



**DELHI AVIATION FUEL FACILITY PRIVATE LIMITED**

**DELHI AVIATION FUEL FACILITY PRIVATE LIMITED  
AVIATION FUELLING STATION  
SHAHBHAD MOHAMMADPUR  
IGI AIRPORT  
NEW DELHI-110061**



TENDER NO: DAFFPL/MOD/FF/2020-21/15

INVITING TENDER FOR DESIGN, SUPPLY, INSTALLATION,  
TESTING AND COMMISSIONING OF AUTOMATIC NOVEC 1230  
GAS BASED FIRE SUPPRESSION SYSTEM FOR CONTROL ROOM

BID DUE DATE & TIME: 1500 Hrs. IST on 26<sup>th</sup> February 2021

OPENING OF TECHNICAL BIDS: 1100 Hrs. IST on 27<sup>th</sup> February 2021



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PRICE BID FORMAT

NOTE: BIDDERS ARE REQUESTED TO SIGN AND STAMP ALL THE PAGES OF THE TENDER DOCUMENT AND SEND THE SAME BACK IN THEIR OFFER AS A TOKEN OF UNCONDITIONAL ACCEPTANCE OF TENDER FIRMS.

THE DEVIATIONS, IF ANY, SHOULD BE MENTIONED SEPARATELY ON BIDDER’S LETTER HEAD IN TECHNICAL BID. THE DEVIATIONS MENTIONED ANYWHERE ELSE SHALL NOT BE CONSIDERED. IN ABSENCE OF DEVIATION SHEET IT WOULD BE CONCLUDED THAT BIDDER HAS ACCEPTED THE TENDER TERMS WITHOUT ANY DEVIATIONS. CORRECTIONS IN TENDER DOCUMENT WILL NOT BE ACCEPTED.



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## TENDER NOTICE DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

### INVITING TENDER FOR DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUTOMATIC NOVEC 1230 GAS BASED FIRE SUPPRESSION SYSTEM FOR CONTROL ROOM AS PER SPECIFICATIONS AS REQUIRED

**TENDER NO: DAFFPL/MOD/FF/2020-21/15**

**Delhi Aviation Fuel Facility (P) Ltd (DAFFPL)** invites bids from eligible bidders for DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUTOMATIC NOVEC 1230 Gas based Fire Suppression System Works.

**Brief Scope of work:**

We intend to provide GAS BASED FIRE SUPPRESSION SYSTEM as per specification as required. Scope of supply includes DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING with other associated amenities at our DAFFPL facility.

Bid Security (EMD):	As mentioned in the Tender document
Date, Time & Venue for Voluntary Pre-bid Meeting:	11 <sup>th</sup> February 2021; 1500 HRS (IST) at DAFFPL, Aviation Fueling Station, Shahabad Mohammadpur, New Delhi-110061
Bid Due Date, Time & Place of Submission:	Upto 15:00 HRS (IST) on 26 <sup>th</sup> February 2021, at e-Tendering Portal of DAFFPL

Detailed Invitation for Bids (IFB) along with Pre-qualification Criteria, Bid Document Corrigenda can be viewed and downloaded from DAFFPL's website: <http://www.daffpl.in>

**Chief Executive Officer**  
DAFFPL, New Delhi  
9810081078



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## CHAPTER 1: INTRODUCTION (COVERING NOTE)

**Delhi Aviation Fuel Facility Private Limited (DAFFPL)** is a Joint Venture comprising Indian Oil Corporation Ltd. (IOCL), Bharat Petroleum Corporation Ltd. (BPCL), and Delhi International Airport (P.) Ltd. (DIAL). We provide the infrastructure aimed at ensuring an uninterrupted flow of Aviation Turbine Fuel (ATF) to all type of aircrafts at the Indira Gandhi International Airport, New Delhi (IGI Airport) as per international benchmarking.

The bidder/ contractor shall refer to various sections of this tender document for detailed scope of work. It is contractor's responsibility to execute the job in all respects as per detailed drawings, documents / specification furnished by consultant / owner and as per applicable codes, standards & in line of statutory requirements.

The field circumstances shall also be taken into consideration and methods suitable to the site conditions shall be adopted with concurrence of the Engineer-in-charge and in line with manuals, instructions of respective equipment and specified codes and standards. The successful accomplishment of the project is greatly influenced by the team work, workmanship of the workers and supervisors.

The Contractor shall employ only such workers and supervisors who have considerable experience of similar work and who can work, temperamentally in good harmony and co-operation.

**Delhi Aviation Fuel Facility Private Limited (DAFFPL)** invites tenders in prescribed tender form under two-bid system. For viewing details including EMD, BID QUALIFICATION CRITERIA etc. please visit our e-Tendering web site [www.daffpl.in](http://www.daffpl.in) and go to tender section by clicking the link "Tenders".

The bids are to be submitted in the e-Tendering portal of **Delhi Aviation Fuel Facility Private Limited (DAFFPL)**.



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1. The Tender is floated in Two Bid system consisting of Technical Bids (Bid Qualification Criteria - BQC, Technical plus Commercial) and Price Bids.

Part-I : Bid Security / EMD in accordance with tender document.  
Part-II : BQC (Bid qualification criteria), Technical & commercial Bid, duly filled in & along with all supporting as requested to be submitted in Physical form in the Tender Box.  
Part -III : Price Bid.

2. The bidder should be able to construct the entire size/type/quantity bid by them. Bidders cannot bid for part items or part quantity.
3. Firstly, the Technical bid (BQC & Techno commercial bids) shall be opened. The Bids shall be initially scrutinized by a team as per tender requirements of BQC (Bid qualification criteria). Technical cum commercial bids of only those vendors who qualify the BQC will be processed further. The price bids of only techno-commercially qualified bidders will be opened, evaluated and shortlisted for Placement of Work Order.
4. The bids submitted should be valid for **four months** from the due date of bid submission for Owners acceptance. Once accepted it will remain firm till completion of contracts/orders.
5. We request the bidder to carefully go through all tender documents before submitting the offer. Please note that any exceptions or deviations to the tender document are necessarily to be recorded in the attached deviation statement only. Any exceptions/deviations brought out elsewhere in the bid shall not be considered.
6. The bidders may be invited for a presentation to DAFFPL during Techno-commercial evaluation before price bid opening.
7. The bidders to provide their bank details/ PAN / Goods & Service Tax Registration No. / VAT registration No., as applicable for updating vendor master file. You are also requested to keep us informed of any change in address / status of your business / contact details including email address etc.
8. Party can quote with the deviations as referred in Point No.6 above. Please refer query end date / time in tender calendar after which no query posted by bidder shall be considered. However, DAFFPL reserves the right to respond the queries after cutoff date / time mentioned in tender calendar.



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9. Please note that queries related to scope of job, tender specifications, terms & conditions etc., should be submitted by means of letter/E mail to reach the owner's office not later than one week before the meeting. It may not be practicable to answer queries received late, but queries and responses/clarifications will be posted in the form letter, E-mail within one week from the date of Pre-Bid Meeting. Any modification in the bid document that may become necessary as a result of the Pre-Bid meeting shall be made by the owner exclusively through the issues of corrigendum/ addendum posted at web site and not through the minutes of the pre-bid meeting.

### 10. UNSOLICITED POST BID MODIFICATION

Bidders are advised to quote strictly as per terms and conditions of the Bidding Document. After tender submission due date & time/ extended due date & time (as the case may be) the bidders shall not make any subsequent price changes, whether resulting or arising out of any technical / commercial clarifications sought/allowed on any deviations or exceptions mentioned in the bid unless discussed and agreed by DAFFPL in writing.

11. EMD & Techno Commercial bid shall be opened on **27<sup>th</sup> February 2021**. Price Bid of only those bidders whose offer is found meeting both BQC & techno-commercially acceptable, shall be opened on a later date as per convenience of DAFFPL.

12. DAFFPL reserves the right to accept any tender in whole or in part or reject any or all tenders without assigning any reason. DAFFPL reserves right to accept any or more tenders in part. Decision of DAFFPL in this regard shall be final and binding on the bidder.

QUERIES AND CLARIFICATIONS: Any query or clarification with regard to this tender may please be referred to below address & phone nos. on any working day during office working hours

Mr. M Vishnu Vardhan  
Assistant Manager - Projects  
[Vishnu.vardhan@daffpl.in](mailto:Vishnu.vardhan@daffpl.in), [rakesh.arora@daffpl.in](mailto:rakesh.arora@daffpl.in), [manish.kumar@daffpl.in](mailto:manish.kumar@daffpl.in)  
8826000228, 9810640818

13. GOVERNING LAWS: The laws of Union of India shall govern all matters concerning the tender. Any issue arising related to the tender or the selection process shall be adjudged by the courts in Delhi alone.

14. A Pre-bid meeting is scheduled for **11<sup>th</sup> February 2021 at 1500 Hrs IST** at the office of DAFFPL, New Delhi. All prospective bidders can participate in the same. Any clarification regarding tender shall be sorted out during



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the pre-bid meeting.

- a. The purpose of the pre-bid meeting is to clarify any doubts of the BIDDER on the interpretation of the provisions of tender.
- b. Bidder(s) are requested to submit their queries, mentioning form name, clause no. & clause, by a letter / e-mail to our office as per schedule in order to have fruitful discussions during the meeting.
- c. All the Bidder(s) are requested to attend the pre-bid meeting to be held at DAFFPL Office as per schedule.

**15. Earnest Money Deposit (EMD) (also referred to as Bid Security):** Bidder shall be required to submit the Earnest Money Deposit (EMD), either in the form of Bank guarantee as per format (provided as Annexure) or PAY ORDER or BANK DRAFT (in favour of Delhi Aviation Fuel Facility Private Limited, payable at New Delhi) at our office. The EMD in either form has to be submitted on or before the due date & due time of bid submission of this tender with a covering note mentioning the tender no.

- a. The bidders not submitting EMD by due time & date shall be rejected & their bids shall not be evaluated further.
- b. **The EMD amount shall be 1.0 (One) Lakh INR**
- c. Firms registered with National Small Scale Industries (NSIC)/MSME of India are exempted from submission of bid security. Central Public Sector Enterprises of India and Firms registered with Nation Small Scale Industries Corporation (NSIC) of India are exempted from submission of Bid Security. Central Public Sector Enterprises are requested to give a self-declaration on their letter head to this effect. Bidders registered with NSIC of India are also requested to submit self-declaration on their letter head to this effect along with a copy of their Valid Registration certificate, specifying limit of volume and other details which should be submitted.

**16. Site Restriction:** The job must be done in an area which is inside the premises of DAFFPL Fuel Facility. Successful bidder will have to follow all the security norms and procedures for entry and exit to the facility. The job timings will have to change as per the permissions obtained from Operation Dept. All the entry procedures for labours / machinery / raw materials as per the rules of the DAFFPL will have to be followed by the vendor. Contractor shall visit the site and ensure familiarity with the working condition / limitations at the site. Also, the entire works are to be carried out in an operating Location. The contractor may have to follow the timings of the facility and must work under restricted conditions. The normal working hours of facility is 0930 Hrs to 1800 Hrs on Monday to Saturday except holidays. Working beyond above normal working hours



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/holidays /Sundays are to be with prior permission of Engineer in charge and relevant facility officers. Contractor is required to plan his work within the normal working hours and days and accordingly he has to mobilize the resources to complete the job within the scheduled time. However, all efforts will be made by DAFFPL to give extended working time beyond normal working time in order to help the contractor for early completion of the job. No additional payment / charges shall be payable for such works. Not getting permission for working on holidays/ Sundays or beyond normal working hours will not be considered as reason for delay in work. The contractor and his personnel have to obey all rules and regulations of the plant. Trained and experienced supervisor/ engineer are required to be present at the work spot always.

All hot work like welding, cutting, grinding etc. needs to be done in the closed booth of asbestos cloth. No extra claim on account of the same will be considered. Also the shutdown jobs may get delayed due to operational requirement. Any extra claims on account of the same will not be entertained.

The tenderer must visit the site of the tender and familiarize himself with location, operating / working conditions as well as any other local factors which could influence the working before quoting for the job. His quote should take care of any such restrictions; conditions etc and any claim afterwards will not be entertained. **It is suggested that the Tenderer must visit the site in order to have a better idea of site conditions and factors.**

17. **Completion Time:** Time is the essence of the contract. The time period of contract is **02 (Two) months** from the date of Letter of Intent including monsoon period. **The time includes necessary time required for mobilizations and demobilizations after the execution of work and includes monsoon period.** Successful bidder is required to provide a bar chart /schedule showing the activities/events with time along with the Technical bid to be scheduled accordingly.
18. The work is required to be done in a working/operating location, the party has to get necessary Hot/cold work permits from the concerned officer in plant as per OISD standards and all workmen should be provided with necessary safety helmet, safety belts, safety shoes and other standard safety equipment's. Any delay on account of non-adherence to safety norms, rules and regulations of plant as well as obtaining work permits from the plant shall not be accounted for the delay in completion of job.





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19. **Receipt & storage of material at Site:** Contractor is required to make his own arrangement for unloading and storage of materials at site. Contractor is required to inform us prior to dispatch of materials and his representative required to be available for receipt and unloading of materials at site.
20. The successful vendor if required, must arrange and submit to fuel facility the proper **POLICE VERIFICATION DOCUMENTS** of all the labours, site in charges, supervisors, welders, grinders and all associated workmen who will be coming inside the terminal for carrying out related jobs.
21. All the debris, scrap, cut pieces, etc coming out of fabricated plates, excavated earth, area cleaning will have to be shifted by the vendor to a location inside or outside the terminal premises as per the instruction of DAFFPL site in-charge and no extra payment will be done for the same.

### THE FORMS /ATTACHMENTS TO THIS TENDER ARE AS UNDER:

1. Covering Note – CHAPTER: 1
2. Instructions To Bidders - CHAPTER: 2
3. Bid-Qualification Criteria - CHAPTER: 3
4. Performance of Work – CHAPTER: 4
5. General Purchase Conditions- CHAPTER: 5
6. Technical Specification Documents - **(Attached separately as Annexure I)**
7. Annexure attached are as follows:
  - Annexure II – DEVIATION SHEET
  - Annexure III – DECLARATION SHEET
  - Annexure IV – FORMAT FOR DRAFT BANK GUARANTEE IN LIEU OF BID SECURITY (EMD)
  - Annexure V - FORMAT DRAFT COMPOSITE BANK GUARANTEE FOR SECURITY DEPOSIT/PERFORMANCE GUARANTEE
  - Annexure VI – FORM OF LETTER OF UNDERTAKING
  - Annexure VII – DECLARATION TO BE SUBMITTED ALONGWITH Technical BID
  - Price Bid

Thanking you,  
Yours faithfully,  
For DELHI AVIATION FUEL FACILITY (P) LTD.  
**Chief Executive Officer**



## CHAPTER 2: INSTRUCTIONS TO BIDDERS

1. The bidder shall bear all costs associated with the preparation and submission of the bid and Owner will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
2. Vendor is requested to submit their bids taking full notice of all the technical specifications, terms and conditions, forms & attachments to this tender. Bids must be submitted in Physical form only.
3. Owner reserves the right to accept / reject any or all bid qualification documents at their sole discretion without assigning any reason whatsoever.
4. Owner is not responsible for any delays from bidder end.
5. Owner reserves the right to make any changes in terms and conditions of purchase before due date of bid submission and to reject any or all bids received incomplete.
6. Undertaking by the bidder:
  - a. I/we hereby undertake that the statements made herein/information given in the bids through Physical Tendering system/annexure/forms referred are true in all respects and that in the event of any such statement or information being found to be incorrect in any particular, the same may be construed to be a misrepresentation entitling DAFFPL to avoid any resultant contract.
  - b. I/we further undertake as and when called upon by DAFFPL to produce, for its inspection, original(s) of the document(s) of which copies have been annexed hereto.
7. Owner, at its discretion reserves the right to verify information submitted by the bidders.
8. Bidder to submit documents/information to satisfy the bid qualification criteria. Bidders should also be able to produce further information as and when required by DAFFPL with in a time limit of 15 days.
9. DAFFPL reserves their right to negotiate the quoted prices with lowest bidder.



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10. Bidders would be qualified based on data and documents submitted by them.
11. Owner's decision on any matter regarding short listing of vendors shall be final and no corresponding in this regard will be entertained.
12. The vendors who are on IOCL/BPCL/DIAL holiday list or delisted will not be considered.
13. The bidder is expected to examine all instructions, forms, attachments, terms and specifications in the tender document. The entire tender document together with all its attachments thereto, shall be considered to be read, understood and accepted by the bidder, unless deviations are specifically stated seriatim by the bidder. Failure to furnish all information required in the tender document or submission of a bid not substantially responsive to the tender documents in every respect will be at bidder risk and may result in the rejection of his bid. The bidder scope of supplies as specified in the material requisition shall be in strict compliance with the scope detailed therein and in the bid document.
14. Bidders in their own interest shall ensure that they submit their bid, complete in all respects, well within the specified bid due date and time. No relaxation shall be given for delay due to any unforeseen event in submission of bid.
15. At any time prior to the bid due date, we may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bid document. The amendment will be notified through our portal [www.daffpl.in](http://www.daffpl.in) to all prospective bidders and will be binding on them. In order to afford prospective bidder, reasonable time in which to take the amendment into account in preparing their bids, we may, at our discretion, extend the bid due date.
16. The bid prepared by the bidder and all correspondence/ drawings and documents relating to the bid exchanged by bidder and the owner shall be written in ENGLISH language, provided that any printed literature furnished by the bidder may be written in another language so long as accompanied by an ENGLISH translation, in which case, for the purpose of interpretation of the bid, the ENGLISH translation shall govern.
17. Declaration with the bid qualification criteria that bidder has not been banned or delisted by any Government or quasi Government agencies



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or Public Sector Undertaking (PSU) as per declaration format (provided as annexure) of the tender document should be submitted along with the bid.

18. Bidders are advised to submit bids based strictly on the terms & conditions and specifications contained in the tender document and not to stipulate any deviations. Each Bidder shall submit only one bid. A Bidder who submits more than one bid will be rejected. Alternative bids will not be accepted.
19. The Owner may, at its discretion, extend the bid due date, in which case all rights and obligations of the Owner and the Bidders, previously subject to the bid due date, shall thereafter be subject to the new bid due date as extended. The same will be hosted in the web site.
20. Bids shall be kept valid for 4 months from the bid due date. A bid valid for a shorter period shall be considered as non-responsive and rejected by the Owner. Notwithstanding above, the Owner may solicit the Bidder consent to an extension of the period of bid validity. The request and the responses thereto shall be made in writing. The EMD (bid security) shall also be accordingly extended.
21. Telex/ Telegraphic/ Telefax / E-mail offers will not be considered and shall be rejected.
22. No bid shall be modified subsequent to the due date & time or extension, if any, for submission of bids. Bidder(s) to note that Price changes after submission of bid shall not be allowed. In case any bidder gives revised prices/price implication, his bid shall be rejected. No bid shall be allowed to be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder. Withdrawal of a bid during this interval shall result in the forfeiture of Bidder's EMD.
23. Bids that do not meet the Bid qualification criteria as specified in the bid document shall be rejected. A bid with incomplete scope of work and/or which does not meet the technical requirements as specified in the bid document, shall be considered as non-responsive and rejected. Conditional bids will be liable for rejection.
24. The Owner will examine the bids to determine whether they are complete, whether any computational errors have been made, whether



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the documents have been properly signed and whether the bids are generally in order.

25. The bids without requisite EMD and/or not in the prescribed Performa and the time limit will not be considered and bids of such bidder(s) shall be rejected.
26. PRICE EVALUATION CRITERIA: As award is on overall landed lowest basis, part offers will be rejected. Bidder has to quote for all items in a lot for us to consider them.
27. Prior to the expiration of period of bid validity, the owner will notify the successful bidder in writing or by e-mail, that his bid has been accepted. The Notification of Award will constitute the formation of the Contract. Delivery Period shall be counted from the date of notification of award (Letter/Fax/e-mail of Intent).
28. Any efforts by a bidder to influence the owner/ in the owner bid evaluation, bid comparison or contract award decisions may result in the rejection of their bid.
29. ISSUE OF CONTRACT/ PURCHASE ORDER: After the successful bidder has been notified that his bid has been accepted, DAFFPL will send to such bidder a detailed contract/purchase order incorporating all the terms and conditions agreed between the parties. Within 15 days of receipt of the detailed purchase order, the bidder shall sign and return to the owner the duplicate copy of the order as a token of their acknowledgement.
30. Vigil Mechanism: DAFFPL has developed the Vigil Mechanism to deal with references/ grievances, if any, that is received from bidders who participated / intends to participate in the tender. The details of the same are available on our website [www.daffpl.in](http://www.daffpl.in)
31. VERIFICATION BY OWNER: All statements submitted by bidder regarding experience, manpower availability, equipment and machinery availability etc., are subject to verification by the owner either before placement of order or after placement of order. If any data submitted by the bidder at the bid stage is found to be incorrect, the offer is liable to be rejected or the contract/order is liable to be terminated.
32. EVALUATION OF BIDS



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- a. Qualification of Bidder: The experience details and financial & technical capabilities of the bidder(s) shall be examined to determine whether the bidder(s) meet the Bid Qualification Criteria mentioned in the INVITATION FOR BIDS (IFB).
- b. The Owner will examine the bids to determine whether they are complete, any computational errors have been made, whether the documents have been properly signed and whether the bids are generally in order.
- c. The bids without requisite Bid Security and/or not in the prescribed proforma will not be considered and bids of such bidder Bidder(s) shall be rejected.
- d. To assist in the examination, evaluation and comparison of technical bids, the owner/ may, at its discretion, ask the Bidder clarifications on the bid. The request for such clarifications and the response thereto shall be in writing.
- e. Prior to the evaluation and comparison of the bid, the owner will determine the substantial responsiveness of each bid to the bidding documents. For the purpose of this Article, a substantially responsive bid is one, which conforms to all the terms and conditions of the bidding document without material deviations or reservations. A material deviation or reservation is one which affects in any substantial way the scope, quality, or performance of the works or which limits in any substantial way, inconsistent with the bidding document, the DAFFPL's rights or Bidder's obligation under the contract and retention of which deviation or reservation would affect unfairly the competitive position of other bidders presenting substantially responsive bids. The owner's determination of bid responsiveness is to be based on the contents of the bid itself without recourse to the extrinsic evidence.
- f. A bid determined as substantially non-responsive will be rejected by the Owner and shall not subsequently be allowed by the Owner to be made responsive by the Bidder by correction of the non-conformity.

**Note:**

- 1) The Bid Shall be submitted in English Language Only**
- 2) For any Document submitted in any language other than English, the translation copy in English language shall be submitted.**



## CHAPTER 3: BID-QUALIFICATION CRITERIA:

Bidders need to meet following pre-qualification criteria to qualify for short-listing as a successful vendor, who would be considered for tendering process for the job of “Design, supply, installation, testing and commissioning of automatic NOVEC 1230 gas-based fire suppression system for control room **at DAFFPL**”

### Similar Works Experience:

Experience of having successfully completed similar works during last 3 years i.e. upto **31.03.2020** should be either of the following:

- Two similar completed works each costing not less than the amount equal to **Rs 13,50,000.00**
- OR**
- One similar completed works costing not less than the amount equal to **Rs 18,00,000.00**

### Note:

- a. The value of completed job to be submitted by prospective bidders shall be compared with values as prescribed above. There shall be no deduction against Taxes.
- b. The completed job value shall be exclusive of AMC / CAMC value.

### DEFINITION OF SIMILAR WORKS:

#### Experience in successful completion of:

“Design, supply, installation, testing and commissioning of clean agent (in line with IS 15493/NFPA standard/ NOVEC 1230) based fire extinguishing system (CAFES) with or without allied works.”

Contractor not meeting the above similar work order definition need not apply.

### Financial criteria for Job:

- Bidder shall have minimum average annual turnover of Rs.25 Lakhs as per audited financial results in the preceding three financial/calendar years. “Turnover shall mean Consolidated Turnover in case of a Bidder having wholly owned subsidiaries”
- Both the above criteria (Technical & Financial) to be met for acceptance of the bid.



## OTHER INFORMATION OF PQC

1. Parties who are affiliates of one another can decide which affiliate will make a bid. Only one affiliate may submit a bid. Two or more affiliates are not permitted to make separate bids directly or indirectly. If 2 or more affiliates submit a bid, then any one or all of them are liable for disqualification. However up to 3 affiliates may make a joint bid as a consortium, and in which case the conditions applicable to a consortium shall apply to them. "Affiliate" of a Party shall mean any company or legal entity which:
  - a. Controls either directly or indirectly a Party, or
  - b. Which is controlled directly or indirectly by a Party; or
  - c. Is directly or indirectly controlled by a company, legal entity or Partnership which directly or indirectly controls a Party. "Control" means actual control or ownership of at least a 50% voting or other controlling interest that gives the power to direct, or cause the direction of, the management and material business decisions of the controlled entity.
2. Bids may be submitted by:
  - a. A single person/ entity (called sole bidder);
  - b. A newly formed incorporated joint venture (JV) which has not completed 3 financial years from the date of commencement of business;
  - c. A consortium (including an unincorporated JV) having a maximum of 3 (three) members;
  - d. An Indian arm of a foreign company.
3. Fulfillment of Eligibility criteria and certain additional conditions in respect of each of the above 4 types of bidders are stated below, respectively:
  - a. The sole bidder (including an incorporated JV which has completed 3 financial years after date of commencement of business) shall fulfill each eligibility criteria.
  - b. In case the bidder is a newly formed and incorporated joint venture and which has not completed three financial years from the date of commencement of business, then either the said JV shall fulfill each eligibility criteria or any one constituent member/promoter of such a JV shall fulfill each eligibility criteria. If the bid is received with the proposal that one constituent member/promoter fulfils each eligibility criteria, then this member/promoter shall be clearly identified and he/it shall assume all obligations under the contract and provide such comfort letter/guarantees as may be required by Owner. The guarantees shall cover inter alia the commitment of the member/ promoter to complete the entire





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work in all respects and in a timely fashion, being bound by all the obligations under the contract, an undertaking to provide all necessary technical and financial support to the JV to ensure completion of the contract when awarded, an undertaking not to withdraw from the JV till completion of the work, etc.

- c. In case the bidder(s) is/are a consortium (including an unincorporated JV), then the following conditions shall apply:
- I. Each member in a consortium may only be a legal entity and not an individual person;
  - II. The Bid shall specifically identify and describe each member of the consortium;
  - III. the consortium member descriptions shall indicate what type of legal entity the member is and its jurisdiction of incorporation (or of establishment as a legal entity other than as a corporation) and provide evidence by a copy of the articles of incorporation (or equivalent documents);
  - IV. One participant member of the consortium shall be identified as the "Prime member" and contracting entity for the consortium;
  - V. This prime member shall be solely responsible for all aspects of the Bid/ Proposal including the execution of all tasks and performance of all consortium obligations;
  - VI. The prime member shall fulfill each eligibility criteria;
  - VII. a commitment shall be given from each of the consortium members in the form of a letter signed by a duly authorized officer clearly identifying the role of the member in the Bid and the member's commitment to perform all relevant tasks and obligations in support of the
  - VIII. Prime/lead member of the Consortium and a commitment not to withdraw from the consortium;
  - IX. No change shall be permitted in the number, nature or share holding pattern of the Consortium members after pre-qualification, without the prior written permission of the Owner.
  - X. No change in project plans, timetables or pricing will be permitted as a consequence of any withdrawal or failure to perform by a consortium member;
  - XI. Entities which are affiliates of one another are allowed to bid either as a sole bidder or as a consortium only;
  - XII. Any person or entity can bid either singly or as a member of only one consortium.



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- d. In case the bidder is an Indian arm (subsidiary, authorized agent, branch office or affiliate) of a foreign bidder, then the foreign bidder shall have to full fill each eligibility criteria. If such foreign company desires that the contract be entered into with the Indian arm, then a proper back to back continuing (parent company) guarantee shall be provided by the foreign company clearly stating that in case of any failure of any supply or performance of the equipment, machinery, material or plant or completion of the work in all respects and as per the warranties/ guarantees that may have been given, then the foreign company shall assume all obligations under the contract. Towards this purpose, it shall provide such comfort letter/guarantees as may be required by Owner. The guarantees shall cover inter alia the commitment of the foreign company to complete the entire work in all respects and in a timely fashion, being bound by all the obligations under the contract, an undertaking to provide all necessary technical and financial support to the Indian arm or to render the same themselves so as to ensure completion of the contract when awarded, an undertaking not to withdraw from the contract till completion of the work, etc.



## CHAPTER 4: PERFORMANCE OF WORK

### 1. EXECUTION OF WORKS:

- a. All the works shall be executed in strict conformity with the provisions of the contract documents and with such explanatory detailed drawings, specifications, and instructions as may be furnished from time to time to the contractor by the Engineer-in-Charge whether mentioned in the contract or not. The contractor shall be responsible for ensuring that works throughout are executed in the most substantial, proper and workman like manner with the quality of material and workmanship in strict accordance with the specifications following all safety requirements of DAFFPL and as stipulated in work permits as per the directions and to the entire satisfaction of the Engineer-in-Charge.
- b. Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities/materials, it is understood that the contractor shall do, so at his cost unless otherwise specified.
- c. The materials, design and workmanship shall satisfy the relevant Indian Standards, the Job specification contained herein and codes referred to. Where the job specification stipulate requirements in addition to those contained in the standards codes and specifications, these additional requirements shall also be satisfied.

### 2. COORDINATION AND INSPECTION OF WORK:

The coordination and inspection of the day-to-day work under the contract shall be the responsibility of the Engineer-in-Charge. The written instructions regarding any particular job will be normally be passed by the Engineer-in-Charge or his authorized representative. A work order book / logbook will be maintained by the Contractor for each job in which the aforesaid written instructions will be entered. These will be signed by the contractor or his authorized representative by way of acknowledgment within 12 hours. The non-maintaining of the order book or non-signing by the contractor shall not preclude the contractor from complying with the instructions.

### 3. WORK IN MONSOON AND DEWATERING:

- a. The completion of the work may entail working in the monsoon also. The contractor must maintain a minimum labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No extra rate will be considered for such work in monsoon.



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- b. During monsoon and other period, it shall be the responsibility of the contractor to keep the construction work site free from water at his own cost.
  
4. **WORK ON SUNDAYS AND HOLIDAYS:**

For carrying out work on Sundays and Holidays if needed, the contractor will approach the Engineer-in-Charge or his representative at least two days in advance and obtain permission in writing. No special compensation on this account will be payable.
  
5. **GENERAL CONDITIONS FOR CONSTRUCTION AND ERECTION WORK:**
  - a. **Place of Work:** The work has to be executed at specified premises as per the tender. Contractor should apprise himself of all the conditions prevailing in such location and the restrictions placed on movement of personnel and equipment, types of equipment and tools permitted, working methods allowed etc. in the light of security and safety regulations operative in the area. The safety regulations to be complied with, by the contractor will also be provided along with the tender. No idle time wages or compensation for temporary stoppage of work or restrictions would be paid, and the rate quoted for the various items of work should cover the cost of all such contingencies and eventualities. Substantial structures and utilities exist both above ground and underground, adjacent to the work site. (The construction activity gets restrained by the existence of such structures and utilities). Special care is necessary in transportation, storage, working on equipment's and other construction activities to protect the existing features and prevent damage to any facility. Necessary protective structures barricades etc. have to be erected at various places as directed by Engineer-in-Charge. No extra payment of such protective works will be made unless specially provided in the tender.
  - b. The working time or the time of work is 48 hours per week normally. Overtime work is permitted in cases of need and the Owner will not compensate the same. Shift working at 2 or 3 shifts per day may become necessary and the contractor should take this aspect into consideration for formulating his rates for quotation. No extra claims will be entertained by the Owner on this account.
  - c. The contractor must arrange for the placement of workers in such a way that the delayed completing of the work or any part thereof for any reasons whatsoever will not affect their proper employment. The Owner will not entertain any claim for idle time payment whatsoever.



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- d. The contractor shall submit to the Owner reports at regular intervals regarding the state and progress of work. The details and preforma of the report will mutually be agreed after the award of contract.
6. DRAWINGS TO BE SUPPLIED BY THE OWNER:
- a. Where drawings are attached with tender, these shall be for the general guidance of the contractor to enable him to visualize the type of work contemplated and scope of work involved. The contractor will be deemed to have studied the drawings and formed an idea about the work involved.
  - b. Detailed working drawings on the basis of which actual execution of the work is to proceed will be furnished from time to time during the progress of the work. The contractor shall be deemed to have gone through the drawings supplied to him thoroughly and carefully and in conjunction with all other connected drawings and bring to the notice of the Engineer-in-Charge, discrepancies, if any, therein before actually carrying out the work.
  - c. Copies of all detailed working drawings relating to the works shall be kept at the contractor's office of the site and shall be made available to the Engineer-in-Charge at any time during the contract. The drawings and other documents issued by the Owner shall be returned to the Owner on completion of the works.
7. SETTING OUT WORKS:
- a. The Engineer-in-Charge shall furnish the contractor with only the four corners of the work site and a level bench mark and the contractor shall set out the works and shall provide efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.
  - b. The contractor shall provide, fix and be responsible for the maintenance of all stacks, templates, level marks, profiles and other similar things and shall take all necessary precaution to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance should the same take place and for their efficient and timely reinstatement. The contractor shall also be responsible for the maintenance of all existing survey marks, boundary marks, distance marks and centre line marks, either existing or supplied and fixed by the contractor. The, work shall be set out to the satisfaction of the Engineer-in-Charge. The approval thereof or joining in setting out the work shall not relieve the contractor of any of his responsibilities.



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- c. Before beginning the works, the contractor shall at his own cost, provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme, for bearing marks acceptable to the Engineer-in-Charge. The centre, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct marks at the centre to enable theodolite to be set over it. No work shall be started until all these points are checked and approved by the Engineer-in-Charge in writing but such approval shall not relieve the contractor of any of his responsibilities. The contractor shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.
- d. Pillars bearing geodetic marks located at the site of work under construction should be protected and fenced by the contractor.
- e. On completion of works, the contractor must submit the geodetic documents according to which the work was carried out.

### **8. RESPONSIBILITY FOR LEVEL AND ALIGNMENT:**

The contractor shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of the work and shall rectify effectually any errors or imperfections therein. Such rectifications shall be carried out by the contractor, at his own cost, when instructions are issued to that effect by the Engineer-in-Charge.

### **9. MATERIALS TO BE SUPPLIED BY CONTRACTOR:**

- a. The contractor shall procure and provide the whole of the materials required for construction including tools, tackles, construction plant and equipment for the completion and maintenance of the works except the materials which will be issued by Owner and shall make his own arrangement for procuring such materials and for the transport thereof. The materials procured by the contractor shall be DAFFPL approved/specified quality.
- b. All materials procured should meet the specifications given in the tender document. The Engineer-in-Charge may, at his discretion, ask for samples and test certificates for any batch of any material procured. Before procuring, the contractor should get the approval of Engineer-in-Charge for any material to be used for the works.
- c. Manufacturer's certificate shall be submitted for all materials supplied by the contractor. If, however, in the opinion of the Engineer-in-Charge any tests are required to be conducted on the



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materials supplied by the contractor, these will be arranged by the contractor promptly at his own cost.

### **10. MATERIALS SUPPLIED BY OWNER:**

- a. If the specifications of the work provides for the use of any materials of special description to be supplied from the Owner's stores, price for such material to be charged therefore as herein after mentioned being so far as practicable for the convenience of the contractor but not so as in any way to control the meaning or effect of the contract. The contractor shall be bound to purchase and shall be supplied such materials as are from time to time required to be used by him for the purpose of the contract only. The sums due from the contractor for the value of the actual materials supplied by the Owner will be recovered from the running account bill on the basis of the actual consumption of materials in the work covered and for which the running account bill has been prepared. After the completion of the works, however, the contractor has to account for the full quantity of materials supplied to him as per relevant clauses in this document.
- b. The value of the materials as may be supplied to the contractor by the Owner will be debited to the contractor's account at the rates shown in the schedule of chargeable materials and if they are not entered in the schedule, they will be debited at cost price, which for the purpose of the contract shall include the cost of carriage and all other expenses whatsoever such as normal storage supervision charges which shall have been incurred in obtaining the same at the Owner's stores. All materials so supplied to the contractor shall remain the absolute property of the Owner and shall not be removed on any account from the site of the work, and shall be at all times open for inspection to the Engineer-in-Charge. Any such materials remaining unused at the time of completion or termination of the contract shall be returned to the Owner's stores or at a place as directed by the Engineer-in- Charge in perfectly good condition, at contractor's cost.

### **11. CONDITIONS FOR ISSUE OF MATERIALS:**

- a. Materials specified to be issued by the Owner will be supplied to the contractor by the Owner from his stores/location. It shall be the responsibility of the contractor to take delivery of the materials and arrange for its loading, transport and unloading at the site of work at his own cost. The materials shall be issued between the working hours and as per the rules of the Owner framed from time to time.



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- b. The contractor shall bear all incidental charges for the storage and safe custody of materials at site after these have been issued to him.
- c. Materials specified to be issued by the Owner shall be issued in standard sizes as obtained from the manufacturer.
- d. The contractor shall construct suitable godown at the site of work for storing the materials safe against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose.
- e. It shall be duty of the contractor to inspect the material supplied to him at the time of taking delivery and satisfy himself that they are in good condition. After the materials have been delivered by the Owner, it shall be the responsibility of the contractor to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and/ or replaced by him at his own cost, according to the directions of the Engineer-in-Charge.
- f. The Owner shall not be liable for delay in supply or non-supply of any materials which the Owner has undertaken to supply where such failure or delay is due to natural calamities, act of enemies, transport and procurement difficulties and any circumstances beyond the control of the Owner. In no case, the contractor shall be entitled to claim any compensation or loss suffered by him on this account.
- g. It shall be the responsibility of the contractor to arrange in time all materials required for the works other than those to be supplied by the Owner. If, however, in the opinion of the Engineer-in-Charge the execution of the work is likely to be delayed due to the contractor's inability to make arrangements for supply of materials which normally he has to arrange for, the Engineer-in-Charge shall have the right, at his own discretion, to Issue such materials If available with the Owner or procure the materials from the market or elsewhere and the contractor will be bound to take such materials at the rates decided by the Engineer-in-Charge. This, however, does not in any way absolve the contractor from responsibility of making arrangements for the supply of such materials in part or in full, should such a situation occur, nor shall this, constitute a reason for the delay in the execution of the work.
- h. None of the materials supplied to the contractor will be utilized by the contractor for manufacturing item, which can be obtained from standard manufacturer in finished form.
- i. The contractor shall, if desired by the Engineer-in-Charge, be required to execute an indemnity bond for safe custody and accounting of all materials issued by the Owner.





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- j. The contractor shall furnish to the Engineer-in-Charge sufficiently in advance a statement showing his requirements of the quantities of the materials to be supplied by the Owner and the time when the same will be required by him for the works, so as to enable the Engineer-in-Charge to make necessary arrangement for procurement and supply of the material.
- k. A daily account of the materials issued by the Owner shall be maintained by the contractor indicating the daily receipt, consumption and balance in hand. This account shall be maintained in a manner prescribed by the Engineer-in-Charge along with all connected papers viz. requisition, issues etc. and shall be always available for inspection in the contractor's office at site.
- l. The contractor should see that only the required quantities of materials are got issued. The contractor shall not be entitled to cartage and incidental charges for returning the surplus materials, if any, to the stores/location where from they were issued or to the place as directed by the Engineer-in-Charge.
- m. Materials/ Equipment supplied by Owner shall not be utilized for any other purpose(s) than issued for.

### **12. MATERIALS PROCURED WITH ASSISTANCE OF OWNER:**

Notwithstanding anything contained to the contrary in any or all the clause of this document where any materials for the execution of the contract are procured with the assistance of Owner either by issue from Owner's stock or purchase made under orders or permits or licences issued by Government, the contractor shall hold the said materials as trustee for the Owner and use such materials economically and solely for the purpose of the contract and not dispose them off without the permission of the owner and return, if required by the Engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason, whatsoever on his being paid or credited such prices as the Engineer in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however, shall not exceed the amount charged to him excluding the storage charges if any. The decision of the Engineer-in-Charge shall be final and conclusive in such matters. In the event of breach of the aforesaid condition, the contractor shall in terms of the licenses or permits, and/or for criminal breach of trust, be liable to compensate the Owner a double rate or high rate, in the event of those materials at that time having higher rate or not being available in the market, then any other rate to be determined by the Engineer-in-Charge and his decision shall be final and conclusive.



**13. MATERIALS OBTAINED FROM DISMANTLING:**

If the contractor in the course of execution of the work is called upon to dismantle any part for reasons other than those stipulated in clauses 64 & 68 hereunder, the materials obtained in the work of dismantling etc. will be considered as the Owner's property and will be disposed off to the best advantage of the Owner.

**14. ARTICLES OF VALUE FOUND:**

All gold, silver and other materials, of any description and all precious stones, coins, treasure relics, antiquities and other similar things which shall be found in, under or upon the site, shall be property of the Owner and the contractor shall duly preserve the same to the satisfaction of the Engineer-in-Charge and shall from time to time deliver the same to such person or person indicated by the Owner.

**15. DISCREPANCIES BETWEEN INSTRUCTIONS:**

Should any discrepancy occur between the various instructions furnished to the contractor, his agents or staff or any doubt, arise as to the meaning of any such instructions or should there be any misunderstanding between the contractor's staff and the Engineer-in-Charge's staff, the contractor shall refer the matter immediately in writing to the Engineer-in-Charge whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, or doubts, or misunderstanding shall in any event be admissible.

**16. ALTERATIONS IN SPECIFICATIONS AND DESIGNS AND EXTRA WORK:**

- a. The Engineer-in-Charge shall have power to make any alterations in, omissions from, additions to or substitutions for, the schedule of rates, the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out such altered / extra / new items of work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall not invalidate the contract and any altered additional or substituted work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agree to do the main work. The time for completion of work may be extended for the part of the particular



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job at the discretions of the Engineer-in-Charge, for only such alteration, additions or substitutions of the work, as he may consider as just and reasonable. The rates for such additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions:

- If the rates for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract.
- If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates for similar class of works as specified in the contract for the work. The opinion of the Engineer-in-Charge as to whether the rates can be reasonably so derived from items in the contracts will be final and binding on the contractor.
- If the rates for the altered, additional or substituted work cannot be determined in the manner specified in sub-clause (a) and (b) above, then the contractor shall inform the Engineer-in-Charge of the rate which is his intension to charge for such class of work supported by analysis of the rate or rates claimed, and the Engineer-in-Charge shall determine the rates on the basis of the prevailing market rates of materials, labour cost at schedule of labour plus 10% to cover contractor's supervision, overheads and profit and pay the contractor accordingly. The opinion of the Engineer-in-Charge as to the current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the contractor.
- Provisions, contained in sub-clause mentioned above shall not, however, apply: Where the value of alterations / additions / deletions or substitutions exceeds beyond plus or minus 25% of the estimated contract value (i.e. quoted item rates of contractor shall hold good for variations etc. within plus or minus 25% of estimated contract value)

b. In the event and as a result of such alternatives / additions / substitutions / deletion, the scope of contract work exceed the value stipulated in the contract by more than the limits given in clause above, the Contractor shall claim revision of the rates supported by the proper analysis in respect of such items for quantities in excess of the above limits, notwithstanding the fact that



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the rates for such items exist in the tender for the main work or can be derived in accordance with the provision of sub-clause (b) of Clause 61 A, and the Engineer-in-Charge may revise their rates having regard to the prevailing market rates, and the contractor shall be paid in accordance with the rates so fixed. But, under no circumstances the contractor shall suspend / stop / slowdown the work on the plea of non-settlement of rates of items falling under this clause.

### **17. ACTION WHERE NO SPECIFICATIONS ISSUED:**

In case of any class of work for which there is no such specification given by the Owner in the tender documents, such work shall be carried out in accordance with Indian Standard Specifications and if the Indian Standard Specifications do not cover the same the work should be carried out as per standard Engineering Practice subject to the approval of the Engineer-in-Charge.

### **18. ABNORMAL RATES:**

The contractor is expected to quote rate for each item after analysis of cost involved for the completion of item/work, considering all specifications and conditions of contract. This will avoid loss of profit or gain, in case of curtailment or change of specification for any item. In case it is noticed that the rates for any item, quoted by the tenderer unusually are high or unusually low it will be sufficient cause for the rejection of the tender unless the Owner is convinced about the reasonableness of the rates on scrutiny of the analysis for such rate to be furnished by the tenderer on demand.

### **19. INSPECTION OF WORK:**

- a. The Engineer-in-Charge will have full power and authority to inspect the works at any time wherever in progress either on the Site or at the contractor's premises / workshop where situated premises /workshops of any person, firm or corporation where work in connect with the contract may be in hand or where materials are being or are to be supplied, and the contractor shall afford or procure for the Engineer-in-Charge every facility and assistance to carry out such Inspection. The contractor shall at all time during the usual working hours and at all other time for which reasonable notice of the intention of the Engineer in-Charge or his representative to visit the works have been given to the contractor, either himself be present to receive order and instructions or post a responsible agent duly accredited in writing for the purpose. Orders



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given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. The contractor shall give not less than seven days, notice in writing to the Engineer-in-Charge before covering up or placing any work beyond reach of inspection and measurement any work in order that the same may be inspected and measured. In the event of breach of above the same shall be uncovered at contractor's expense carrying out such measurement or inspection.

- b. No materials shall be dispatched by the contractor before obtaining the approval of Engineer-in-Charge in writing. The contractor is to provide at all times during the progress of the work and the maintenance period, proper means of access with ladders, gangways, etc. and the necessary attendance to move and adopt as directed for inspection or measurement of the works by the Engineer-in-Charge.

### **20. ASSISTANCE TO THE ENGINEERS:**

The contractor shall make available to the Engineer-in-Charge, free of cost necessary instruments and assistance in checking of setting out of works and taking measurement of work.

### **21. TESTS FOR QUALITY OF WORKS:**

- a. All workmanship shall be of the respective kinds described in the contract documents and in accordance with the instructions of the Engineer-in-Charge and shall be subjected from time to time to such test at contractor's cost as the Engineer-in-Charge may direct at place of manufacture or fabrication or on the site or at all or any such places. The contractor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required the Engineer-in-Charge.
- b. All the tests necessary in connection with the execution of the work as decided by Engineer-in-Charge shall be carried out at the field testing laboratory of the Owner by paying the charges as decided by the Owner from time to time. In case of non-availability of test facility with the Owner, the required test shall be carried out at the cost of contractor at government or any other testing laboratory as directed by Engineer-in-Charge.
- c. If any tests are required to be carried out in connection with the work or materials workmanship not supplied by the contractor, such tests shall be carried out by the contractor as per the instructions of



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Engineer-in-Charge and cost of such tests shall be reimbursed by the Owner.

### **22. SAMPLES:**

The contractor shall furnish to the Engineer-in-Charge for approval when requested or if required by the specifications, adequate samples of all materials and finishes to be used in the work. Such samples shall be submitted before the work is commenced and in ample time to permit tests and examinations thereof. All materials furnished and finishing applied in actual work shall be fully identical to the approval samples.

### **23. ACTION AND COMPENSATION IN CASE OF BAD WORK:**

If it shall appear to the Engineer-in-Charge that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description, or that any materials or articles provided by the contractor for the execution of the work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the Engineer-in-Charge or his authorized representative, specifying the work, materials or articles complained of, notwithstanding that the same have been inadvertently passed, certified and paid for forthwith shall rectify or remove and reconstruct the works specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within a period to be specified by the Engineer-in-Charge in his demand aforesaid, the contractor shall be liable to pay compensation at the rate of 0.5% of the estimated cost of the whole work, for every week limited to a maximum of 10% of the estimated cost of the whole work, while his failure to do so shall continue and in the case of any such failure the Engineer-in-Charge may on expiry of notice period rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expenses of the contractors in all respects. The decision of the Engineer-in-Charge as to any question arising under this clause shall be final and conclusive.

### **24. SUSPENSION OF WORKS:**

The contractor shall, if ordered in writing by the Engineer-in-Charge or his representative, temporarily suspend the works or any part thereof for such period and such time as so ordered and shall not, after receiving such written order, proceed with the work therein ordered to be suspended, until he shall have received a written order to proceed therewith. The contractor shall not be entitled to claim/ compensation for any loss or



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damage sustained by him by reason of temporary suspension of the works aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the works as aforesaid will be granted to the contractor, should he apply for the same, provided that suspension was not consequent to any default or failure on the part of the contractor.

### **25. OWNER MAY DO PART OF WORK:**

Upon failure of the contractor to comply with any instructions given in accordance with the provisions of the contract, the owner has the alternative right, instead of assuming charge for entire work to place additional labour force, tools, equipments and materials on such parts of the work, as the owner may designate or also engage another contractor to carry out the work. In such cases, the owner shall deduct from the amount which otherwise might become due to the contractor, the cost of such work and materials with ten percent added to cover all departmental charges and should the total amount thereof exceed the amount due to the contractor, the contractor shall pay the difference to the owner.

### **26. POSSESSION PRIOR TO COMPLETION:**

The Engineer-in-Charge shall have the right to take possession of or use any completed or partially completed work or part of the work. Such possessions or use shall not be deemed to be an acceptance of any work completed in accordance with the contract agreement. If such prior possession or use by the Engineer-in-Charge delays the progress of work, suitable adjustment in the time of completion will be made and contract agreement shall be deemed to be modified accordingly.

### **27. PERIOD OF LIABILITY FROM THE DATE OF COMPLETION OF WORK:**

- a. The contractor shall guarantee the installation/site work for a period of 12 (twelve) Months from the date of completion of work, unless otherwise specified. Any damage that may lie undiscovered at the time of issue of completion certificate, connected in any way with the equipment or materials supplied by him or in the workmanship shall be rectified or replaced by the contractor at his own expense as deemed necessary by the Engineer-in-Charge or in default, the Engineer-in-Charge may cause the same made good by other workmen and deduct expenses (for which the certificate of Engineer-in-Charge shall be final) from any sums that may be then or at any time thereafter, become due to the contractor or from his security deposit.



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- b. If the contractor feels that any variation in work or in quality of materials or proportions would be beneficial or necessary to fulfill the guarantee called for, he shall bring this to the notice of the Engineer-in-Charge in writing. The work will not be considered as complete and taken over by the Owner until all the temporary works etc., constructed by the contractor is removed and work site cleaned to the satisfaction of Engineer-in-Charge.
- c. Care of Works:  
From the commencement to completion of works, the contractor shall take full responsibility for the care of all works including all temporary works, and in case any damage, loss or injury happens to the works or to any part thereof or to any temporary work, from any cause whatsoever, he shall at own cost repair and make good the same, so that at completion, the work shall be in good order and in conformity in every respect with the requirements of the contract and the Engineer-in-Charge's instructions.
- d. Effects prior to taking over: If at any time, before the work is taken over, the Engineer-in-Charge shall
- Decide that any work done or materials used by the contractor or any sub-contractor is defective or not in accordance with the contract or that the works or any portion thereof are defective or do not fulfill the requirements of contract (all such matters being herein after called 'Defects' in this clause) and
  - As soon as reasonably practicable, notice given to the contractor in writing of the said decisions specifying particulars of the defects alleged to exist or to have occurred, then the contractor shall at his own expenses and with all speed make good the defects so specified. In the case contractor shall fail to do so, the Owner may take, at the cost of the contractor, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure, so incurred by the Owner shall be recovered from the amount due to the contractor. The decision of the Engineer-in-Charge with regard to the amount be recovered from the contractor will be final and binding on the contractor. As soon as the works have been completed in accordance with the contract and have passed the tests on completion, the Engineer-in-Charge shall issue a certificate (hereinafter called completion certificate) in which he shall certify the date on which the work have been so completed and have passed the said tests and the Owner shall be deemed to have taken





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over the works on the date so certified. If the works have been divided into various groups in the contract, the Owner shall be entitled to take over any group or groups before the other or others and thereupon the Engineer-in-Charge shall issue a completion certificate which will however, be for such group or groups as taken over only.

- e. Defects after taking over: In order that the contractor could obtain a completion certificate, he shall make good with all possible speed, any defect arising from the defective materials supplied by the Contractor or workmanship or any act of omission of the contract that may have been noticed or developed after the works or group of the works has been taken over. The period allowed for carrying out such work will be normally one month. If any defect be not remedied within a reasonable time, the Owner may proceed to do the work at the contractor's risk and expense and deduct from the final bill such amount as may be decided by the Owner. If by reason of any default on the part of the contractor a completion certificate has not been issued in respect of every portion of the work within one month after the date fixed by the contract for the completion of the works, the Owner shall be at his liberty to use the works or any portion thereof in respect of which a completion certificate has been issued provided that the works or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these works for the issue of completion certificate.
- f. The Security Deposit/retention money deducted / furnished shall be retained for the period of liability as given in clause above. This Retention amount or Bank Guarantee furnished against Security Deposit/retention money shall be released only on expiry of the period of liability and also based on the certification of the Engineer-in-charge that no defect/damage has been reported / observed during the stipulated period of liability for the contract.
- g. Performance of contractor shall be evaluated on each job by Engineer-in-Charge and recorded. Review of performance will be carried out at appropriate intervals by DAFFPL.



## CHAPTER 5: GENERAL TERMS & CONDITIONS:

### 1. General:

The materials and workmanship shall satisfy the relevant Indian Standards, the job specifications contained herein & codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.

In the absence of any standard / specification / codes of practice for detailed specifications covering any part of the work covered in this tender document, the instruction / direction of consultant engineer will be binding on the contractor.

Wherever it is stated in this tender document that a particular supply is to be effected or that a particular work is to be carried out, it shall be understood that the same shall be effected / carried out by the contractor at his cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the context.

### 2. Construction Program:

A detailed bar chart showing various activities shall be prepared by the tenderers. The work shall be executed strictly as per the agreed time schedule. The period of completion shall include, the time required for mobilization and testing as well as rectification, if any, testing & completion in all respects to the entire satisfaction of the consultant.

A joint programme of execution programme shall be prepared by the contractor.

Monthly / weekly construction programme shall be made by the contractor. The contractor shall scrupulously adhere to these targets / programme by deploying adequate personal and construction tools and tackles. He shall also supply all materials in his scope of supply in time to achieve the targets set out in the weekly and the monthly programme.

The contractor shall give every day, a report on labour and equipment deployed along with the progress of the work done on previous day, for each category of work.

### 3. Electricity will be provided by DAFFPL @ Rs. 14.50 per Unit.



4. Safety Rules and Regulations:

All Safety rules and regulations of the terminal operator have to be followed by the contractor without fail. If any damage occurs due to negligence of safety, contractor will be held responsible for the same.

5. Tests and Inspection:

The contractor shall carry out the various tests as enumerated in the technical specifications of this tender document and the technical documents that will be furnished to him during the performance of the work. No separate payment shall be made.

The contractor shall carry out at his cost, all the tests either on the field or through external institutions / laboratories, concerning the execution of the work and supply of materials by the contractor.

Any work not conforming to the execution drawings, specifications or codes shall be rejected forthwith and the contractor shall carry out the rectification at this own cost. Results of all inspection & tests shall be recorded in the inspection reports, test reports, etc., which will be approved by the Engineer-in-charge. These reports shall form part of the completion documents.

Inspection & Acceptance of works shall not relieve the contractor from any of his responsibilities under this contract.

6. Site Cleaning:

The contractor shall take care to clean the working site from time to time for easy access to work site and for safety. Working site should be always kept cleared to the entire satisfaction of DAFFPL.

Before handing over any work to the owner, the contractor in addition to other formalities to be observed as detailed in the document shall clear the site to the entire satisfaction of DAFFPL.

7. Coordination with other Agencies:

Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the contractor. Proper coordination with other agencies will be the responsibility of the contractor. In case of any dispute, the decision of Engineer-in-charge shall be final and binding on the contractor.

8. DAFFPL reserves the right to accept any tender in whole and reject any or all tenders without assigning any reason. DAFFPL also reserves the right



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to allow public enterprises (Central/State) Price / purchase /contract / service preference as admissible under the Indian Government Policy.

### **9. BID PRICES:**

- a) Prices shall be furnished strictly in the Price Bid format of the tender document.
- b) Bidder should quote their lowest and best offered price. Prices so quoted will remain firm till satisfactory completion of order. The price will not be subjected to escalation for any reason whatsoever.
- c) Bidders quoted prices shall be deemed to include entire Specification of item and all obligations and responsibilities to be carried out / executed by the Bidder as per terms of tender document. It is clearly understood by the Vendor that it is for the Vendor to ascertain and assess the applicable Acts/ Regulations/ Laws etc., entirely of their own. It is also for the Vendor to ascertain and assess the applicability of taxes, duties, levies etc. In case of any difference of opinion between Vendors proposal and interpretation by any tax/assessing (or similar) authorities, on the rate or terms and conditions related to taxes and duties etc., owners liability shall be strictly as per terms/provisions of the contract based on tender document and Vendors offer.
- d) No other charges accept those mentioned in the tender document will be payable to vendor.

10. The materials should be properly packed so as to withstand all transit hazards. Materials are required to be dispatched by the vendor to the locations, on freight paid DOOR- DELIVERY CONSIGNEE COPY ATTACHED basis along with copies of Inspection release note & internal test certificates & other documents as mentioned elsewhere in this tender document.

11. All shipment shall be under deck unless carriage on deck is unavoidable.

12. Bidder to note that Special Packaging Requirement as in technical specifications of this tender. The materials should be properly packed so as to withstand all transit hazards (both ocean & inland transit).

13. Indian agent Commission will not be paid by the owner.

### **14. TAXES & DUTIES:**

- a) Bidder(s) quoted prices shall be exclusive of all taxes, duties, cess,



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levies etc.,

- b) The invoice should clearly mentioned that applicable Excise Duty, Education Cess or any other taxes charged and paid / payable on quoted item to enable the owner to claim MODVAT / Input credit.
- c) The statutory variation in Excise duty, Education Cess and Sales tax / VAT on finished goods and introduction of new tax, from bid due date till the contractual completion period shall be to owner account against submission of the documentary evidence. However, any increase in the rate of these taxes and duties beyond the contractual delivery period shall be to Seller account. Any decrease in the rate of these taxes and duties shall be passed on to the owner. Any additional excise duty due to increase in turn-over would be to seller account.
- d) It is for the Bidder to assess and ascertain the rate of excise duty, education Cess and sales tax/VAT applicable on quoted items. It is clearly understood that Owner will not have any additional liability towards payment of Excise Duty, Education Cess, GST and Sales Tax/VAT which is based on Bidders wrong assessment / interpretation of applicability of such Excise Duty and/or education cess and / or Sales Tax/VAT.
- e) Successful bidder shall carry out its obligations towards services at site as mentioned in technical specifications without any extra charges.
- f) Octroi/Entry tax, if any, in the any state of India shall be directly paid by the vendor, if applicable.
- g) DAFFPL shall not be liable, in case the tax authorities assess the tax elements in a different way on account of any reason, whatsoever.
- h) Taxes and duties other than those specified in this document, if any, shall be included in the quoted prices and no separate reimbursement shall be made by DAFFPL.

### **15. Income Tax / Corporate Tax :**

- a) As regards Income Tax, Surcharge on Income Tax or any other Corporate Tax payable by the Bidder for reason of the contract awarded, and / or on their expatriate personal, the Owner shall not bear any Tax liability whatsoever, irrespective of the mode of construction of contract / order. The Bidder shall be liable and responsible for payment of such tax, if attracted under the provision of Indian Income Tax Act.
- b) Bidder may note that if any tax is deductible at source as per Indian Income Tax Law, the same will be so deducted before releasing any payment to the Bidder and a TDS (Tax deducted at source)



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certificate will be furnished to the Bidder.

- c) Accordingly, Bidder shall have the responsibility to check and include such provision of taxes in the prices.
- d) In case of delay in delivery due to reasons attributable to Bidder, any new or additional taxes or duties levied by Statutory authorities during this period shall be borne by the Bidder.

### 16. EMD / BID SECURITY

- a) The bidder shall furnish, as part of his bid, a bid security in original for the amount specified in the tender document by way of pay order, bank guarantee on Rs.100/-value non-judicial stamp paper or demand draft.
- b) The bid security is required to protect the Owner against the risk of Bidders conduct, which would warrant the security forfeiture.
- c) If bid Security / EMD is in the form of bank guarantee, it shall be in the form of irrevocable bank guarantee (in the format attached) issued by any Indian Scheduled Bank (other than Co-operative Bank) will be accepted.
- d) Bid Security / EMD shall be issued in favour of M/s Delhi Aviation Fuel Facility (P) Limited, New Delhi. .
- e) Unsuccessful bidders bid security without any interest will be discharged/ returned as promptly as possible, but not later than 60 days after the expiry of the period of bid validity prescribed by the Owner.
- f) The successful bidder bid security without any interest will be discharged, upon the Bidder accepting the Contract/ Purchase Order and furnishing the Contract performance bank guarantee to DAFFPL.
- g) The bid security may be forfeited:
  - i. If a bidder withdraws his bid during the period of bid validity or
  - ii. In the case of a successful bidder, if the bidder fails or refuses to:
    - Accept the Purchase Order in accordance with agreed terms and conditions.
    - Furnish Contract performance bank guarantee as per bid document/ Purchase Order.
  - iii. Detection of submission of false / forged documents and fraud.
- h) Bid Security / EMD should be in favour of "Delhi Aviation Fuel Facility Private Limited", payable at New Delhi and submitted to the relevant office of DAFFPL as mentioned in covering note of the



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tender document. Covering letter to bid Security / EMD must indicate the tender number. This is essential to have proper correlation at a later date. The bid security / EMD shall be strictly in the form provided in the bid document before the due date & time of bid submission.

- i) Central Public Sector Undertaking of Govt. Of India are exempted from furnishing the bid security. Firms registered with NSIC/ MSME are also exempted from furnishing bid security, provided they are registered for the tendered items and up to the monetary limit they intend to quote. Provided further that they submit a copy of the current and valid registration certificate for the quoted item and monetary value along with their bid(s). Owner reserves right to verify the registration certificate provided, with relevant authorities.

### **17. CONTRACT PERFORMANCE BANK GUARANTEE [CPBG]**

- a) As a Performance security, the successful Bidder, to whom the work is awarded by, shall be required to furnish within 30 days of notification of award of contract (Letter/ Fax/e-mail of Intent) a Performance Bank Guarantee on RS.100/- VALUE non-judicial stamp paper in favour of the Owner (M/S DAFFPL).
- b) The Bank Guarantee amount shall be equal to TEN PERCENT (10%) of the Total Order Value and it shall guarantee the faithful performance of the Order in accordance with the Terms and conditions specified in the documents and specifications.
- c) CPBG shall be in the form of an irrevocable Bank Guarantee (in the format attached) issued by any Indian Scheduled Bank (other than Co-operative Bank).
- d) The Bank Guarantee shall be valid for the entire period of the Contract, namely, till the end of the guarantee / warranty period. The guarantee amount shall be payable on demand to the Owner.
- e) In case, the Contract Performance Bank Guarantee stated above gets reduced/ deducted for reasons of non-fulfillment of any Contractual obligations upto the completion of guarantee period, the bidder shall immediately take action to increase the value of Bank Guarantee to TEN PERCENT (10%) of the Contract price, to cover his guarantee/warranty obligations.
- f) The Performance Guarantee will be returned to the bidder without any interest at the end of the warranty / guarantee period subject to fulfillment of all contractual obligations by the Bidder. The bank guarantee shall have a claim period of 3 months beyond the



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contractual guarantee period.

- g) The proceeds of performance security shall be appropriated by the owner as compensation for any loss resulting from vendor's failure to complete his obligations under the contract to the prejudice to any of the rights or remedies the owner may be entitled to as per terms and conditions of contract. The proceeds of this performance security shall also govern the successful performance of goods and services and vendors all obligations during the entire period of contractual warrantee / guarantee.

### **18. PRICE REDUCTION FOR DELAY IN DELIVERY:**

- a) The completion period quoted must be realistic & specific. The inability of successful bidder to execute orders in accordance with the agreed completion schedule will entitle DAFFPL, at its options, to:
  - b) Accept delayed delivery at prices reduced by a sum equivalent to half percent (0.5%) of the value of any goods/work not delivered for every week of delay or part thereof, limited to a maximum of 10% of the total order value. Date of completion of work shall be considered for calculation of price reduction
  - c) The price reduction clause shall become applicable for works done beyond the schedule completion period.

### **19. INSURANCE**

Supplier shall carry and maintain any and all statutory insurance(s) required under Indian Laws and Regulations, including Workmen compensation Act/ESI/Third party liabilities etc. and insurances for their personnel engaged in performance of the work at their own cost.

### **20. INSPECTION:**

- a) Material / construction shall be inspected by owner or its representative. Charges other than third party inspection, is entirely vendor responsibility and in no way should affect the completion schedule.
- b) OWNER may, at its own expense, witness any test or inspection. In order to enable OWNER to witness the tests/inspections OWNER will advise the bidder in advance whether it intends to be present at any of the inspections.
- c) Even if the inspection and tests are fully carried out, the Vendor shall not be absolved from its responsibilities to ensure that the Material(s), raw materials, components and other inputs are supplied strictly to conform and comply with all the requirements of





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the Contract at all stages, whether during manufacture and fabrication, or at the time of Delivery as on arrival at site and after its erection or start up or consumption, and during the defect liability period. The inspections and tests are merely intended to prima-facie satisfy OWNER that the Material(s) and the parts and components comply with the requirements of the Contract. The Vendor's responsibility shall also not be anyway reduced or discharged because OWNER or OWNER's representative(s) or Inspector(s) shall have examined, commented on the Vendor's drawings or specifications or shall have witnessed the tests or required any chemical or physical or other tests or shall have stamped or approved or certified any Material(s).

- d) Although material approved by the Inspector(s), if on testing and inspection after receipt of the Material(s) at the location, any Material(s) are found not to be in strict conformity with the contractual requirements or specifications, OWNER shall have the right to reject the same and hold the Vendor liable for non-performance of the Contract.

### **21. GUARANTEE/WARRANTY:**

- a) Materials shall be guaranteed against manufacturing defects, materials, workmanship and design for a period of 12 months from the date of commissioning. Warranty for replacement of material / accessories should be provided free of charges at our premises. The above guarantee/warranty will be without prejudice to the certificate of inspection or material receipt note issued by us in respect of the materials.
- b) All the materials including components and sub contracted items should be guaranteed by the vendor within the warranty period mentioned above. In the event of any defect in the material, the vendor will replace / repair the material at DAFFPL concerned location at vendor risk and cost on due notice.
- c) Alternatively, DAFFPL reserves the right to have the material repaired / replaced at the locations concerned, at the vendors risk, cost and responsibility, in case, vendor does not replace / repair the material.
- d) The Vendor shall provide similar warranty on the parts, components, fittings, accessories etc. so repaired and / or replaced.
- e) Vendor shall guarantee that the performance of the EQUIPMENT supplied under the CONTRACT shall be strictly in conformity with the specifications and shall perform the duties specified under the CONTRACT.
- f) **RISK PURCHASE CLAUSE:** We reserve the right to curtail or cancel the



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order either in full or part thereof if bidder fails to comply with delivery schedule and other terms & conditions of the order. DAFFPL also reserves the right to procure same or similar materials/equipment through other sources at vendor's entire risk, cost and consequences.

22. TEST & PERFORMANCE CERTIFICATES: Bidder shall furnish Material test and Performance Certificates for the materials along with the challans and invoice.

23. PAYMENT TERMS: This payment will be made after making necessary deductions as stipulated elsewhere in the contract document for materials, security deposit or any moneys due to the Owner etc.

Advance Payment is not permissible in this contract.

- 70% of respective item rates against receipt of all materials corresponding to item at site in good condition, along with submission of test/inspection, statutory certificates along with invoice.
- 20 % of respective item rates against installation and power ON of the system
- 10% of respective item rates against successful testing, commissioning and handing over of the system including documentation, design Engineering, drawings, operating manual and training to DAFFPL / IOSPL representatives.

24. Only in the event of causes of Force Majeure occurring within the contractual delivery period and if they impede the performance of contract, the delivery dates shall be extended on receipt of application from the bidder / Owner without imposition of penalty. Only those causes which depend on natural calamities, civil wars, fire and national strikes which have duration of more than seven consecutive calendar days are considered the causes of force Majeure. The decision of Owner shall be final and binding on vendor.

25. The Vendor must advise the Owner by a registered letter duly certified by Local Chamber of Commerce or statutory authorities and Owner must advise the Vendor by a letter, the beginning and the end of the delay immediately, but in no case later than within 10 days of the beginning and end of such causes of Force Majeure condition as defined above. Provided further that if the performance in whole or part of any



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obligation under this contract is prevented or delayed by reason of any such event for period exceeding 60 days either party may at its option terminate the contract.

26. Repeat Order: DAFFPL reserves the right to place repeat order up to the order quantity within SIX MONTHS from the date of original order on mutual agreement basis.
27. Any reference to the Govt. Acts /Regulations etc. in the Bid Document is only indicative, and it is entirely for the bidder to ascertain the applicable Acts/Regulations.
28. Rejected material lying in Owner premises must be replaced within 60 days from date of final report on rejection of material.
29. RECOVERY OF SUMS DUE: Whenever, any claim against bidder for payment of a sum of money arises out of or under the contract or in any other form, the owner shall be entitled to recover such sums from any sum then due or when at any time thereafter may become due from the vendor under this or any other form and should this sum be not sufficient to cover the recoverable amount of claim(s), the vendor shall pay to DAFFPL on demand the balance remaining due.
30. PATENTS & ROYALTIES: The vendor shall fully indemnify owner and users of materials specified herein/supplied at all times, against any action, claim or demand, costs and expenses, arising from or incurred by reasons of any infringement or alleged infringement of any patent, registered design, trademark or name, copy right or any other protected rights in respect of any materials supplied or any arrangement, system or method of using, fixing or working used by the vendor. In the event of any claim or demand being made or action sought against Owner in respect of any of the aforesaid matter, the vendor shall be notified thereof immediately and the vendor shall at his/its own expense with (if necessary) the assistance of Owner (whose all expense shall be reimbursed by the vendor) conduct all negotiations for the settlement of the same and/or litigation which may arise thereof.
31. LIABILITY CLAUSE: In case where it is necessary for employees or representatives of the Vendor to go upon the premises of owner, vendor agrees to assume the responsibility for the proper conduct of such



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employees/representatives while on said premises and to comply with all applicable Workmen s Compensation Law and other applicable Government Regulations and Ordinances and all plant rules and regulations particularly in regard to safety precautions and fire hazards. If this order requires vendor to furnish labour at site, such vendors workmen or employees shall under NO circumstances be deemed to be in owner s employment and vendor shall hold himself responsible for any claim or claims which they or their heirs, dependent or personal representatives, may have or make, for damages or compensation for anything done or committed to be done, in the course of carrying out the work covered by the purchase order, whether arising at owner s premises or elsewhere and agrees to indemnify the owner against any such claims, if made against the owner and all costs of proceedings, suit or actions which owner may incur or sustain in respect of the same.

32. **COMPLIANCE OF REGULATIONS:** Vendor warrants that all goods/Materials covered by this order have been produced, sold, dispatched, delivered and furnished in strict compliance with all applicable laws, regulations, labour agreement, working condition and technical codes and statutory requirements as applicable from time to time. The vendor shall ensure compliance with the above and shall indemnify owner against any actions, damages, costs and expenses of any failure to comply as aforesaid.
33. **REJECTION, REMOVAL OF REJECTED GOODS AND REPLACEMENT:** In case the testing and inspection at any stage by inspectors reveal that the equipment, materials and workmanship do not comply with specification and requirements, the same shall be removed by the vendor at his/its own expense and risk, within the time allowed by the owner. The owner shall be at liberty to dispose off such rejected goods in such manner as he may think appropriate. In the event the vendor fails to remove the rejected goods within the period as aforesaid, all expenses incurred by the owner for such disposal shall be to the account of the vendor. The freight paid by the owner, if any, on the inward journey of the rejected materials shall be reimbursed by the vendor to the owner before the rejected materials are removed by the vendor. The vendor will have to proceed with the replacement of the equipment or part of equipment without claiming any extra payment if so required by the owner. The time taken for replacement in such event will not be added to the contractual delivery period.
34. **NON-WAIVER :** Failure of the Owner to insist upon any of the terms or



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conditions incorporated in the Purchase Order or failure or delay to exercise any rights or remedies herein, or by law or failure to properly notify Vendor in the event of breach, or the acceptance of or payment of any goods hereunder or approval of design shall not release the Vendor and shall not be deemed a waiver of any right of the Owner to insist upon the strict performance thereof or of any of its or their rights or remedies as to any such goods regardless of when such goods are shipped, received or accepted nor shall any purported oral modification or revision of the order by DAFFPL act as waiver of the terms hereof. Any waiver to be effective must be in writing. Any lone incident of waiver of the any condition of this agreement by DAFFPL shall not be considered as a continuous waiver or waiver for other condition by DAFFPL.

35. **NEW & UNUSED MATERIAL:** All the material supplied by the vendor shall be branded new, unused and of recent manufacture.

36. **CANCELLATION:**

- a) DAFFPL reserves the right to cancel the contract/purchase order or any part thereof through a written notice to the vendor if –
  - i. The vendor fails to comply with the terms of this purchase order/contract.
  - ii. The vendor becomes bankrupt or goes into liquidation.
  - iii. The vendor fails to deliver the goods on time and/or replace the rejected goods promptly.
  - iv. The vendor makes a general assignment for the benefit of creditors.
  - v. A receiver is appointed for any of the property owned by the vendor.
  - vi. Any other conditions where owners commercial interest get affected.
- b) Upon receipt of the said cancellation notice, the vendor shall discontinue all work on the purchase order matters connected with it. DAFFPL in that event will be entitled to procure the requirement in the open market and recover excess payment over the vendor s agreed price if any, from the vendor and also reserving to itself the right to forfeit the security deposit if any, made by the vendor against the contract. The vendor is aware that the said goods are required by DAFFPL for the ultimate purpose of materials production and that non-delivery may cause loss of production and consequently loss of profit to the DAFFPL. In this-event of DAFFPL exercising the option to claim damages for non delivery other than by way of difference between



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the market price and the contract price, the vendor shall pay to DAFFPL, fair compensation to be agreed upon between DAFFPL and the vendor. The provision of this clause shall not prejudice the right of DAFFPL from invoking the provisions of price reduction clause mentioned aforesaid.

37. ANTI –COMPETITIVE AGREEMENTS/ABUSE OF DOMINANT POSITION: The Competition Act, 2002 as amended by the Competition (Amendment) Act, 2007 (the Act), prohibits anti- competitive laws and aims at fostering competition and at protecting Indian markets against anti- competitive practices by enterprises. The Act prohibits anti- competitive agreements, abuse of dominant position by enterprises, and regulates combinations (consisting of acquisition, acquiring of control and M&A) wherever such agreements, abuse or combination causes, or is likely to cause, appreciable adverse effect on competition in markets in India. DAFFPL reserves the right to approach the Competition Commission established under the Act of Parliament and file information relating to anti-competitive agreements and abuse of dominant position. If such a situation arises, then Vendors are bound by the decision of the Competitive Commission and also subject to penalty and other provisions of the Competition Act.
38. ASSIGNMENT: The Vendor can / does not have any right to assign his rights and obligations under these general purchase conditions without the prior written approval of DAFFPL.
39. GOVERNING LAW: These General Purchase Conditions shall be governed by the Laws of India.
40. AMENDMENT: Any amendment to these General Purchase Conditions can be made only in writing and with the mutual consent of the parties to these conditions.
41. The following expressions used in these terms and conditions and in the purchase order shall have the meaning indicated against each of these:
- OWNER**, Client, Purchaser, buyer means DAFFPL
  - VENDOR**, tenderer, Bidder, Contractor, Seller, Supplier, manufacturer stated anywhere in the tender document carry the same meaning: It means the person, firm or the Company / Corporation to bidding and shall include its successors and assigns.
  - INSPECTOR/ TPIA**: Person/agency deputed by Owner for carrying out inspection, checking/testing of items ordered and for certifying the



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- items conforming to the purchase order specifications.
- d) **GOODS / MATERIALS:** means any of the articles, materials, machinery, equipment's, supplies, drawing, data and other property and all services including but not limited to design, delivery, installation, inspection, testing and commissioning specified or required to complete the order.
  - e) **SITE / LOCATION:** means any Site where DAFFPL desires to receive materials anywhere in India as mentioned in tender
  - f) **CONTRACT, Order or Purchase Order/CALL-OFF** means the agreement for supply of goods/ materials for required quantity between Owner and Vendor, for a fixed time on mutually agreed terms and conditions.
  - g) The term MR means Material Requisition containing technical requirements and scope of work (technical), GPC means General Purchase Conditions containing commercial terms & conditions, PO means Purchase order issued after award of contract incorporating agreed deviations in MR, ATC means Agreed Terms & Conditions , RFQ means Request For Quotation.
  - h) For the purpose of contract, the trade terms FOB, CFR and CIF, DAP shall have the meanings as assigned to them by INCOTERMS 2010 published by ICC, Paris.

### 42. REFERENCE FOR DOCUMENTATION:

The number and date of Collective Request for Quotation (CRFQ) must appear on all correspondence before finalization of Contract / Purchase Order.

After finalization of Contract / Purchase Order: The number and date of Contract /Purchase Order must appear on all correspondence, drawings, invoices, dispatch advices, (including shipping documents if applicable) packing list and on any documents or papers connected with this order.

### 43. ARBITRATION

- a) Any 'dispute or difference of any nature whatsoever, any claim, cross-claim, counterclaim or set off of the Owner against the Consultant or regarding any right, liability, act, omission or account of any of the parties hereto arising out of or in relation to this agreement shall be refereed to the Sole Arbitration of the nominated Director of the Owner or of some Officer of the Owner who may be nominated by the nominated Director. The consultant



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will not be entitled to raise any objection to any such arbitrator on the ground that the arbitrator is an officer of the Owner or that he has dealt with the matters to which the contract relates or that in the course of his duties as an Officer of the Owner, he had expressed view on all or any other matters in dispute or difference. In the event of the arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, the nominated Director as aforesaid at the time of such transfer, vacation of office or inability to act may in the discretion of the nominated Director designate another person to act as arbitrator in accordance with the terms of the agreement to the end and intent that the original Arbitrator shall be entitled to continue the arbitration proceedings notwithstanding his transfer or vacation of office as an officer of the Owner if the nominated Director does not designate another person to act as arbitrator on such transfer, vacation of office or inability of original arbitrator. Such person shall be entitled to proceed with the reference from the point at which it was left by his predecessor. It is also a term of this contract that no person other than the nominated Director of the Owner or a person nominated by such nominated Director as aforesaid shall act as arbitrator hereunder. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to the agreement subject to the provisions of the Arbitration & Conciliation Act, 1996 or any statutory modification or reenactment thereof and the rules made there under for the time being in force shall apply to the arbitration proceedings under this clause.

- b) The arbitrator shall have power to order and direct either of the parties to abide by, observe and perform all such directions as the arbitrator may think fit having regard to the matters in difference i.e. dispute, before him. The arbitrator shall have all summary powers and may take such evidence oral and/or documentary, as the arbitrator in his absolute discretion thinks fit and shall be entitled to exercise all powers under the Indian Arbitration & Conciliation Act 1996 including admission of any affidavit as evidence concerning the matter in difference i.e. dispute before him.
- c) The parties against whom the arbitration proceedings have been initiated, that is to say, the Respondents in the proceeding, shall be entitled to prefer a cross claim, counter claim or set off before the Arbitrator in respect of any matter in issue arising out of or in relation to the Agreement without seeking a formal reference of arbitration to the nominated Director/officer for such counter-claim, or set off





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and the Arbitrator shall be entitled to consider and deal with the same as if the matters arising therefore has been referred to him originally and deemed to form part of the reference made by the nominated Director/officer.

- d) The arbitrator shall be at liberty to appoint, if necessary any accountant or engineering or other technical person to assist him, and to act by the opinion so taken.
- e) The arbitrator shall have power to make one or more awards whether interim or otherwise in respect of the dispute and difference and in particular will be entitled to make separate awards in respect of claims of cross claims of the parties.
- f) The arbitrator shall be entitled to direct any one of parties to pay the costs to the other party in such manner and to such extent as the arbitrator may in his discretion determine and shall also be entitled to require one or both the parties to deposit funds in such proportion to meet the arbitrators expenses whenever called upon to do so.
- g) The parties hereby agree that the courts in the city of Delhi alone shall have jurisdiction to entertain any application or other proceedings in respect of anything arising under this agreement and any award or awards made by the Sole Arbitration hereunder shall be filed (if so required) in the concerned courts in the city of Delhi only.

## BRIEF SCOPE OF WORK

The scope of the work includes but not limited to details as given below:

- Complete design, engineering, supply, installation, testing and commissioning of Clean Agent Fire extinguishing system (hereunder called CAFES) along with Fire Detection system etc complete in all respect.
- Bidder to calculate the total gas requirements area wise and accordingly design the system.
- The job includes supply and installation of clean agent gas cylinders along with stand of structural steel duly filled at PESO approved gas filling Station along with valve assembly and arrangement for supervisory switch connection for monitoring cylinder pressure, a pressure gauge with a safety burst disc and a safety cap etc complete in all respect.
- Supply, installation, testing and Commissioning of Cylinder kit for Modular System complete as per BOQ and design requirements.
- Supply, fabrication, laying, testing, painting and commissioning of pipeline works including formation of Gas cylinder manifold as per design engineering for discharge of gases during fire detection etc complete in all respect.
- Supply installation, testing and commissioning of Discharge nozzles, Pressure switch, check valves and accessories required for commissioning of the system.
- Supply, installation, testing and commissioning of fire alarm panel along with addressable multi sensor (Smoke + heat) detectors, UL listed, and FM approved
- Associated cabling works, civil works for closure of voids as applicable.
- Development and implementation of logic for tripping of ACS, AHU, associated equipment's as per OEM's recommendation and release of gas as per fire detections.
- Preventive and break down maintenance as detailed in tender specification.
- Submission of detailed design Engineering, drawings, layout etc for approval and final submission after duly amended during handing over of the system.
- Vendor as to deploy specialized man powers at site during construction activities as per tender requirements. – Project Manager, QC Officer and safety Officer with required experience and qualification in addition to our Engineers, welders, fitters, labours etc. In absence of above-mentioned manpower as listed above & also separately in special terms of conditions of the tender, no permit for carrying out site work shall be provided and delay in work shall be totally on your account.
- Any other associated work not specifically mentioned above but is required for satisfactory completion of works in totality as per site requirements and directions of site engineer.

- Clearing job sites of all surplus material, debris, scrap, construction equipment etc. as per directions of Engineer- in-Charge or as directed by the DAFFPL.
- The scope of work is defined in general and is not limited to above. Bidder will also be required, to carry out job which is not listed here but is needed for completion and commissioning of subject Project.

**Each lot of fittings / material shall be accompanied with test certificates for verification at site.**

All materials, works, field & laboratory testing, MTCs, Warrantee Certificates, documents, measurements, repairs, will be checked / inspected / tested / verified as per Quality Assurance Plan / Scope of works / Technical specifications / Manufacturer's specifications and in line with applicable latest & relevant IS codes of practice. Contractor is required to submit copy of invoice of all the materials, copy all field & laboratory test reports, copy of Manufacturer's test Certificates, Warrantee certificates, etc. for all materials as applicable, as built drawing, etc. on completion of work.

All works are to be carried out as per latest & relevant IS codes of practice, and or IOC specifications for designing, fabrication, execution, erection, testing, commissioning, measurements, etc. complete.

All Safety precautions must be observed and work to be carried out in line with OISD 235.

These rates are inclusive of the cost of material, labour, transportation, loading, unloading, insurance, finish, all fittings & fixtures and any other charges required to provide the item at site on door delivery basis

All bought material shall be of approved make.

**NOTE:** Unless otherwise specified, all materials, laborers, tools, tackles, equipment's, transportation etc. shall be provided by the tenderer only to complete the project in all respect **Final Drawings/Layouts, if needed shall be handed over during the handing over of site.**

**SITE VISIT:**

- The bidder is advised to visit and examine the site of works at all locations and their surrounding and obtain for himself on his own responsibility all information that may be necessary for preparing of the bid and entering the contract. The cost of visiting the sites shall be at bidder's own expenses. No extra claim on account of non-familiarity of site conditions shall be entertained during execution of works.
- The bidder and any of his personnel or agents will be granted permission by the Owner to enter upon his premises and lands for the purpose of such inspection, but only upon the explicit condition that the bidder, his personnel, or agents will release and indemnify the Owner and his personnel and agents from and against all liability in respect thereof and will be responsible for personnel injury (whether fatal or otherwise), loss of or damage and expenses incurred as a result hereof.
- Technical details / documents as specified elsewhere in bidding document particulars & catalogues of various bought out items mentioned in this Tender document or proposed to be used by the prospective bidders.

- The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General Conditions, Conditions of Contract, Works Requirement (Technical Specifications, and Drawings).
- The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor, and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
- In the Bill of Quantities, quantity, and unit rates and thereby the amount against each item have been indicated. From this, the estimated price of each bill has been worked out and indicated in the summary sheet in BOQ. The Bidder shall quote rates as percentage above/below/at par for each schedule in the summary sheet. If no percentage as above, below or par is indicated for any bill, the same will be considered as percentage at par.
- The rates are deemed to be inclusive of all lead (except as otherwise specifically provided in the description of the item), lifts, ascend, descend, handling, re-handling crossing of nallah/streams/tracks any other obstructions.
- All enabling works for executing the work e.g., approach road to site, launching arrangements, procuring right of way, arrangement of water and electricity etc is to be arranged by the contractor at his own cost and deemed to be included in the quoted rates.
- Storage of Material: All the material at site will have to be properly stacked & stored to facilitate inspection. The material should be properly protected from the detrimental effects of nature and fire, theft etc. The contractor shall be responsible for watch & ward and any loss or deterioration on account of above shall lead to rejection of material and contractor must replace the same at his own cost.

The method of measurement of completed work for payment shall be in accordance with provisions in Works Requirements (Specifications) except as otherwise specifically provided in the description of item or bill of quantities or explanatory notes to the bill of quantities.

The bidder shall supply, install, test and put in operation NOVEC 1230 (3M) based fire suppression system. The fire suppression system shall include and not be limited to gas release control panel, PESO approved seamless cylinders, discharge valve (with solenoid or pneumatic actuator) as the case may be, discharge pipe, check valve and all other accessories required to make a complete operation system meeting applicable requirements of NFPA 2001 standards and installed in compliance with all applicable requirements of the local codes and standards.

The system design should be based on the specifications contained herein, NFPA 2001 and in accordance with the requirements specified in the design manual of the agent. The bidder shall confirm compliance to the above along with their bid.

The system shall be properly filled and supplied by an approved OEM (Original Equipment Manufacturer)

Generally, the key components\* of the system shall be FM/UL listed. The NOVEC 1230 gas shall:

- (i) comply with NFPA 2001 standard
- (ii) have the approval from US EPA (Environmental Protection Agency) for use as a total flooding fire extinguishing for the protection of occupied space:
- (iii) be given Underwriters' Laboratories Inc. (UL, USA) component listing for the NOVEC 1230 gaseous agent.
- (iv) must have zero ozone depletion potential (ODP)
- (v) have a minimal life span in atmosphere, with atmospheric lifetime of less than 5 days
- (vi) be efficient, effective and does not require excessive space and high pressure for storage.
- (vii) commercially available

\*Key components are valves and its accessories, actuators, flexible discharge and connection hoses, check valves, pressure switch, and nozzles

## Design Condition

The Novec 1230 agent is stored in seamless steel cylinders and dry nitrogen is added to provide additional energy to give the required rapid discharge. At the normal operating pressure of 25 bar at 21° C, the agent is a liquid in the container.

The designer shall consider simultaneous total flooding of all voids within the protected volume. The system shall be designed in accordance with the OEM's Design Manual.

To extinguish a fire using clean agent, the concentration of agent delivered to each void shall be above the minimum design concentration. The following shall be considered while designing the system.

- Minimum design concentration shall be 4.2%. Class A & 4.5% for Class C for UL listed systems. Design concentration shall be applicable based on the listings of the system. i.e., NFPA 2001 standard has to be followed for UL/FM approved system and ISO standard for Vds/LPCB system.
- If the protected volume has a floor and / or ceiling void the spaces shall be included in the protected volume, employing a minimum design concentration not below that of the main room compartment.
- The discharge nozzles shall be located within the protected volume in compliance to limitations and with regard to spacing, floor and ceiling coverage, etc. The nozzles shall be positioned such that they would cover the entire area up to the extreme corners of the area under protection and the design concentration will be established in all parts of the protected volumes.
- The final numbers of discharge nozzles shall be according to the OEM's product manual.
  - The average pressure at each nozzle shall not be less than 4.2Bar.
- The gas flow calculations shall be carried out on special software given by the OEM. The software should support usage of seamless cylinders which have a different design compared to the standard containers used worldwide. The system acceptance report shall show the resulting concentration in each independent void to be above 4.5% and the average pressure at each nozzle to be not less than 4.2 Bar for UL listed system.
- The agent discharge time shall not exceed 10 seconds and not less than 5 seconds.
- The design concentration shall follow at minimum NFPA 2001 for under floor, room and ceiling space. Unless otherwise approved, room temperature for air-conditioned space shall be taken around 20°C. For non-air conditioned space, the temperature shall be taken around ambient temperature. The system shall be designed with minimum design concentration of 4.2 % as applicable to Class A fire & 4.5% for Class C Fire or as applicable as per the listings.
- The system engineering company should carry out the piping Isometric design and validate the same with a hydraulic flow calculation generated by using the agent's design software. Appropriate fill density to be arrived at based on the same.

The system shall be so designed that a fire condition in any one protected area shall actuate automatically the total flooding of clean agent in that area independently using directional valves. The entire system shall incorporate inter-alia detection, audible and visual alarms, actuation and extinguishing.

## SYSTEM DESIGN

### Cylinders

Each cylinder shall be seamless steel type manufactured from billets and tested in accordance with IS 7285 / BS 5045 standard and approved by PESO.

The cylinder/valve assembly shall have suitable metallic protection for the valve enabling transportation of the filled cylinders safely.

The cylinders shall be super-pressurized with dry Nitrogen to 25 bar. The cylinder shall be capable of withstanding any temperature between -30 Deg C and 70 Deg C.

All cylinders shall be distinctly and permanently marked with the quantity of agent contained, the empty cylinder weight, the pressurization pressure and the zones they are protecting.

If multiple rooms to be protected, directional valve also can be used.

Cylinder capacities shall be 34ltrs, 80ltrs, 120ltrs & 140ltrs with minimum fill density of 80-85% shall be used. Higher capacities more than 140ltrs shall not be used.

### Cylinder Valve

The Valve assembly shall be mounted directly on the cylinder and should NOT have any adaptor provision between the cylinder and Valve as per requirements of PESO. Cylinders with Adaptor between Valve assembly shall be rejected as it is a violation of the PESO norms.

Each cylinder valve shall have a provision for fixing a supervisory pressure switch and a safety burst disc to protect the cylinder from over pressure. The cylinder valve shall have a disabling plug to prevent accidental discharge of the valve during transportation and installation. Each valve is to be fitted with a pressure gauge for monitoring loss of pressure.

The master cylinder valve is to be released electrically which is performed by means of a solenoid valve arrangement.

### Cylinder valve Actuators

In a single cylinder system the cylinder shall have a solenoid operated actuator and a manual actuator incorporating a strike knob mounted on top of the solenoid operated actuator. Multi cylinder systems shall have the same fitted on to the master cylinder and pressure operated actuators fitted on each slave cylinder. All actuators shall be original OEM make and locally manufactured actuators shall not be used.

### Hoses

Each cylinder valve shall be provided with a plug in type flexible rubber discharge hose of minimum 40mm size with a test pressure of 52 Bar. Each hose shall be permanently marked with the test pressure and OEM's part number. Multi cylinder systems shall have an

interconnect hose for each cylinder. All hoses shall be original OEM make and locally manufactured hoses shall not be used.

#### Manifold with Check valve

The manifold shall be fabricated from ASTM A106 Schedule 80 seamless pipe and shall have integral check valves provided for each cylinder. The Manifold shall preferably be supplied by the original equipment manufacturer instead of fabricating the same at site.

#### Discharge Nozzles

Discharge nozzles shall be 180Deg and/or 360deg pattern made of Brass and coverage shall be maximum of 12.1mtrs & 7.7mtrs radius respectively. Various size of nozzles shall be available locally and able to supply within 2weeks from the date of approved drawings & flow calculation.

#### RE-FILLING AND MAINTENANCE

In case of any leakage or accidental discharge of the agent, it should be possible to re-fill the cylinders from a valid PESO approved OEM filling station in India itself. The contractor should indicate the source of re-filling and the time that will be taken for re-filling and replacement.

#### PIPING AND FITTINGS

All piping shall be ASTM A-106, Grade-B, Schedule 40 seamless pipes and all fitting shall be of ASTM A-105.

#### ROOM INTEGRITY TEST

Room integrity test shall be done by the Level 1 & 2 certified personal from the original manufacturer of Novec system.

#### DOCUMENTATION

The system engineering company should prepare & submit along with the bid documents, the piping Isometric drawing and support the same with a UL listed hydraulic flow calculation generated using the agent's design software. The calculations shall validate the fill density assumed by the bidder.

The bidder shall submit copies of datasheets of hardware used in the system. The bidder shall also submit copy of PESO approval letter for the cylinder proposed to be used.

The bidder shall also submit calculations to evidence the qty of agent considered for the system.

The successful vendor must submit, along with the supply invoice, a certificate of authenticity for the agent, duly checked and vetted by the OEM.

The system engineering company should provide, as part of the handing over, the As-built drawings and operation & maintenance manual.

The drawings & calculation has to be prepared & approved by OEM using the UL listed software program.



The contractor shall be direct OEM or Authorized partner of OEM and shall submit the letter confirming the same. Single contractor shall propose only one make.

LIST OF MAKES

S. No	ITEM	MAKE
1 .	Seamless Cylinders	Worthington / Rama / EKC
2 .	Electric Actuator	Chemetron / Kidde / Ceasefire
3 .	Pressure Actuator	Chemetron / Kidde / Ceasefire
4 .	Discharge Nozzle	Chemetron / Kidde / Ceasefire
5 .	Manual Actuator	Chemetron / Kidde / Ceasefire
6 .	Flexible Discharge Hose	Chemetron / Kidde / Ceasefire
7 .	Manifold Check Valve	Chemetron / Kidde / Ceasefire
8 .	Actuation Hose	Chemetron / Kidde / Ceasefire
9 .	NOVEC 1230 Gas	3M, USA
10 .	Seamless Pipe	Maharashtra / BHEL / Eqvt.



**DELHI AVIATION FUEL FACILITY PRIVATE LIMITED**

**Specifications  
For  
Clean Agent Fire Extinguishing System  
(CAFES)**

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Sign & Stamp of Bidder

**VARDHAN  
MEDURI VISHNU**

Digitally signed by VARDHAN  
MEDURI VISHNU  
Date: 2021.01.11 12:13:54  
IST



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## TECHNICAL SPECIFICATION & VENDOR'S SCOPE OF WORK

### 1. GENERAL DESCRIPTION

- a. The scope of work defined below to be read in conjunction with BOQ, NFPA Standards 2001 (Edition 2015- latest amendment), special terms and conditions, specifications, statutory norms and relevant clauses of the tender document
- b. The intent of this specification is complete design, engineering, supply, installation, testing and commissioning of Clean Agent Fire extinguishing system (hereunder called CAFES) along with Fire Detection system etc complete in all respect.
- c. The job includes inspection, puff testing, pre-commissioning testing etc to access the actual performance of the complete system.
- d. The job includes supply, installation, testing and commissioning of fire alarm panel along with smoke cum heat detector, aspirating type smoke detection system and their integration with the proposed CAFES.
- e. Supply of all items (including those required to complete the system for successful commissioning) covered under this specification, shall be under the scope of vendor, unless otherwise specifically excluded from the scope of supply
- f. Responsibility of the Vendor includes supply, execution and installation of any items/material not indicated in the Bill of material / Schedule of rates but required to complete the system in all respects without any extra price implication to DAFFPL.
- g. The vendor shall be fully responsible for proper selection of equipment's, engineering, performance and successful operation of the complete system including all bought out equipment, subsystems supplied by them meeting the functional requirements.
- h. All the offered Instruments and Instrumentation systems must have proven track record (PTR) of operating satisfactory in Refinery/ Petrochemical/POL plants. Necessary documentary proof, clients list etc. to be submitted if sought by DAFFPL/ TPI.
- i. Completion of As-built drawings / documents as per the execution of work at site and submission to DAFFPL before handing over of the complete system to DAFFPL.
- j. Supply of special tools and test equipment, spares, consumables required for installation, testing, calibration and commissioning of the system. All commissioning and start-up spares required up to commissioning, system acceptance and handing over of the system to the owner shall be in the vendor's scope. All the spares required during CAMC period as per OEM's recommendations shall be positioned at the time of conducting SAT.
- k. Packing, forwarding, transportation, custom clearance, insurance, storage etc. of the equipment's is in vendor's scope of work.
- l. Vendor, prior to submitting his offer, should take a site visit to study the location of installation, the existing Fire detection and alarm system of the



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proposed area to which the Fire extinguishing System shall be hooked up for automatic actuation.

### **2. SYSTEM AND SITE-SPECIFIC REQUIREMENTS**

- a. Selection of the clean agent & design of fire protection system shall follow the standard on "Clean Agent Extinguishing System NFPA Standards 2001 (Edition 2015- latest amendment) including its safety guideline with respect to "Hazards to the personnel, Electrical clearances & environmental factors in line with the environment consideration as per Ozone Depleting Substances (Regulation & Control) Rule-2000; MoEF; GOI along with amendments published vide latest MoEF Gazette notifications on the subject.
- b. The offered clean agent shall comply with the requirement of the Ozone Depleting Substances (Regulation & Control) Rule-2000; MoEF; GOI along with amendments published vide latest MoEF Gazette notifications on the subject.
- c. If the cylinder battery bank to be provided outside the area to be protected, DAFFPL shall provide platform along with shed (if required) for storage of the cylinder banks. Vendor to make other arrangements for proper storage of the cylinder bank.
- d. The cylinders shall be refilled at PESO approved refilling sites only.
- e. For total flooding, vendor shall during the site survey collect actual data for calculation of volume, design concentration, abnormal temperatures and conditions affecting ability to hold the clean agent concentration after discharge etc. Vendor shall also calculate the holding time required for total flooding. Any change in the civil structure to be advised by the Vendor at the designing stage (after allocation of the job) and the same shall be in the scope of DAFFPL.

### **3. SCOPE**

- a. This Specification covers the design, engineering, procurement, material supply including all hardware & software, fabrication, installation, inter-connection with Existing / New (as the case may be) fire detection & alarm system, power supply & back-up arrangement, execution, performance testing, commissioning, operation & maintenance training and performance guarantee of Clean Agent Fire Extinguishing System [CAFES] for volume to be protected complying the minimum requirements of "Standard on Clean Agent Fire Extinguishing System", NFPA 2001, 2015, latest Edition" and the Ozone Depletion Substance Regulation & Control Rule-2000; MoEF; GOI along with amendments published vide latest MoEF Gazette notifications on the subject.
- b. System design, comprising of specifications, working plans, flow calculations, design concentration requirement, total flooding quantity, system, design factors, duration of protection, rate of application,



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discharge time, nozzle selection & location, etc. shall comply the relevant criteria mentioned in chapter - 5 of NFPA-2001, 2015, including clauses & sub-clauses. All the relevant calculations shall be done by FM/UL/LPCB/Vds approved software and submit the copy of certificate.

- c. The system components shall be Listed / approved by FM/ UL/Vds/LPCB and cylinders shall be seamless & shall be PESO approved.
- d. The system shall be designed based on the largest volume to be protected. However, the grouping of cylinders shall be made in such a way that discharge of cylinders take place corresponding to the volume of the risk under fire.
- e. The system shall also comprise of the different modes of operation and electrical manual actuation etc. with necessary control panel as per specification. Operating devices and local control panel shall be provided as per Cl. 6.7 & 6.8 respectively.
- f. The vendor shall have to offer 100% clean agent filled standby cylinders. The vendor shall very clearly mention in their offer that they have considered total flooding centralized system and have also offered 100% standby connected cylinders.
- g. The design requirements as given in Clause 6.0 shall be met. The material of construction shall be as per Clause 7.0. No deviation from specification is acceptable.

#### **4. CODES AND STANDARDS**

- a. The latest editions of the following codes, specification and regulations have to be used for the detailed design and specification of clean agent system.
  - I. NFPA:2001 (Edition 2015- latest amendment) (Standard for clean agent fire extinguishing system).
  - II. IS 15493-2004 latest edition.
  - III. Gas Cylinder rule, PESO Nagpur
  - IV. OISD-STD-116 / 117/ 163 & 235 -Latest Edition
  - V. Ozone Depletion Substance Regulation & Control Rule-2000; Ministry of Environment & Forests, Govt. of India along with amendments published vide latest MoEF Gazette notifications on the subject.

#### **5. VENDOR TECHNICAL QUALIFICATION CRITERIA**

Vendor should have valid FM/UL/Vds/LPCB approval for the relevant components of clean agent fire extinguishing system as per NFPA-2001 (Edition 2015- latest amendment), on the bid due date. A copy of valid certificate / approval shall be provided. For offered Clean Agent System, OEM authorization certificate for offered Clean Agent as well as for the system to be submitted along with the Bid / Design stage.



## 6. DESIGN REQUIREMENTS

### I. SYSTEM DESIGN:

- a) **SYSTEM:** The centralized system shall be designed to protect the volume to be protected from all the three portions i.e. below false floor, main room and above false ceiling.
- b) **System Operation:** The system shall comprise of the following mode of operation and actuation etc. with necessary control panel. System operation shall be possible by the following means:
- I. Automatically due to fire detection in the protected area.
  - II. Operation of manual release push button located adjacent to protected area.
  - III. By operating manual lever provided on electrical/ manual control head on master cylinder.
  - IV. By push button actuation at clean agent control panel, in manual mode.

The clean agent shall be discharged / actuated automatically after an adjustable time delay based on the detection signal received. The delay shall be as per the requirement of NFPA for the respective clean agent offered. In the local control panel of clean agent system, there shall be one hooter, which shall operate once the gas is released. During time delay, there shall be a pre-discharge alarm (audio + visual). Hooter shall follow the alarm once the gas is discharged.

Operating instruction on manual mode must be displayed in florescent colour near the battery bank.

- c) **Clean Agent Gas & its grouping / distribution:** The quantity of clean agent gas provided shall be sufficient to protect the volume to be protected. The system for every individual risk shall have its own distribution piping, nozzles, alarm and actuation system etc. Suitable combination of cylinders shall be made to cater to all the risk area individually. Cylinders shall be permanently connected to the distribution piping through manifold and arranged for manual change over. Since the system is designed for the largest risk and there are several risk areas varying in size in a particular building, the system shall permit the use of required no. of cylinders for any individual risk involved so that the concentration of gas in that risk area does not exceed the NOAEL (no observable adverse effects level) as per the requirements stipulated in NFPA-2001 (Edition 2015- latest amendment).
- d) **Gas properties & its discharge characteristics:** Physical properties shall meet as per the requirements stipulated in NFPA-2001 (Edition 2015- latest amendment).



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The agent discharge shall be as per NFPA-2001 (Edition 2015- latest amendment). The measured discharge time is considered to be the time when the measuring device starts to record reduction of oxygen until the design oxygen reduction level is achieved. The minimum oxygen concentration shall be maintained after release of clean agent as per the requirements of NFPA.

### **II. SYSTEM FLOW CALCULATIONS**

System flow calculations shall be performed using "A Calculation method listed or approved by the FM/UL/LPCB/VDS. Vendor shall also provide calculation for over pressurization due to release of gas in protected area. Copy of approval certificate of software from the FM/UL/LPCB/Vds etc. shall be submitted along with the offer. Final flow calculations and other parameters obtained from approved method, shall be approved by DAFFPL approved TPI agency.

### **III. CLEAN AGENT QUANTITY**

Minimum design concentration of clean agent gas shall be as per NFPA-2001 (Edition 2015- latest amendment) at 70oF by volume for clean agent fire extinguishing system based on approved / listed flow calculation method. Clean agent concentration requirement shall be computed considering the volume of the hazard as specified. The quantity of Clean agent shall be worked out by the contractor as per NFPA-2001 (Edition 2015- latest amendment).

### **IV. CLEAN AGENT STORAGE CYLINDERS**

- a. The clean agent storage cylinders shall be designed to hold clean agent at ambient temperatures. Cylinder shall be of approved type. Minimum design level pressure of storage cylinder shall be as per as per the requirements stipulated in NFPA-2001 (Edition 2015- latest amendment).
- b. The design pressure for cylinder shall be suitable for the maximum pressure developed at 130oF (55oC).
- c. The cylinders shall be charged to a fill density with the range specified in the manufacturer's listed manual.
- d. Vendor shall select the capacity of cylinder based on the storage space available and for better replacement and interchangeability. The cylinder shall be seamless, brand new, never re-tested and month & year of manufacture shall not be older than Twelve Months from the date of commissioning of clean agent system.
- e. Vendor shall consider separate filled cylinder (s) required for dump testing of the system in addition to the requirement calculated for smallest enclosure of the area to be protected so that the commissioned system is not short fall of filled cylinders.



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- f. Each cylinder shall have a marking specifying the agent, tare and gross weight in addition to the pressurization level, mark of the manufacturer, serial number, nominal agent volume.
- g. Cylinder shall also bear test certificate issued by authority having jurisdiction and shall be duly listed /approved by approving authority (FM/UL/Vds/LPCB) in addition to approval by PESO Nagpur (India). Cylinders without the listing /approval will not be accepted. PESO approval of the cylinders is a must.
- h. Each cylinder valve shall have pressure relieving device to protect the cylinders against excess pressure conditions. Pressure switch on Discharge Manifold, connected to Control Panel shall be provided. Automatic means such as check valve shall be provided to prevent agent loss if the system is operated when any cylinders are removed for maintenance. Individual cylinder with discharge hoses will be fitted with check valve.
- i. **LAYOUT OF CYLINDERS:** Clean agent cylinders shall be arranged in the following manner:
  - i. In a battery of cylinders manifold together and leading to distribution piping and discharge nozzles for the risk to be protected including below floor board and above false ceiling spaces.
  - ii. A reserve battery of clean agent filled cylinders with manifold and manual change over to any of the two banks after actuation of main cylinders to be provided in each risk area i.e., 100% reserve.
  - iii. The cylinder storage racks shall be provided for main as well as for reserve cylinders.
  - iv. The manifold cylinders referred above shall be securely mounted on the floor and suitably supported in a rack with provision for convenient individual servicing according to the manufacturers installation manual. Such servicing shall be possible without shutting down the system.

### **V. PIPE, FITTINGS AND DISCHARGE NOZZLES**

#### **i. Piping & fittings – Meeting the requirement of NFPA.**

- a. Pipe thickness calculation shall be as per the provisions of NFPA.
- b. The pressure reduction device shall be easily identifiable. The clean agent piping layout shall be such that the pipes of one risk shall not pass through that of another risk.
- c. The clean agent piping shall have to clear: The beams and ribs which criss-cross the ceiling. The vendor to note that the clean agent piping shall be routed considering clearing structural beams/ columns or any other facilities coming in the areas where clean agent system is being envisaged. All necessary civil works including taking support from the blast resistant RCC walls or breaking brick walls for routing the





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pipng and making them good shall be in the scope of work of vendor.

- Path of AC ducts.
- Cabling in false flooring.
- Light fittings.

- ii. **Discharge Nozzles:** Discharge shall conform to the requirements of NFPA-2001 (2015 latest amendment). The nozzles used in the system shall be UL /FM /VdS/LPCB listed/approved for the use intended for discharge characteristics. The selection of nozzle orifice shall be as per the requirement of NFPA for the respective clean agent offered. The noise level during the discharge shall not exceed 100 db at 1 meter distance from any nozzle. Each nozzle shall be permanently marked to identify the manufacturer as well as type and size of the orifice along with tag/ part number, orifice code, other suitable marking as specified by the authority having jurisdiction.

### VI. Painting

Painting and color scheme of pipelines, clean agent storage cylinders, supports etc. shall be as per shade 536 of IS-5.

### VII. Operating Devices

- a. Operating devices shall include clean agent releasing devices, directional valve, discharge controls and shut down equipment necessary for successful performance of the system.
- b. Electric supply: The owner shall provide 240V ( $\pm 10\%$ ), 50 Hz ( $\pm 3\%$ ), AC, single phase power supply at a convenient point to clean agent vendor. Converter if required to convert to any other operating voltage shall be in vendor's scope.
- c. The clean agent system shall be designed to function properly for the temperature range specified in NFPA- 2001 (2015 LATEST AMENDMENT)
- d. The clean agent cylinders shall be firmly supported in brackets in a manner that they will not be easily subjected to mechanical, chemical or other damage, which would render the system inoperative.
- e. In addition to Automatic actuation, there shall be a normal manual control for actuation, which shall be located so as to conveniently and easily accessible (as per EIC direction) at all times including the time of fire. This control shall cause the complete system to operate in its normal fashion.
- f. Manual controls shall not require a pull of more than 40 lb nor a movement of more than 14 inches to secure operation as per NFPA-2001 (2015 LATEST AMENDMENT). Each remote manual



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control for activation shall be located not more than 4 feet above the floor.

- g.** Vendor has to provide arrangement to interface with existing system so that closing of AHU and fire damper is achieved in case of any emergency. Supervision of automatic systems shall be provided and shall include electrical supervision of the actuating device and the wiring connecting the actuation device and the detection system.
- h.** Operating instructions shall be displayed on a nameplate fitted permanently on the clean agent skid.
- i.** Clean agent extinguishing system shall incorporate a pre-discharge alarm with a time delay sufficient to allow personnel evacuation prior to discharge. (The delay shall as per the requirement of NFPA for the respective clean agent offered).

### **VIII. GAS RELEASE PANEL FOR CLEAN AGENT SYSTEM**

- i.** The Gas Release Panel shall be UL/FM/Vds/LPCB listed/approved. The control panel shall be floor / wall mounted type and shall be suitable for both auto and manual operation.. The panel shall be naturally ventilated, totally enclosed dust and vermin proof with IP-41 enclosure as a minimum. If forced ventilation is provided, redundant ventilation fan shall be included.
- ii.** The clean agent system shall be actuated automatically by the signal received from the fire alarm and detection panel. Fire alarm and detection panel, after detecting the fire in the protected area / zone shall provide an actuating signal to clean agent control panel, which, in turn shall energize the solenoid valve to trigger the dumping operation in the respective protected area/ zone. Necessary control/ interlock cabling between fire alarm and detection panel and clean agent system panel shall be provided by the clean agent vendor. Cabling from clean agent control panel to AHU control panel shall also be provided by the vendor installing clean agent system.
- iii.** 240V ( $\pm 10\%$ ), 50 Hz ( $\pm 3\%$ ), AC, single phase normal power supply shall be provided to the clean agent control panel. However, control panel shall be equipped with adequate rating battery charger and battery. Battery shall be capable of maintaining the system in normal operation for a period of not less than 24 hours after the failure of normal main supply after which sufficient capacity would remain to provide full load operation for at least 30 minutes. The full load would be defined as that caused by the operation of all the alarm sounders operating simultaneously and operation of fault indicator.



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- a. Control panel shall be provided with all alarms, indicators, caution/ signboard, relays/ control switches meeting all the requirements of NFPA-2001 (2015 – Latest amendment) and shall include but not limited to the following:
  - i. Two alarms and one fault indicator lamp for each zone to be protected.
  - ii. Combination of alarm silence and alarm off switch.
  - iii. Combination of fault silence and trouble lamp switches.
  - iv. Alarm test switch
  - v. Alarm re-set switch.
- b. The system shall have a positive warning device by sounding alarm to alert personnel of the impending discharging and also a positive indication to show that the system has actuated. Two nos. potential free contacts shall be provided by clean agent vendor, one contact for indication of start of dumping operation and other contact for indication of end of dumping operation.
- c. Alarm indicating failure of supervised devices of equipment shall give prompt and positive indication of any failure and shall be distinctive from alarm indicating operation of hazardous conditions.
- d. Florescent Warning and instruction signs at entrance to and inside protection areas shall be provided.
- e. The control panel shall be located either just outside the entry / exit gate of main control room building or in cylinder room or any other place as decided by owner at the time of detailed engineering.
- f. The cylinder pressure status monitoring to be provided (for main battery bank and stand by bank), on the Gas Release Panel.

### **7. MATERIAL OF CONSTRUCTION**

The material of construction used in the system shall be in accordance with NFPA-2001 (2015 LATEST AMENDMENT) or as specified by the equipment manufacturer for the intended use (if the same is not specified in NFPA-2001 (2015 LATEST AMENDMENT)). The material test certificate approved by certified agency shall be submitted along with the delivery of the materials.

### **8. INSPECTION, TESTING AND APPROVAL OF INSTALLATION**

The complete system shall be tested to meet the approval of Owner. Only listed or approved equipment and devices shall be used in the systems (i.e., All equipment shall be approved by FM /UL/Vds/LPCB and cylinders along with cylinder valve assemblies shall be seamless and PESO approved).



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All critical equipments such as pressure reducers, nozzles, actuation controls, pressure switches, pressure gauges etc. shall have approvals from FM/UL/Vds/LPCB. In order to determine that the system has been properly installed and will function as specified, till the commissioning and handing over the system in operative condition, all consumable will be in the scope of the vendor at no extra cost to DAFFPL and the following inspection / tests shall be performed by the vendor, at no extra cost to DAFFPL:

The approval of installation shall be subject to satisfying the requirements of NFPA-2001 (2015 LATEST AMENDMENT)

- a. A thorough visual inspection of the installed system and hazard area shall be carried out. The piping, operational equipment and discharge nozzles shall be inspected for proper size and location. The locations of alarms and manual emergency releases shall be confirmed. The hazard area shall be inspected closely for un-closable openings and sources of agent loss. The supplier shall furnish the composition certificate of clean agent satisfying the requirements of NFPA-2001 (2015 LATEST AMENDMENT), Filling certificate should be provided specifying from which original clean agent drum, the gas has been taken and which cylinder is filled.
- b. A check labeling of devices for proper designations and instructions. Name plate data on the storage cylinders shall adhere to specifications.
- c. A test for mechanical tightness of the piping shall be conducted as per the requirement stipulated in NFPA-2001 (2015 LATEST AMENDMENT)
- d. A flow test (puff test) shall be performed on the piping network to verify that flow is continuous and that the piping and nozzles are unobstructed as per the requirement stipulated in NFPA -2001 (Latest).
- e. Actual performance test of the system by activating detectors & subsequent actuation of clean agent suppression system.
- f. Vendor shall consider separate filled cylinder (s) required for actual, performance testing of the system in addition to the requirement calculated for each control room so that the commissioned system is not short fall of filled cylinders.

### **9. VENDOR DATA REQUIREMENTS**

- i. List of clause wise deviations, if any, to the specifications in the deviation format. It will be vendor's responsibility to furnish the deviations. If the same are not furnished, it will be assumed that the offered system/ equipment meet the specifications of the enquiry document in totality. Deviation mentioned anywhere else except for those mentioned in the deviation format shall not be considered.
- ii. FM/UL/LPCB/Vds Approval of the relevant components of the clean agent system.
- iii. Approval of certificate of software from the FM/UL/LPCB/Vds.



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- iv. Catalogues/ Brochures giving technical particulars and details of operation / maintenance of the offered elements/ system.
- v. Certificates of agencies that have accorded approval for the elements/ components offered.
- vi. If the vendor is collaborating with any foreign party for basic engineering, design etc. they should provide certificate of collaboration.
- vii. Firm commitment and agreement with backup consultant for design, supply, engineering, construction, testing and commissioning etc (To furnish certificate).
- viii. Name of the clean agent to be provided shall be clearly furnished.
- ix. Protected room/ area layouts as reconfirmation regarding the area being provided with clean agent system.
- x. Confirmation regarding the available space for cylinders.
- xi. Numbers & placement / Area coverage for type of nozzles used.
- xii. Quantity of clean agent offered for various areas as per specifications.
- xiii. List and certificate of jobs completed along with completion certificates of similar types of job.
- xiv. Availability of offered gas, spare parts, refilling facilities in India.
- xv. Details of source of clean agent to be procured shall be submitted along with the offer.
- xvi. Filled in Technical Data sheet (Annexure-I).
- xvii. List of Mandatory and recommended spares as per Cl. 10.0 and 11.0.
- xviii. MSDS of the offered clean agent system.
- xix. For offered Clean Agent System, OEM authorization certificate for offered Clean Agent.
- xx. For offered Clean Agent System, OEM authorization certificate for for the system.
- xxi. Certificate of Analysis from the Manufacturer of Clean Agent, giving the properties of offered clean agent as per the requirements stipulated in NFPA.
- xxii. **After award of the contract**
  - System design including computerized system flow calculations, piping and storage layout using approved listed software (UL/FM/Vds/LPCB). Flow calculation for each risk area shall be provided. The complete output shall be submitted which also shows that there is no error in calculation and discharge time is less than as specified in NFPA using seamless steel cylinders.
  - List of Indian/ International standards to which the offered equipment conform.
  - Catalogues/ Brochures giving technical particulars and details of operation/ maintenance of the offered elements/ systems.
  - Certificates of agencies that have accorded approval for the components/ elements offered.



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- Numbers and placement / area coverage for type of nozzles used. Quantity of each type of equipment offered along with the calculations.
- Protected room / area piping layouts along with the details of supporting arrangement.
- Quantity of clean agent offered for various areas as per specifications.
- PFD, P&ID and GA Drawing.
- Calculations for pipe sizes, time of discharge, flow, nozzle rate of discharge etc.
- GA and dimensional drawings of the areas showing storage, piping and nozzles for various areas.
- Mounting/ fixing details of all the elements.
- Cylinder data sheets.
- Other data sheets as per the list attached.
- If the vendor is collaborating with any foreign party or other party for basic engineering, design etc., the design and detailed drawing shall be approved by the collaborator (certificate of collaboration shall be furnished during bidding).
- Testing and inspection schedule and procedure according to NFPA 2001 (Edition 2015- latest ammendment).
- List of drawings.
- Battery and charges sizing calculations.
- GA and schematic designs of control panel.
- Functional write up of control panel including battery charger.
- Operating and maintenance manual.
- Programme user's manual for software used for clean agent flow calculation.
- FM/UL/LPCB/Vds and PESO approval of cylinders.

### **10. SPARES REQUIRED FOR COMMISSIONING AND MANDATORY SPARES**

- i. Spares required for commissioning - Any spares/components required for successful commissioning of the supplied system shall be in the scope of the vendor at no extra cost to DAFFPL. Vendor to provide a list indicating quantities. Any item remaining from this category after successful commissioning shall be the property of DAFFPL. However, any spares/components required for successful commissioning over and above those supplied under this category, shall be in the scope of the vendor at no extra cost to DAFFPL.
- ii. Mandatory Spares: Mandatory spares/components and also the spares required during warranty period for the supplied system shall be in the scope of the vendor at no extra cost to DAFFPL. Vendor to provide a list indicating quantities of the Mandatory spares/components and spares required during warranty period.



## 11. SPECIAL NOTES

- i. All items being supplied by vendor shall be subjected to third party inspection by any DAFFPL approved TPI agency. All equipments shall be tested at manufacturer's works prior to being dispatched to site. All test certificate and reports shall be submitted to DAFFPL for reference. Material and Performance guarantee test certificate for all equipments shall be furnished. The vendor shall provide at no extra cost, all facilities required by inspector to carry out inspection.
- ii. Vendor has to stamp and sign on all the pages of the enquiry document before submitting the offer as a token of acceptance.
- iii. After commissioning of the entire system, it shall be finally inspected by DAFFPL representatives to check its conformity with all the drawings and specifications furnished. The vendor shall carryout actual performance test of the system, rectify all the defects and finally hand over the system to the entire satisfaction of the DAFFPL for final acceptance.
- iv. Vendor shall impart training to site personnel for routine operation, maintenance & diagnostic test of the clean agent system. The training shall be imparted at owners' site minimum two days per locations immediately after commissioning. Effectiveness of the training to be assessed by the vendor through post training test and record to be maintained.

## 12. WARRANTY

- i. Zero date for Warranty shall be as per Tender Conditions. The Warranty shall be applicable for complete system covered under tender. Vendor shall offer performance guarantee for satisfactory and trouble free operation of the entire clean agent system for a minimum period of 2 year from the Zero Date.
- ii. The Vendor shall repair any defect or replace any defective part during the warranty period within 7 days of receiving such information from the owner. In the event of delay beyond seven days for reasons attributable to the vendor, the warranty period shall stand extended 1.5 times the days of delays. Warranty period shall also stand extended equivalent to the down time days exceeding 5% of period during the year.
- iii. During the warranty period the bidder shall provide the following services with necessary corrective action:
  - a. Once in six month, complete checking, checking of pressure / weight of cylinders as applicable, validation of all instruments etc. and detailed reporting.
  - b. Once in a year Operational built in check of detection system (if provided by vendor), solenoid valves, pressure gauges / pressure switches etc.



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- c. Once in a year cleaning of the nozzles, cylinders manifold to be done.
- d. Once in a year Flow test (puff test) shall be performed on the piping network to verify that flow is continuous and that the piping and nozzles are unobstructed.
- e. Maintenance of all mechanical items should be done annually as per the recommendations of OEM.
- f. Refilling / replenishment of clean agent cylinders, if required, shall be done by the vendor. The cylinders shall be refilled and brought back by the vendor within 45 days time after the intimation to vendor. Picking up of the cylinders from the system , transportation and fitting it back shall be in the scope of the vendor. Only the cost of the Clean agent shall be borne by DAFFPL as per finalized rate for gases.

### 13. Post Warranty Maintenance:

The system shall be under comprehensive maintenance Contract (CAMC) for a period of 5 years after warranty period. The following shall be covered under post warranty maintenance:

- The Vendor shall provide comprehensive maintenance including supply of spares for period of five years after the expiry of the warranty period.
- The travel, boarding & lodging of service engineer / technician shall be borne by the Vendor. The Vendor shall also bring tools & tackles as required for maintenance of the system.
- The bid shall be made for five years & price validity shall be available for the entire period of the contract (including AMC period).
- The service under post warranty maintenance including necessary corrective action:
  - Once in six month, complete checking, checking of pressure / weight of cylinders as applicable, validation of all instruments etc. and detailed reporting.
  - Once in a year Operational built in check of detection system (if provided by vendor), solenoid valves, pressure gauges / pressure switches etc.
  - Once in a year cleaning of the nozzles, cylinders manifold to be done.
  - Once in a year Flow test (puff test) shall be performed on the piping network to verify that flow is continuous and that the piping and nozzles are unobstructed.
  - Maintenance of all mechanical items should be done annually as per the recommendations of OEM.
  - Refilling / replenishment of clean agent cylinders, if required, shall be done by the vendor. The cylinders shall be refilled and brought





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back by the vendor within 45 days time after the intimation to vendor. Picking up of the cylinders from the system , transportation and fitting it back shall be in the scope of the vendor. Only the cost of the Clean agent shall be borne by DAFFPL as per finalized rate for gases

#### **14. Emergency maintenance:**

In the event of any malfunction of the system / system operated due to fire, experienced service engineer shall be made available at site within 7 days on the receipt of such information from the owner & the system must be brought to the Normal within next 3 day after reporting at site.

Refilling / replenishment of clean agent cylinders, as per the requirement, shall be done by the vendor as per agreed rate for gases.

In the event of delay beyond ten days for reasons attributable to the vendor, the AMC period shall stand extended 1.5 times the days of delays. AMC period shall also stand extended equivalent to the down time days exceeding 5% of period during the year.

#### **15. Inclusions**

All work related to civil, mechanical, and electrical and instruments for the execution and commissioning of Clean Agent System at Owner's site shall be in the scope of the bidder at no extra cost to DAFFPL.



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## TECHNICAL DATA SHEETS DETAILS TO BE FURNISHED BY THE VENDOR ALONG WITH THE OFFER.

(Data sheets shall be filled in separately for the clean agent as per NFPA-2001 (2015 LATEST AMENDMENT)).

Legend D: Vendor to furnish the data / details (vendor data is given in bracket).

SN	Description	Vendor's to furnish data
1	Mention Clean Agent, Manufacturer & Approving Authority for the System:	D
1.1	Formula	D
1.2	Normal Charging Pressure (psig)	D
2	Design code/ standard to which design/ manufacture/ testing conforms to	D
3	System designed to protect the largest or total risk in the building as specified.	D
3.1	Risk Name	D
3.2	Design Concentration	D
3.2.1	Quantity of Agent required, risk wise	D
3.3	Clean agent cylinder details (Seamless)	
a	Manufacturer	D
b	Gas Holding Capacity (Kg)	D
c	Capacity (kg)	D
e	Total number of cylinders	D
f	Approving agency	D
g	Approval by PESO (Yes/No)	D
h	Working pressure (Kg/cm <sup>2</sup> )	D
i	Design Pressure (Kg/cm <sup>2</sup> )	D
	Pipes, valves and fittings	
	Materials for Construction	
	i) Pipes	D
b	ii) Fittings	D
	iii) Valves	D
	Design Code for	
	i) Pipes	D
	ii) Fittings	D
	iii) Valves	D
	iv) Type of joints	D



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Hydraulic test pressure of manifold/supply lines (Kg/cm <sup>2</sup> )	D
Discharge Nozzles	
i) Number supplies	D
ii) Approved by FM/UL/Vds/LPC (Yes / No)	D
Pressure switch	
i) Approved by FM/UL/Vds/LPC (Yes / No)	D
Pressure Gauge	
i) Pressure Range	D
ii) Approved by FM/UL/Vds/LPC (Yes / No)	D
Pressure Reducer	
i) Approved by FM/UL/Vds/LPC (Yes / No)	D
Cylinder Valve	
i) Make	D
ii) Approved by FM/UL/Vds/LPC (Yes / No)	D
iii) PESO approval (Yes/ No)	D
Cylinder valve actuator	
i) Approved by FM/UL/Vds/LPC (Yes / No)	D
Operating Devices	
Signal from the clean agent control panel for shutting off the air handling unit and damper closing. (Yes / No)	D
Push Button Station	
i) Type	D
ii) Manufacturer	D
iii) Model, numbers offered	D
iv) Overall dimensions	D
Control cables	
i) Manufacturer	D
ii) Code/ standard	D
iii) Type	D
iv) Core & Size	D
v) Rating	D
Main control panel	
i) Manufacturer	D
ii) Mounting Detail	D
iii) Number of entries	D
iv) Sheet Thickness	D
v) Cable entry	D
vi) Total heat load predicted for air conditioning	D
vii) Nos. of AC/DC feeders and their rating	D
Additional requirements for control panel	



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Whether housing all the necessary printed card circuits, board cards, relays indicating lamps, push buttons, switches, etc for the efficient operation of the system (Yes/No)	D
Input power supply requirement for operation of panel (AC/DC volts)	D
Panel signal Voltage (AC/DC volts)	D
Type APM/ Capacity of the battery	D
Interconnecting cabling between battery and panel	D
Power supply unit incorporated in the panel (Yes/No).	D
Audio visual alarm on panel provided for battery low conditions (Yes/No)	D
Change over from AC Main supply to standby power supply fully automatic in either direction (Yes/No)	D
Following push buttons provided	
i) Alarm	D
ii) Reset	D
iii) Test (Yes/No)	D
iv) Abort (Yes/No)	D
v) Lamp Test	
Audio visual indication for AC supply failure Provided (Yes/No).	D
Pilot lamp for system ON and supply failure provided (Yes/No)	D
Dual tone hooter for fire / fault alarm provided and range of the same	D
Painting (External / Internal)	D
Low pressure alarm to indicate level	
Material of Construction selected in accordance with NFPA-2001 : 2015 (latest Amendment) (Yes/No)	D
Confirmation regarding the size of cylinders room provided (Main + 100% standby) (Yes/No)	D
100 % reserve cylinder with all accessories (YES/NO)	D
Battery back-up for 24 hrs ( YES/NO)	D



## SPECIFICATION FOR ASPIRATING TYPE SMOKE DETECTION SYSTEM

### 1. SCOPE:

- The Design, Engineering, Supply, Erection, Testing and Commissioning of the complete aspirating type smoke detection system including supervision as per the technical specification without any deviation. The Vendor/Contractor shall supply all the parts of aspirating type smoke detection system, detection cabinet complete with all the internal parts, cabling, sampling pipes, fittings, flexible connections, etc.
- All the electrical wiring required for connection from detector cabinet to the Gas Release Panel shall be in contractor's scope.

### 2. LAYOUT

- The aspirating type smoke detection system should consist of primarily three components:
  - Detector cabinet with micro processor controlled evaluating electronics, sensitive smoke detector and high speed fan.
  - Sampling pipe with suction holes complete with fittings.
  - Individual cabinet mounted Indicators.

### 3. APPROVALS

The aspirating type smoke detection system must be tested, approved / listed for its usage in Area Monitoring as per the respective standards by FM/UL/Vds/LPCB.

### 4. DETECTION SYSTEM DESIGN REQUIREMENT

- The system must be Linear Active Air Sampling type.
- The system must have local display panel with at least 5 levels of the current smoke concentration with audio visual alarm at a remote location also. It must be equipped with minimum two configurable potential free relays for signalling at different smoke concentration levels.
- The air sampling system must have two LED/Laser detectors installed inside one detector cabinet for double detector dependability, and system fail safe capability.
- The fire signal from the air sampler will go to the gas Release Panel for further action.
- The airflow intake must always be monitored that when in case of blockage of the sampling holes or breakage of the sampling tube must result a fault signal to be triggered. It must have the options to set a delay time of minimum 100 seconds. The delay time for the fault signal is crucially important for filtering any disturbance signals, which result in false signals.



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The aspirating type smoke detection system shall also be designed using OEM piping layout software which has UL/FM/VDS/LPCB certification.

- The maximum transport time of the smoke from last suction hole to the detector must be approx. 120 seconds to provide optimum protection.
- The tube network must have adequate flexibility for different installation requirements. Usage of 90 degree angle bend, T intersection and flexible tube connection must be possible.
- The standard sensitivity of the system must be from 0.05% and above obscuration dB per meter.
- The system must have minimum of 3 potential free relays. These relays should associate with alarm stage of detector 1, alarm stage of detector 2, and system fault. The additional relays associated to different smoke concentration for pre-alarm purpose should be possible with OPTIONAL accessory.
- The system must be capable to install a filter inside or outside of the fan box to filter dust or unwanted particles and a dust trap.
- **PRINCIPLE OF OPERATION FOR DETECTION SYSTEM**
  - The fan should generate a vacuum which results in fresh air continuously reaching the detector box and if the smoke concentration exceeds the permissible value the detector should trigger an alarm.
  - The alarm should be indicated optically on the detector cabinet and also it should be able to be transmitted via a potential free contact to local Gas Release Panel.
  - The operational safety for the system should be such that the failure of the fan or 50% blockage of the sampling holes or pipe break should result as a fault signal.
  - The operational safety for the system is that removal of the detector inside the detector box should result as fault signal.
  - The alarm and fault functions should also be initiated in Gas Release panel.

### 5. DETECTOR CABINET

- The detector cabinet should be of high strength made of suitable polymers mounted with suitable fasteners.
- The cabinet should be connected to the Gas release panel or external acoustic or optical devices including local control panels via two cable entries
- The optical signals for "Operation", "Fault", "Alarm 1", "Alarm 2" should be indicated on the detector cabinet surfaces.
- There should be facility to reset the detector after an event occurs.
- The detector cabinet should operate within the temperature range of 0 deg Celsius to +50 deg Celsius and the protection category should be rated at IP 53.



## 6. SAMPLING PIPE

- The sampling pipe should be made of rigid PVC or of halogen free ABS or PP or metallic material, if required, depending on the type of requirements. The size of the pipe should be selected suitably.
- When there is a joining of the sampling pipe, the joints must be tight so that no entry of the stray air is possible.
- The sampling pipe should have operating temperate range between 0 deg Celsius to +60 deg Celsius.

## 7. SPECIFICATION OF ASPIRATING SMOKE DETECTION SYSTEM

Detecting Type	Active air sampling
Detecting Principle	Optical Principle of Scattered Light
Pressure Source	High performance air sucking fan; adjustable air flow
Control Device	Sensitivity 0.05% obscuration dB/m
Operating Voltage	20 – 30 V DC
Operating Current	Less than 500 mA
Self-Diagnostic Function	Power, Airflow quantity, Air Leakage
Degree of Protection	IP 53
Sampling Pipe	Material: PVC or of halogen free ABS or PP or metallic material
Indication	Fire Alarms and fault
Electrical Output	Potential free contacts for Fire Alarms and Fault
Operating Temperature	Detector Box 0 deg Celsius to +50 deg Celsius.
Ambient Humidity Detector Box	Short term 95% rel. humidity Continuous 70% rel. humidity
Approvals	Any of: FM/UL/Vds/LPCB

## 8. TESTING & COMMISSIONING

On completion of the installation, the aspirating type smoke detection system should be tested and commissioned by the vendor to ensure satisfactory operation up to the satisfaction of DAFFPL / PMC site in charge.

## 9. DOCUMENTS REQUIRED ALONG WITH BID

- Scheme / details of the complete system offered.
- Technical datasheet of the system offered.
- Literature of the system offered.
- Copy of approval certificate for the system from any of FM/UL/Vds/LPCB.
- List of spares during commissioning and for 2 years warranty. (Cost of the Spares to be borne by the party as per the tender conditions)



## 10. DOCUMENTS REQUIRED AFTER PLACEMENT OF ORDER

Layout / drawing for approval of DAFFPL

## 11. DOCUMENTS REQUIRED BEFORE COMMISSIONING

- As build drawing of entire system
- Copy of all relevant certificates / approvals
- Operating & Maintenance Manual – 2 hard copy + 2 soft copies.
- Warranty certificate

## 12. INSPECTION/ PERFORMANCE

- The system shall be inspected by DAFFPL approved TPI Agency if desired by us.
- The vendor/ contractor shall confirm for demonstration of the system at our site/installation within the time stipulated by DAFFPL



S No	Details of Materials / Equipment	Manufacturers Name
1	NOVEC 1230 Gas	3M, USA
2	Seamless cylinder	Worthington / Rama / EKC
3	Seamless pipe	Maharashtra / BHEL / Jindal
4	Electric actuator	UTC / SERVO / VIKING / Ceasefire
5	Pressure actuator	UTC / SERVO / VIKING / Ceasefire
6	Manual actuator	UTC / SERVO / VIKING / Ceasefire
7	Discharge nozzle	UTC / SERVO / VIKING / Ceasefire
8	Discharge Pressure switch	UTC / SERVO / VIKING / Ceasefire
9	Flexible Discharge Hose	UTC / SERVO / VIKING / Ceasefire
10	Manifold Check Valve	UTC / SERVO / VIKING / Ceasefire
11	Actuator hose	UTC / SERVO / VIKING / Ceasefire
12	Armored cable	Polycab / Finolex / Havells
13	Fire alarm and detection system	Notifier / System Sensor / GE



## Delhi Aviation Fuel Facility Private Limited



Name of the Work: DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AUTOMATIC NOVEC 1230 GAS BASED FIRE SUPPRESSION SYSTEM

Name of the Firm

SN	Description	Vendor's to furnish data
1	Mention Clean Agent, Manufacturer & Approving Authority for the System:	
1.1	Formula	
1.2	Normal Charging Pressure (psig)	
2	Design code/ standard to which design/ manufacture/ testing conforms to	
3	System designed to protect the largest or total risk in the building as specified.	
3.1	Risk Name	
3.2	Design Concentration	
3.2.1	Quantity of Agent required, risk wise	
3.3	Clean agent cylinder details (Seamless)	
a	Manufacturer	
b	Gas Holding Capacity (Kg)	
c	Capacity (kg)	
e	Total number of cylinders	
f	Approving agency	
g	Approval by PESO (Yes/No)	
h	Working pressure (Kg/cm <sup>2</sup> )	
i	Design Pressure (Kg/cm <sup>2</sup> )	
	Pipes, valves and fittings	
	Materials for Construction	
j	Pipes	

j	ii) Fittings	
	iii) Valves	
k	Design Code for	
	i) Pipes	
	ii) Fittings	
	iii) Valves	
	iv) Type of joints	
l	Hydraulic test pressure of manifold/supply lines (Kg/cm <sup>2</sup> )	
m	Discharge Nozzles	
	i) Number supplies	
	ii) Approved by FM/UL/Vds/LPC (Yes / No)	
n	Pressure switch	
	i) Approved by FM/UL/Vds/LPC (Yes / No)	
o	Pressure Gauge	
	i) Pressure Range	
	ii) Approved by FM/UL/Vds/LPC (Yes / No)	
p	Pressure Reducer	
	i) Approved by FM/UL/Vds/LPC (Yes / No)	
q	Cylinder Valve	
	i) Make	
	ii) Approved by FM/UL/Vds/LPC (Yes / No)	
	iii) PESO approval (Yes/ No)	
r	Cylinder valve actuator	
	i) Approved by FM/UL/Vds/LPC (Yes / No)	
s	Operating Devices	
	Signal from the clean agent control panel for shutting off the air handling unit and damper closing. (Yes / No)	
†	Push Button Station	
	i) Type	
	ii) Manufacturer	
	iii) Model, numbers offered	
	iv) Overall dimensions	
u	Control cables	
	i) Manufacturer	
	ii) Code/ standard	
	iii) Type	

	iv) Core & Size	
	v) Rating	
v	Main control panel	
	i) Manufacturer	
	ii) Mounting Detail	
	iii) Number of entries	
	iv) Sheet Thickness	
	v) Cable entry	
	vi) Total heat load predicted for air conditioning	
	vii) Nos. of AC/DC feeders and their rating	
4	Additional requirements for control panel	
5	Whether housing all the necessary printed card circuits, board cards, relays indicating lamps, push buttons, switches, etc for the efficient operation of the system (Yes/No)	
6	Input power supply requirement for operation of panel (AC/DC volts)	
7	Panel signal Voltage (AC/DC volts)	
8	Type APM/ Capacity of the battery	
9	Interconnecting cabling between battery and panel	
10	Power supply unit incorporated in the panel (Yes/No).	
11	Audio visual alarm on panel provided for battery low conditions (Yes/No)	
12	Change over from AC Main supply to standby power supply fully automatic in either direction (Yes/No)	
13	Following push buttons provided	
	i) Alarm	
	ii) Reset	
	iii) Test (Yes/No)	
	iv) Abort (Yes/No)	
	v) Lamp Test	
14	Audio visual indication for AC supply failure Provided (Yes/No).	
15	Pilot lamp for system ON and supply failure provided (Yes/No)	
16	Dual tone hooter for fire / fault alarm provided and range of the same	
17	Painting (External / Internal)	
18	Low pressure alarm to indicate level	
19	Material of Construction selected in accordance with NFPA-2001 : 2015 (latest Amendment) (Yes/No)	

20	Confirmation regarding the size of cylinders room provided (Yes/No)	
	Cylinder with all accessories (YES/NO)	
	Battery back-up for 24 hrs ( YES/NO)	

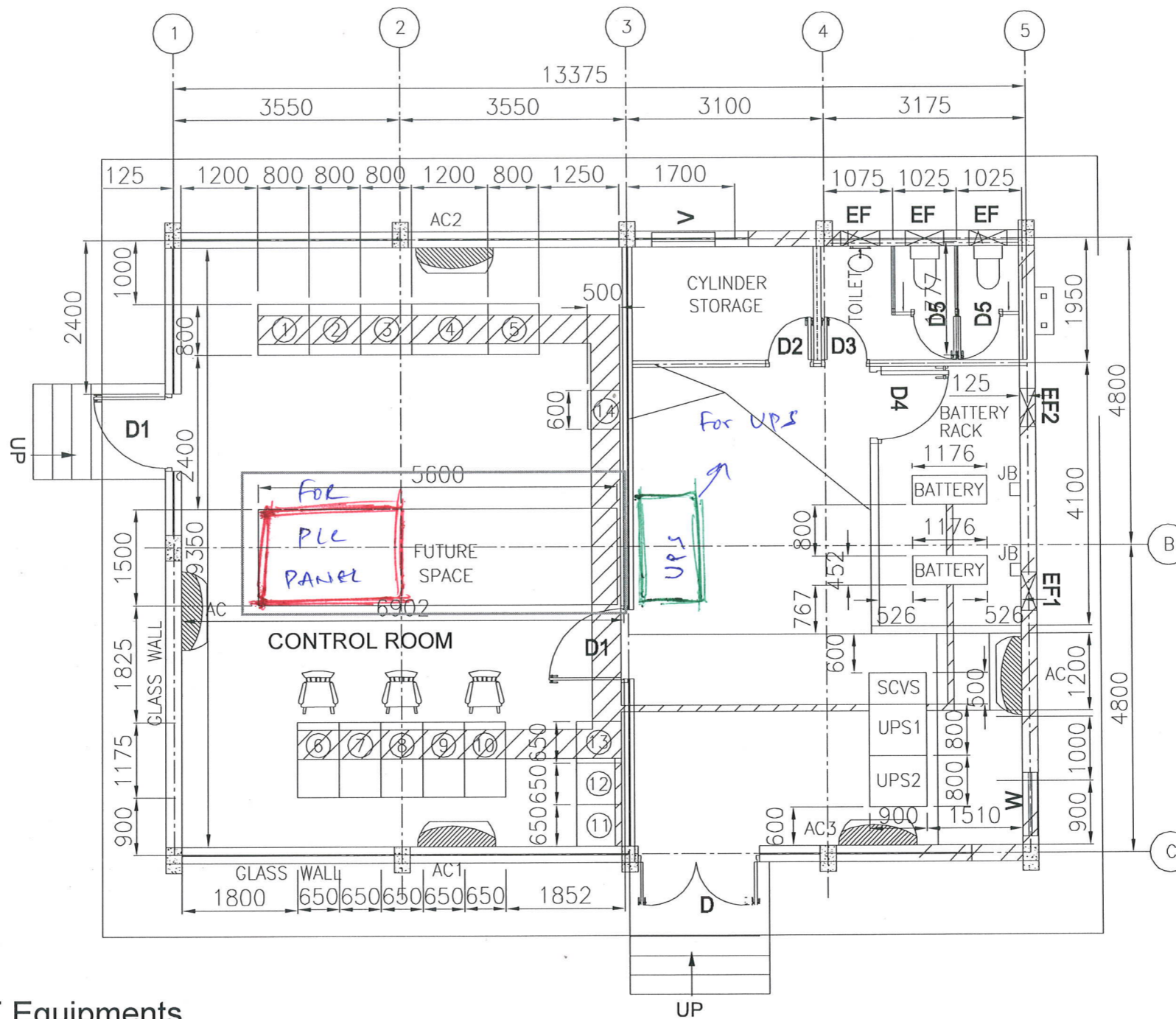
Note: All Yellow Coloured cell must not left blank either you will be liable for disqualification

LEGENDS :

- ① : SM-SC-01
- ② : SM-MC-01
- ③ : ML-SC-01
- ④ : ML-MC-01
- ⑤ : PDB-01
- ⑥ : OWS1
- ⑦ : OWS2
- ⑧ : SCAN-A
- ⑨ : SCAN-B
- ⑩ : TFMS OWS/EWS (PROCESS PLC)
- ⑪ : DMP (DOT MATRIX PRINTER)
- ⑫ : LJP1 (LASERJET PRINTER)
- ⑬ : LJP2 (LASERJET PRINTER)
- ⑭ : NWC01 (WALL MOUNT)

▨ : CABLE TRAY ROUTE

▭ : Future space for ATF Equipments including UPS & Batteries



FLOOR PLAN

REV	DESCRIPTION	DRAWN	APPRV	DATE
0	ISSUED FOR APPROVAL	RAHUL	VYD	20.09.2019

PROJECT: MODERNIZATION OF FUEL FARM OF DELHI AVIATION FUEL FACILITY PVT. LTD. IGI AIRPORT, NEW DELHI

DIMENSIONS: ALL DIMENSIONS ARE IN MM

SCALE: NTS

CAD FILE: INP NO.: 012965

TITLE: CONTROL ROOM LAYOUT

DOC. NO: INP-012965-409-01

SHT: 02 OF: 04

**Honeywell**  
HONEYWELL AUTOMATION INDIA LTD.

CUSTOMER : DELHI AVIATION FUEL FACILITY (P) LTD.

CONSULTANT : MOTT MACDONALD

END-USER : DELHI AVIATION FUEL FACILITY (P) LTD.

**VARDHAN MEDURI VISHNU**  
Digitally signed by VARDHAN MEDURI VISHNU  
Date: 2021.01.11 12:16:11 IST



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## ANNEXURE III – DEVIATION SHEET

EXCEPTION AND DEVIATIONS STATEMENT				
S.NO.	PAGE NO. OF TENDER DOCUMENT	CLAUSE NO.	SUBJECT	DEVIATIONS

Bidder shall list all the deviations in the following given format only on their Letterhead. The Deviation sheet should be submitted along with technical bid.

In case no deviation sheet is submitted along with technical bid, it would be concluded that bidder has accepted all specifications, terms and conditions.

\_\_\_\_\_  
Sign & Stamp of Bidder

**VARDHAN  
MEDURI VISHNU**

Digitally signed by VARDHAN  
MEDURI VISHNU  
Date: 2021.01.11 12:17:08  
IST



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## ANNEXURE IV – DECLARATION SHEET

Date:

### **DECLARATION**

We, M/s \_\_\_\_\_ hereby, unconditionally accept all terms & conditions of TENDER NO. : DAFFPL/MOD/FF/2020-21/15 (JOB: TENDER FOR DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AUTOMATIC NOVEC 1230 GAS BASED FIRE SUPPRESSION SYSTEM FOR CONTROL ROOM) including Scope of job, quantities, completion period, terms & condition without any deviations.

Sign & Stamp of Bidder

Note: In case of deviations (whether technical or commercial) the above declaration should not be submitted and the deviations should be mentioned separately on bidders letter head with the heading "DEVIATION SHEET". In absence of "DEVIATION SHEET", it would be concluded that bidder has submitted his offer as per tender specifications, terms & conditions. Corrections in tender booklet will not be accepted.

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Sign & Stamp of Bidder





# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## ANNEXURE-V

### **PROFORMA OF BANK GUARANTEE (EARNEST MONEY DEPOSIT)**

(On Non-Judicial Stamp paper for appropriate value)

BANK GUARANTEE NO. :

BANK GUARANTEE AMOUNT:

CLAIM:

(Till 120 days from date of submission of Proposal)

TENDER NO. /DATE:

JOB DESCRIPTION/

LOCATION:

### **Tender Security No. [\*]**

Name and Address of the Beneficiary: Delhi Aviation Fuel Facility (Private) Limited  
Aviation Fuelling Station, Shahabad Mohammadpur, IGI Airport, New Delhi – 110 061, India

We [*name and address of the issuing bank*] have been informed that [*Name of the Interested party*] (hereinafter called the “Interested Party”) is submitting a proposal for the Award of the Works in response to a Request for Proposal (“RFP”) by Delhi Aviation Fuel Facility (P.) Ltd. (“DAFFPL” or ‘Beneficiary’) for [*Insert description of work*] (“Works”). The conditions of the RFP, which are set out in a documents entitled Request for Proposal dated [*Please insert*] require its offer to be supported by a Tender Security.

At the request of the Interested Party, we hereby irrevocably undertake to pay you without demur, the Beneficiary, any sum or sums not exceeding Rs. \_\_\_\_\_ [*Please insert*].

Upon receipt by us of your demand in writing and your written statement (in the demand) stating that:

- 1) The Interested Party has, without written consent of DAFFPL, withdrawn its offer after the latest time specified for its submission and before the expiry of its period of validity; or
- 2) The Interested Party has refused to accept the correction of errors in nits offer in accordance with the instructions to Interested parties contained in the RFP; or

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Sign & Stamp of Bidder



## **DELHI AVIATION FUEL FACILITY PRIVATE LIMITED**

- 3) DAFFPL entered in to the contract with the Interested party but the Interested party has failed to deliver the **COMPOSITE BANK GUARANTEE (SECURITY DEPOSIT & PERFORMANCE)** in compliance with the Contract conditions; or
- 4) The Interested Party has failed to enter into the Contract within 30 (Thirty) days of being required to do so by the Tender Officer.

Any demand for payment must contain your signature(s). The demand must be received by us at this office on or before the expiry of the earliest of the following dates, when this security guarantee shall expire and shall be returned to us:

- a) Date of issue of letter communicating to the Interested Party that it has not qualified for the contract or the Proposal submitted by the Interested Party is unsuccessful or the TENDER is withdrawn and/or cancelled by the Beneficiary; or
- b) 7 (seven) days after the date of delivery of an acceptable performance bond complying with the Contract conditions and execution of the Contract after the award of the works to the Interested Party; or
- c) 120 (One hundred twenty) days from the last date of submission of Proposal in accordance with the TENDER.

Date:

Signature:

Designation:

Name of the Branch

---

Sign & Stamp of Bidder



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## ANNEXURE-VI

### **PROFORMA OF COMPOSITE BANK GUARANTEE (SECURITY DEPOSIT & PERFORMANCE)**

(On Non-Judicial paper of Rs. 100/-value)

To,

DAFFPL

Dear Sirs,

M/s .....have taken tender for the work .....for DAFFPL,.

The tender Conditions of Contract provide that the Contractor shall pay a sum of Rs. .... (Rupees ..... ) as security deposit & performance guarantee in the form therein mentioned. The form of payment of security deposit & performance guarantee includes guarantee executed by Scheduled Bank at New Delhi, undertaking full responsibility to indemnify DAFFPL, in case of default. The said party ..... have approached us at and their request and in consideration of the premises we ..... having our office at ..... have agreed to give such guarantees as hereinafter mentioned.

1. We -----hereby undertake and agree with you that if default shall be made by M/s. -----in performing any of the terms and conditions of the tender or in payment of any money payable to Daffpl. We shall on demand pay to you, without demur, protest or requiring you to seek recourse to M/s \_\_\_\_\_, in such matter as to you may direct the said amount of Rupees ----- only or such portion thereof not exceeding the said sum as you may from time to time require.
2. You will have the full liberty without reference to us and without effecting this guarantee, postpones for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said -----and to enforce or to forbear from endorsing any powers of rights or by reason of time being given to the said -----which under law relating to the sureties would but for provision have the effect of releasing us.
3. Your right to recover the said sum of Rs. ----- (Rupees -----) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. -----

\_\_\_\_\_  
Sign & Stamp of Bidder



## DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

- and/or that any dispute or disputes are pending before any officer, tribunal or court.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or change of constitution or insolvency of the said -----but shall in all respect and for all purposes be binding operative units payment of all money due to you in respect of such liabilities is paid.
  5. Our liability under this guarantee is restricted to Rupees -----our guarantee shall remain in force until -----unless a suit or action to enforce a claim under Guarantee is filed against us within six months from -----(which is date of expiry of guarantee) all our rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.
  6. NOT WITHSTANDING anything hereinbefore contained our liability under this Bank Guarantee is restricted to Rupees -----( Rupees -----).This Bank Guarantee shall be valid up to -----and we are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before.
  7. This guarantee is to be returned to us within fifteen (15) days from the date it ceases to be in force. If the guarantee is not returned to us within the date of aforementioned it shall be automatically cancelled.
  8. We have power to issue this guarantee in your favour under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney dated -----granted to him by the Bank.

Yours faithfully

-----Bank  
By its Constituted Attorney  
Signature of a person duly  
Authorized to sign on behalf of the bank

---

Sign & Stamp of Bidder



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## Annexure- VII

### Form of Letter of Undertaking

[On the letterhead of the Interested Party]

#### **Letter of Undertaking**

**Date:**

Delhi Aviation Fuel Facility (Private) Limited  
Aviation Fuelling Station, Shahabad Mohammadpur,  
IGI Airport, New Delhi – 110 061, India

**Re:**

The undersigned Interested Party acknowledges that the TENDER issued is confidential and personal to the undersigned Interested Party and hereby undertakes and agrees as follows:

1. **“Confidential Information”** means the TENDER and everything contained therein, all documentation, data, particulars of the Works and technical or commercial information made by (or on behalf of) Delhi Aviation Fuel Facility (Private) Limited or obtained directly or indirectly from Delhi Aviation Fuel Facility (Private) Limited or its representatives by the undersigned Interested Party or which is generated by the undersigned Interested Party or any information or data that the undersigned Interested Party receives or has access to, as a result of the TENDER, as being confidential information of Delhi Aviation Fuel Facility (Private) Limited, provided that such term does not include information that (a) was publicly known or otherwise known to undersigned Interested Party prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by undersigned Interested Party or any person acting on its behalf.
2. The undersigned Interested Party shall maintain the confidentiality of Confidential Information in accordance with procedures adopted by the undersigned Interested Party in good faith to protect confidential information of third parties delivered to it, provided that the undersigned Interested Party may deliver or disclose Confidential Information to its authorized representatives who agree to hold confidential the Confidential Information substantially in accordance with the terms of this Undertaking.
3. The undersigned Interested Party shall not at any time whatsoever:
  - (i) Disclose, in whole or in part, any Confidential Information received directly or indirectly from the Delhi Aviation Fuel Facility (P) Limited to any third party.

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Sign & Stamp of Bidder



## **DELHI AVIATION FUEL FACILITY PRIVATE LIMITED**

(ii) Reproduce, publish, transmit, translate, modify, compile or otherwise transfer the Confidential Information.

4. In case the Proposal of the undersigned Interested Party is not accepted and immediately upon the acceptance of the Proposal of any of the other Interested Party, the undersigned Interested Party, shall:

(i) Return all Confidential Information including without limitation, all originals, copies, reproductions and summaries of Confidential Information; and

(ii) Destroy all copies of Confidential Information in its possession, power or control, which are present on magnetic media, optical disk or other storage device, in a manner that ensures that the Confidential Information is rendered unrecoverable.

5. The undersigned Interested Party shall certify to Delhi Aviation Fuel Facility (Private) Limited that it has returned or destroyed such Confidential Information to the Delhi Aviation Fuel (Private) Limited within two (2) days of such a request being made by Delhi Aviation Fuel (Private) Limited.

**Name of Interested Party's**

**Signature of Authorized Representative**

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Sign & Stamp of Bidder



# DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

## Annexure VIII

### **DECLARATION to be submitted along with Technical Bid**

(M/s. \_\_\_\_\_) hereby declare / clarify that we have not been banned or delisted by any government or quasi Government agencies or Public Sector Undertakings.

Stamp & Signature of the bidder

**NOTE:** If a bidder has been banned by any Government or quasi Government agencies or PSUs, this fact must be clearly stated with details. If this declaration is not given along with the technical bid, the tender will be rejected as non-responsive.

---

Sign & Stamp of Bidder



## Delhi Aviation Fuel Facility Private Limited



### PRICE BID

**Name of the Work:** DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AUTOMATIC NOVEC 1230 GAS BASED FIRE SUPPRESSION SYSTEM

**Name of Firm:**

S No	Particulars	Qty	Units	Unit Rate	Sub Total	GST		Total Amount incl Taxes
						%	Amount	
1	DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AUTOMATIC NOVEC 1230 GAS BASED FIRE SUPPRESSION SYSTEM FOR CONTROL ROOM	1	Nos					

**Total Amount in Words mention below :-**

--	--

**Notes:**

1. Removal and Reinstallation of False Ceiling and Flooring is in the scope of contractor.
2. Detailed BOQ to be submitted along with the Bid Document
3. Supply and Installation Prices to be mentioned separately in the detailed BOQ