be strengthened specifically on the members with the lockers doors frames are to be fitted and also the other members by providing brackets and gussets of 2 mm mild steel plate securely welded. The details of super structure are as follows: Under frame cross members:ISMC100 mm×50 mm×5 mm Cross members: ISMC75mm×75mm×5 mm Body structure : TUBE 32mm×32mm×2 mm ii. The cab and lockers shall be of composite construction with sufficient rigidity and reinforcement and shall be kept as light as possible. iii. The structure/frame work shall be of welded constructions and made from 2 mm thick mild steel pressed sections and square tubes. The angles and channels used shall be of minimum 3 mm thickness. The complete structure material shall be treated for anti-corrosion by zinc plating. The plating thickness shall not be less than 20 microns. Two coats of epoxy paint shall be applied to the completely welded structure. iv. The structure shall be so designed so as to avoid any vibration/ratting/deformation in the intended usage of the vehicle. v. The interior panelling shall be done from 1.22 mm thick

			aluminium sheets and the exterior panelling shall be done from 1.60 mm thick aluminium sheets. vi. The entire roof of the vehicle, cabin floor and locker floor shall be covered with minimum 1.60 mm thick aluminium chequered plates. All the lockers sides and complete rear of the vehicle shall be covered with minimum 1.22 mm thick aluminium chequered plates. vii. Lockers shall be provided for secure stowage of all equipment given in Annex B. The height of the lockers from the bottom to the top of the opening shall be not less than 600 mm and the depth shall be not less than 600 mm. All lockers shall be provided with internal automatic lighting arrangement with the master switch in the cab. viii. All lockers above chassis floor shall be covered with aluminium roller shutters. The roller shutters shall be made from extruded aluminium sections with suitable roller, spring, and guide channels, etc. All aluminium sections used shall be properly anodized. The roller shutters shall be rolled inwards underneath the roof giving unobstructed access to the equipment lockers and the fire fighting material. These roller shutters shall open in every position of the vehicle even in rough terrain. Guide rails shall support the shutters over entire length on both sides to make them absolutely torsion free. The roller shutters shall have a sturdy lock, preventing accidental opening during movement of vehicle. Roller shutters shall be made of hollow rectangular shaped aluminium links which shall be inter connected with rubber/plastic/PVC profiles sealing the roller shutter watertight when closed. These roller shutters shall be durable, maintenance free, weather and corrosion resistant. ix. Suitable storage space shall be provided to store four 2.5 m lengths of suction hoses in convenient location.
		5.12	**Miscellaneous** a) A suitable bumper shall be provided at the rear rigidly fixed to the super structural members by means of nuts and bolts, fabricated from 100 mm × 50 mm× 5 mm mild steel channel. b) Two cat ladders made out of stainless steel round or square pipe of 25 mm diameter shall be provided. c) Two numbers of 25 mm diameter aluminium pipe railing with sufficient number of aluminium double socket brackets shall be provided to the rear body over the deck. d) A heavy duty towing hook shall be provided and fitted the rear bumper by means of nuts and bolts. e) Quick removable type wire mesh guard made from 25 mm × 25 mm size mild steel wire mesh of 1.6 mm covered in mild steel angle frame shall be provided to all the glasses of driver-cum-crew cabin
		5.13	**Provision for Stowage of Equipments** For all water fittings like branch pipes, etc, quick release type couplings are provided which enables the operator to locate the desired equipment instantly and thereby save valuable time at the time of fire. These couplings also ensure that none of the item damage the internal paneling and thereby increase the life of the vehicle. Suitable clamps, brackets, holders, etc. are provided for all other items.

		5.14	**Ladder Gallows** Gallows shall be provided to carry a 10.5 m, aluminium trussed type extension ladder. The design shall be such that the ladder can be released without difficulty from a reasonably accessible position and shall embody rollers to permit easy withdrawal by one man. Means shall also be provided for locking the ladder when stowed.
		5.15	**Tool-Kit Container** A specially fitted recessed tray for the normal kit of tools, carried on the appliance, shall be provided.
		5.16	**Stability** The stability of the appliance shall be such that when under fully equipped and loaded conditions (but excluding crew), if the surface on which the appliance stands is tilted to either side, the point at which overturning occurs is not passed at an angle of 30 degree from the horizontal.
6	WORKMANSHIP AND FINISH	6.1	All parts of the appliance shall be of good workmanship and shall have streamlined finish.
		6.2	The appliance shall be painted fire red colour conforming to Shade No. 536 of IS 5. The paint shall conform to IS 2932.
7	INSTRUCTION BOOK, ACCESSORIES AND EQUIPMENT	7.1	**Instruction Book or Books** Instruction book(s) for the guidance of the 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 numbers of all the wearing parts.
		7.1.1	**General Instructions** The following description of the pump shall be included in the instruction handbook: a) General description; b) Range of usable ambient temperature; c) Design and function of the pump, including important data (for example number of stages, shaft seal, primer materials, drainage, lubrication points); d) Range of usable fluid temperatures; e) Maximum operating pressure; f) Information of operating controls; g) Design, function and use of safety protection devices; h) Shut off valves and pump connections; i) Additional descriptions for accessories; j) Additional descriptions for accessories; k) Cross-sectional drawing of the pump or exploded diagram; and l) Maximum angle of inclination of operation.
		7.1.2	**Installation/Assembly** The following instructions for installation/assembly shall be included in the installation handbook: a) Instructions for installer/fabricator to make a complete risk assessment for the final fire tender. b) Initial installation instructions. c) Data on installation site including 1) Space requirements for operation and maintenance. 2) Inspection instruction before start of installation. 3) Details of base/foundation. 4) Installation of pump assembly. 5) Correct installation of safety devices and control system. 6) Correct installation of pressure relief valve, thermal relief

			valve or other devices in accordance with pressure containing parts and components of the pump, if not supplied the pump manufacturer. 7) Adjustable safety devices shall be contained in enclosures that can only be opened by use of tools
		7.1.3	**Maintenance and Servicing** The following instruction for maintenance and servicing of the pump shall be included in the instruction handbook: a) Maintenance intervals and scope. b) Maintenance procedures and inspections, including, 1) Consumable items list of spare parts and special tools; 2) Monitoring during operations; 3) Dry preventive action to be taken (for example regarding parts subject to wear lubrication, sealing medium); 4) Warning on risks arising from incorrect adjustment of safety devices; 5) Warning on risks arising from removing the pump inlet screen; and 6) Tightening of fasteners.
		7.2	**Accessories** The following accessories shall be provided in addition to those normally fitted on modern commercial vehicles: a) *Fire bells* -250 mm diameter fire bell shall be mounted externally and shall be capable of being operated from within the driving compartment. The bell shall be of the hand operated type. b) *Head lamps — Two.* c) *Fog lamps — Two.* d) *Reversing light — Lamp suitably situated to assist reversing.* e) *Amber blinkers lights — Situated on the head of the driving compartment.* f) *Trafficators-Illuminated with indicating lights on instrument panel or in any other prominent position in driving compartment.* g) *Wind screen wipers.* h) *Tools - All tools required for normal routine maintenance of the appliance which are not included in the kit for the chassis.* i) Siren - Battery operated. j) Search light -Adjustable to give flood or beam light, mounted in a convenient position but capable of being readily disconnected and mounted on a tripod away from the appliance, complete with tripod and with not less than 30 m of TRS cable on a reel mounted on the appliance. k) Spot light -Adjustable, mounted in a convenient position on the near side of the driving compartment. l) Inspection lamp-Protected type on wander lead with plug. A socket shall be provided in the control panel in the driver‘s cab for plugging in the lamp. m) Tail lamps -Two of combined stop and tail. n) Rear reflectors. o) Cab, instrument panel and locker, light. p) Public Address (PA) system.
8	MARKING		Each appliance shall be clearly and permanently marked with the following information: a) Manufacturer‘s name, or trade-mark, if any; b) Serial number of the pump body and year of construction; c) Capacity of pump, in l/min;

			d) Capacity of water tank, in litre; e) Nominal speed, in rev/min; f) Transmission ratio of the pump gear; g) Working pressure, in kg/cm2; h) Direction of rotation of the pump shall be indicated by an arrow and this shall be permanently marked on the pump body; and i) Lubrication points, drainage devices, etc, shall be colour coded.

LIST OF REFERRED INDIAN STANDARDS **Annex-A**

S.No	IS No	Title
1.	5 : 2007	Colours for ready mixed paints and enamels (fifth revision)
2.	273 : 1990	Specification for picks and beaters (fourth revision)
3.	318 : 1981	Specification for leaded tin bronze ingots and castings (second revision)
4.	513 : 2008	Specification for cold-rolled low carbon steel sheets and strips (fifth revision)
5.	617 : 1994	Specification for aluminium and aluminium alloy ingots and castings for general engineering purposes (third revision)
6.	636 : 1988	Specification for non-percolating flexible fire fighting delivery hose (third revision)
7.	703 : 1966	Specification for axes (second revision
8.	704 : 1984	Specification for crow-bars and clawbars (second revision)
9.	737 : 1986	Wrought aluminium and aluminium alloy sheet and strip for general engineering purposes (third revision)
10.	841 : 1983	Specification for steel hammers (second revision)
11.	884 : 1985	Specification for first-aid hose reel for fire fighting (first revision)
12.	901 : 1988	Specification for couplings, double male and double female, instantaneous pattern for fire fighting (third revision)
13.	902 : 1992	Specification for suction hose couplings for fire fighting purposes (third revision)
14.	903 : 1993	Specification for fire hose delivery couplings, branch pipe, nozzles and nozzle spanner (fourth revision)
15.	904 : 1983	Specification for 2-way and 3-way suction collecting heads for fire fighting purposes (second revision)
16.	905 : 1988	Specification for delivery breechings, dividing and collecting instantaneous pattern for fire fighting purposes (second revision)
17.	906 : 1988	Specification for revolving branch pipe for fire fighting (third revision)
18.	907 : 1984	Specification for suction strainers, cylindrical type for fire fighting purposes (second revision)
19.	910 : 1980	Specification for combined key for hydrant, hydrant cover and lower valve (second revision)
20.	927 : 1981	Specification for fire hooks (second revision)
21.	952 : 1986	Specification for fog nozzle for fire brigade use (first revision)
22.	1084 : 005	Manila ropes — Specification (fourth revision)
23.	1931 : 2000	Engineer‘s files — Specification (third revision)
24.	2097 : 1983	Specification for foam making branch pipe (first revision)

25.	2171 : 1999	Specification for portable fire extinguishers, dry powder (cartridge type) (fourth revision)
26.	2871 : 1983	Specification for branch pipe universal for fire fighting purposes (first revision)
27.	2932 : 2003	Enamel, synthetic, exterior (a) Undercoating, (b) Finishing-Specification (third revision)
28.	3582 : 1984	Specification for basket strainers for fire fighting purposes(cylindrical type)(first revision)
29.	4571 : 1977	Specification for aluminium extension ladders for fire brigade use (first revision)
30.	4643 : 1984	Specification for suction wrenches for fire brigade use (first revision)
31.	4770 : 1991	Specification for rubber gloves for electrical purposes (first revision)
32.	4927 : 1992	Unlined flax canvas hose for fire fighting — Specification (first revision)
33.	4928 : 1986	Specification for delivery valve for centrifugal pump outlets (first revision)
34.	5098 : 1969	Specification for cross-cut and rip saws
35.	5131 : 2002	Dividing breeching with control for fire brigade use — Specification (second revision)
36.	5612	Specification for hose-clamps and hose bandages for fire brigade use: (Part 1) : 1977
		Hose clamps (first revision) (Part 2) : 1977 Hose bandages (first revision)
37.	5714 : 1981	Specification for hydrant stand pipe for fire fighting (first revision)
38.	6149 : 1984	Specification for single-ended open jaw adjustable wrenches (first revision)
39.	6603 : 2001	Stainless steel bars and flats — Specification (first revision)
40.	8423 : 1994	Specification for controlled percolating hose for fire fighting (first revision)
41.	8442 : 2008	Functional requirements for stand post type water monitor for fire fighting (first revision)
42.	10245	(Part 2) : Respiratory protective devices — 1994 breathing apparatus: Part 2 Open circuit breathing apparatus (first revision)

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37.	5714 : 1981	Specification for hydrant stand pipe for fire fighting (first revision)
38.	6149 : 1984	Specification for single-ended open jaw adjustable wrenches (first revision)
39.	6603 : 2001	Stainless steel bars and flats — Specification (first revision)
40.	8423 : 1994	Specification for controlled percolating hose for fire fighting (first revision)
41.	8442 : 2008	Functional requirements for stand post type water monitor for fire fighting (first revision
42.	10245	(Part 2) : Respiratory protective devices — 1994 breathing apparatus: Part 2 Open circuit

Schedule of Equipments to be stowed in the Appliance Annex-B

S. No.	**Item**	**Qty.**
1.	Aluminium extension ladder 10.5 Meters	01 No.
2.	Rubber lined delivery hose according to Type II of IS 636 in 22.5 m or 15 m length fitted with 63 mm delivery hose couplings	180 m

3.	Suction hose of rubber of 100 mm internal diameter in 2.5 m lengths fitted with 100 mm suction hose	10 m
4.	3-way suction collecting head 100 m (IS 904)	01 No.
5.	Suction wrenches for 100 mm suction coupling (IS 4643)	02 Nos.
6.	Suction strainer 100 mm (IS 907)	01 No.
7.	Basket strainer (cylindrical type) IS 3582	01 No.
8.	Dividing breeching with control instantaneous pattern 63 mm (IS 5131)	01 No.
9.	Collecting breaching instantaneous pattern 63 mm (IS 905)	01 No.
10.	Hydrant-stand pipe-two way (IS 5714)	01 No.
11.	Double female coupling (IS 901)	02 Nos.
12.	Hydrant connection, 63 mm double armoured hose 1 m long with 63 mm female instantaneous pattern delivery couplings at both ends (IS 901)	02 Nos.
13.	Combined key for hydrant, hydrant cover and lower valve (IS 910)	02 Nos.
14.	Fog nozzle with extension applicator with fog head (IS 952)	01 No.
15.	Hand controlled branch for 63 mm size hose coupling	01 No.
16.	Branch pipe, universal (IS 2871)	01 No.
17.	Branch with revolving head (IS 906)	01 No.
18.	Branch pipe, universal (IS 903)	04 Nos.
19.	Nozzle of sizes 12 mm, 16 mm, 20 mm and 32 mm (two each) IS 903	10 Nos.
20.	Adaptor for 100 mm suction 2 female screw coupling and 63 mm male instantaneous	02 Nos.
21.	Adaptor double female instantaneous pattern 63 mm	02 Nos.
22.	Adaptor double male instantaneous pattern 63 mm	02 Nos.
23.	Nozzle spanners (see IS 903)	02 Nos.
24.	Portable electric box lamp with rechargeable accumulator	02 Nos.
25.	Hand lamp (torch — rechargeable)	02 Nos.
26.	Self contained breathing apparatus compressed air type) complete with spare cylinder and tool kit [IS 10245 Part-2)	01 Set
27.	Portable fire extinguisher, dry powder type, 2 kg (IS 2171)	01 No.
28.	Foam making branch FB-4 with pick up tube (IS 2097)	01 No.
29.	Lowering line - 50 mm hemp or terylene, 40 m long having two ends spliced in and one end with a running noose (IS 1084)	01 No.
30.	Long line - 50 mm manila 30 M long	01 No.
31.	Short line -50 mm manila 15 M long	01 No.
32.	Canvas buckets	02 Nos.
33.	First aid box for 10 persons	01 Set
34.	Rubber gloves (in case) (IS 4770)	01 pair
35.	Asbestos guantlets (in case)	01 pair

36.	Axe, large (IS 703)	01 No.

37.	Spade	01 No.
38.	Pick axe (IS 273)	01 No.
39.	Crow bar (IS 704)	01 No.
40.	Sledge hammer, 6.5 kg (IS 841)	01 No.
41.	Carpenter‘s saw, 60 cm (IS 5098	01 No.
42.	Spanner, adjustable, 30 cm long	01 No.
43.	handle (see IS 6149)	01 No.
44.	Door breaker	01 No.
45.	Hydraulic jack — 7.5 tonne	01 No.
46.	Fire hook (IS 927)	01 No.
47.	Tool kit	01 No.
48.	Grease gun	02 Nos.
49.	Oil feeder	01 No.
50.	Can oil — 2 litre	01 No.
51.	Funnel for oil or fuel filling	01 No.

4. Drawings:

The bidder will submit detailed general arrangement drawings in accordance to technical specification, RTO
norms, other safety norms and circular/guidelines of GoI/GoR.

5. Inspections and Tests

The following inspections and tests shall be performed:

S. No	Brief Description of Item	Description of Inspection and/ or Trial and/ or Test for full conformance of the product to the specifications given in Bidding Document and/ or to the Samples,
1.	As listed above goods	**Inspections:** As per specifications as per relevant IS code
2.		**Tests: as per technical specification and GoI/GoR norms**
3.	Third Party Inspection	Stage wise inspections/test of the above Fire Tender shall be carried out at fabricators site by Department inspecting officers/third party inspecting agency (RITES). The inspection charges will be paid by agency. No payment will be paid the Corporation for third party inspection.

Notes :

Note : 1

Insurance & Registration of vehicles:-The supplier shall responsible to arrange for final registration and insurance of vehicles in the name of the concerning ULB, before final payment by the Procuring Entity. The supplier shall arrange basic comprehensive insurance covering at least theft, fair, riots and road accident for one year. The price offered by the bidder shall include all such expenses of insurance, RTO clearance, registration etc.

Note : 2

- *The Supplier shall bear the cost of all sampling and testing, and/ or pre-dispatch inspections at its premises.*

- *Samples shall be picked up as per the procedure by the Procuring Entity from the lot offered for supply.*
- *Pre-dispatch inspections and testing shall be offered by the Supplier well in time before the scheduled date of dispatch.*

Specification of Foam TANK:

A Foam Tank shall be installed on the Fire Tender. That shall tanks have the following parameters:

- Capacity **500 Liters**
- Material of Construction SS-304
- Bottom Plate Thickness 4MM
- Side Plate Thickness (Die Pressed Stiffened on Two Sides) 4MM
- Top Plate Thickness 4MM
- Baffles Thickness 3MM
- Numbers and Size of Manhole 1 X 450MM
- Numbers and Size of Cleaning Hole (Bottom of Tank) 1 X 250MM
- Drain Pipe on Cleaning Hole 25MM
- Overflow Pipe Size 25MM
- Tank Filling Line Size 25MM
- Tank to inductor line size (For pump capacities up to 2250lpm) 25mm.

All valves shall be ball valve.