



Office of the Superintending Engineer: Municipal Corporation Bathinda
NOTICE INVITING E-TENDERS (WORKS) Tender Notice
 eproc.punjab.gov.in
 E-tender No MCB/2021-22/012

No.: 636/ਏ

Date: 21/5/2021

Request for Proposals (RFP)

The Municipal corporation Bathinda invites online tenders for "Supply and Installation of Gas Cremation Machine and Annual maintenance Contract "from Experienced Manufacturer with having ample experience in this field for a period of one year (AMC) after warranty period likely to be extend for one more year on same terms and conditions in accordance with relevant clauses of the tender document, may participate in the tendering process:-

e-Tender Inviting authority	Superintending Engineer, Municipal Corporation of Bathinda (MC BATHINDA)
Name of the Work	Supply and installation of Gas cremation machine and annual maintenance contract.
Cost of Tender Document	Rs 1000/- by online
Pre bid Meeting Date and Time	----- at ---- Noon
Place of Pre bid Meeting	Office of Superintending Engineer M.C. Bathinda
Last Date & Time of Online Sale/Submission of bidding document	31.05.2021 at 03.00 PM
Opening of Bid document	31.05.2021 at 04.00 PM
Earnest Money Deposit (EMD)	Rs. 175000/-
Mode of EMD Deposit or Payment of Cost of Tender Document	By online
Address for Communication	Commissioner, Municipal Corporation of Bathinda, Punjab
Contract Period in Years	For a period of one year(AMC) after warranty period likely to be extend for one more year on same terms and conditions as mentioned in the RFP
Other important criteria specified by the Tender Inviting Authority: 1. Detailed eligibility criteria's given in the Tender Document 2. See NIT/Corrigendum for important dates/updates.	

Instruction to Bidders for E-tendering Process:

Where ever applicable in the tender/RFP document, the tendering process shall be replaced with "E-tendering process" / instructions, as mentioned below.

- a. For participating in the above e-tendering process, the applicant / prospective bidder shall have to get themselves registered with <https://eproc.punjab.gov.in> and get user-id and password. Class-3 digital signature is mandatory to participate in the e-tendering.
- b. For selecting the Selected Bidder to undertake the above work, The MCB has adopted a Two Stage System.
- c. The first Stage (the "Technical Qualification Stage") and second Round is (the " Financial Bid Stage") comprising the Technical and Financial Proposal. In the Technical Qualification Stage. Bidders would be required to furnish the information specified in the RFP. Only those Bidders who will be qualified as per the Qualification Stage will stand short-listed by MCB and shall be eligible for opening their Financial Proposal in the Bid Stage for the Project.
- d. The Tender Documents can be downloaded from: <https://eproc.punjab.gov.in>
- e. Purchase of online Tender Document /Bid Security for Tender shall be submitted strictly through online mode (E-Payment only). Bidders are advised to open bank account with core banking solution branches (with NEFT/RTGS Facility).
- f. The web site also has user manuals with detailed guidelines on enrollment and participation in the online bidding process i.e. Two cover bid submission).The user manuals can be downloaded for ready reference from <https://eproc.punjab.gov.in>.
- g. The Submission of Proposal / Tender Document shall be carried out strictly online through website; <https://eproc.punjab.gov.in>. For any online tendering process help bidders shall contact 12 hours support timing 9 am to 5pm at 0172-2970263.
- h. The Bidder shall prepare and submit hard copy of One (1) copy of the Technical Proposal; at the address mentioned below before the date and time mentioned in this RFP. Bidders are required to submit duly filled RFP document (Technical and Financial Proposal) in accordance with the guidelines set forth in this RFP Document and as mentioned on website. In order to enable the Bidders to prepare Proposal in a consistent manner and to minimize misunderstandings regarding how Bidders' Proposals will be interpreted by MCB, the format in which Bidders will specify the fundamental aspects of their Proposals has been broadly outlined in RFP.
- i. In case of any discrepancy between the Proposal of bidder, as uploaded on e-tender portal, and the hard copy of Proposal submitted by the bidder to Municipal Corporation Bathinda, the Proposal of bidder uploaded on e-tender portal, shall be considered for the purpose of evaluation.
- j. For any further queries or clarification bidder may contact on: cmcbathinda@gmail.com
- k. Corrigendum/Addendum/corrections, if any will be published in the website,


**Superintending Engineer,
Municipal Corporation, Bathinda**

Scope of work:-

The agency shall be responsible to execute the Civil/electrical works and works related to Gas Cremation Machine as mentioned in Appendix-1 and Appendix 2 of the RFP according to the prescribed specifications.

- 1) The civil/electrical work should be executed as per CSR (Punjab) rates.
- 2) The payment of Civil/ electrical works should be made according to the actual work executed at site. The quantities of the work could be increase or decrease according to site conditions.
- 3) Time period: -
For civil/Electrical works- 10 weeks after work order
For Installation of Cremation Machine- 2weeks after the completion of civil/electrical works.
Warranty period-One year from the date of work order
For AMC- One year after the completion of warranty period
- 4) The agency shall be responsible to Install Gas Cremation machine and to execute one year operation and maintenance contract after warranty period.
- 5) In case of any alteration in the specification, the agency shall be responsible to send the proposal to the MCB for approval in writing along with full justification and the decision of MCB to approve/reject the proposal shall be final and binding.
- 6) The agencies shall quote the rates inclusive of GST or any other taxes applicable at the time of bidding.
- 7) The agency shall be responsible to comply the norms of Central/state pollution boards.
- 8) The agency shall be responsible to operate and maintain the machine for 30 days after installation and to make the arrangements for training the MCB staff free of cost for running and operations of machine.
- 9) In case of any breakdown during operation of machine within warranty period, the agency shall be responsible to repair/ replace the damaged part within 24 hours. The penalty of Rs 5000/- shall be imposed for Non-Performance (after 24 Hours) for 1st time in the month and subsequently penalty of Rs 10,000/- shall be imposed for Non-Performance(after 24 Hours) for 2nd time in the same month and termination if the Non-performance is repeated for the 3rd or subsequent time.
- 10) This Contract shall remain in force for a period of one year(AMC) after warranty period likely to be extendable or one more year on same terms and conditions subject to the satisfactory performance of the agency, MCB shall have a right to terminate this Contract without assigning/disclosing any cause or reason, by serving upon the agency one (1) months' prior written notice of its intention to terminate the Contract. The Service agency shall have no right to terminate the Contract before the period of one year after warranty period.
- 11) In case of termination of contract the bank guarantee submitted by the bidder shall be forfeited.
- 12) Agency shall be responsible for taking any kind of NOC from CPCB/PPCB for installation of Machine. Machine should comply with all the norms issued by CPCB/PPCB from time to time.

Scope of work for Annual Maintenance Contract

1. The agency shall be responsible for monthly checkups of whole system to monitor the (Temperature performance recording everyday) at a fix time. This indicates recording of all electrical parameters/voltage/current/frequency at that fixed time every day.
2. The agency shall be responsible for the drain of asphalt chamber after regular intervals or as and when required.
3. The agency shall be responsible to train the MCB staff as and when required.
4. The agency shall be responsible to attend the breakdown within 24 hours, if fails the penalty clause will enforce.
5. The agency shall be responsible to keep the machine in running condition.
6. The agency shall be responsible for the replacement of routine minor parts as and when required.
7. The agency shall be responsible for the painting of system as and when required.
8. The agency should be responsible for the insurance of their workers associated with the annual maintenance contract.

Eligibility Criteria:

The Bidder must fulfill the following conditions

- 1) The bidder has to complete the above project through or under the guidance of approved electrical license holder and has to submit test report of the same in MCB office.
- 2) The bidder should have enlisted with PWD or any other agency for civil works. (This condition is not applicable on original equipment manufacturer)
- 3) Only experienced manufacturer having ample experience in this field can apply.
- 4) Only those manufacturer whose product should be of International standards and they have already supplied the product India and abroad.
- 5) The bidder should have experience certificate of where he has provided services to govt department during last five years.
- 6) The Bidder should not have been declared blacklisted by any Govt., Semi Govt. Deptt., or any other organization. (Certificate to this effect may be attached).
- 7) The Bidder should not be declared by media/ or any governmental Bidder for its involvement in corrupt/fraudulent financial practices related to forging any kind of Certification, Challans, Banking documents, and Statutory (ESI/PF/GST) etc.
- 8) (An affidavit to that effect on Non-Judicial stamp paper of Rs. 50/- duly notarized should be enclosed with the Technical Bid same information could also be shared with ESI/PF and GST department if required. False declaration shall leads to rejection of bid at any stage and criminal proceeding may also be initiated against the defaulter as per law.)
- 9) Average Annual Turnover of Rs Six Crores during the last three years. Should have filed ITR,s for last five years.
- 10) Valid EPF, ESI number
- 11) Valid GST registration number
- 12) Valid PAN No. and TAN No.
- 13) Solvency certificate of an amount not less than Rs. One Crore only issued by any of the commercial/Nationalized Bank.
- 14) Bidders should follow;
 - a. No joint ventures/consortium is allowed in the tender participation.
 - b. As prescribed in the relevant clauses
 - c. Bids should be complete, covering entire scope of work and conform to all the conditions laid down in the tender documents failing which their bids shall be summarily rejected outright without further information to the bidder and without assigning any reason and no correspondence shall be entertained thereof.

SPECIAL CONDITIONS

The Bidder shall at his own cost comply with the provision of labour laws, rules orders and notifications whether central or state or local as applicable to him or to this contract from time to time. These Acts/Rules include without limitation to the followings:

- a) The Workmen's Compensation Act, 1923 with Rules, orders and Notifications issued there under from time to time.
- b) The Payment of Gratuity Act, 1972 with rules, orders and Notifications issued there under from time to time.
- c) whichever is applicable with Rules, orders and issued there under from time to time..
- d) The Payment of Wages Act, 1936 with Rules, orders and Notifications issued there under from time to time.
- e) The Employees Provident Fund & Miscellaneous Provisions Act, 1952 with Notifications issued there under from time to time.
- f) The Employees State Insurance Act, 1948.
- g) All other Acts/Rules/Bye-Laws; orders notifications, etc., present or future applicable to the Bidder from time to time for performing the contract -job.
- h) The Bidder shall have a valid license obtained from Licensing Authority under the Contract labour (Regulation & Abolition) Act, 1970.
- i) The Bidder shall submit the EPF code number obtained from the authorities concerned under the Employees Provident Fund and Miscellaneous Provisions Act, 1952.
- j) The Bidder shall also submit periodical reports / returns to the various statutory authorities such as the Contract Labour (Regulation & Abolition) Act- 1970, Employees Provident Fund Act, etc.
- k) The Bidder shall provide Kits/Liveries to his employees during the execution of this contract.

Tenders is in two parts or two stage tender i.e Technical and Financial Bid

a) Technical Bid containing following documents (duly attested):

- (1) Details of Earnest Money Deposit.
- (2) Enclose photocopy copies of Client Contracts and Good Performance Certificates issued by their authorized signatories. (Mandatory)(as per Annexure V)
- (3) Enclose certified copies of the Balance Sheets and photocopy copies of the Income Tax Returns bearing acknowledgement stamp of the Income Tax Department.
- (4) Certificate of registration of firm under Employee State Insurance (ESI) Act.
- (5) Certificate of Goods and Service Tax Registration.
- (6) Attested copy of PAN card of the firm.

- (7) Provident fund A/C No. allotted by PF Commissioner.
- (8) Attested copy of valid ISO 9001 -2015.
- (9) Attested copy of Solvency certificate of an amount not less than Rs. One Crore.
- (10) Affidavit that (i) the firm has not been blacklisted by any Government organization. The above-mentioned documents should be scanned and uploaded at the time of bidding.

b) Commercial Bid (Shall be done online).

Online Commercial bid of only those Bidders whose technical bid are found acceptable, in order and complete in all respects shall be opened by Superintending Engineer Municipal Corporation Bathinda on notified time, date, place in presence of Qualified bidders or their duly nominated representatives and Bidders who do not qualify as per contents of the technical bid their financial bids will not be opened.

- a) No price should be mentioned in Technical Bid otherwise the bid is liable to be rejected.
- b) The Commissioner reserves the right to reject any bid without assigning any reasons thereof, in the interest of the work. No Bidder shall have any cause of action or claim against Municipal Corporation Bathinda for rejection of his bid.
- c) Any deviation from the clauses hidden/ intentional/unintentional shall be considered as contravention of the clauses of tender document and same shall also be grounds of rejection
- d) The tender document is not transferrable.
- e) Each Bidder shall submit only one tender.
- f) Decision to finally select the firm shall solely lie with Commissioner

The detailed scope of work for all the activities indicated above ("the Contract") is provided in bid.

- 1) The Bidder shall need to demonstrate their technical and financial capacity for carrying out the contract. Financial bids of only those bidders will be opened who will be found technically eligible. In the event of insufficient bid MCB reserves the right to negotiate with bidders.
- 2) A bid containing rates which are unrealistically low/ high and which cannot be substantiated by the bidder shall be rejected by the Bid Evaluation Committee constituted by MCB as non-responsive.
- 3) The Bidder shall also be responsible and shall pay for all of the costs associated with the preparation of its Proposal and its participation in the bidding process.

1. Clarification of bid documents

- a) A prospective Bidder requiring any clarification of the bid documents may submit their queries to Commissioner, Municipal Corporation Bathinda through email to emcbathinda@gmail.com MCB will respond to any request for clarification as per the calendar of the event prior to the deadline for submission of Bids. MCB's response will be discussed in the pre-bid meeting.

2. Pre-Bid meeting:

- a) The Bidder is requested to send the queries, if any to the Commissioner, MCB on or before the pre bid meeting.
- b) The pre bid meeting will be held on ---- at ---- PM at the Office of the Superintending Engineer, MCB.
- c) Any modification in the bid documents, which may become necessary as a result of the pre-bid queries or in sole discretion of MCB shall be made exclusively through the issue of an Addendum to be published on Portal <https://eproc.punjab.gov.in>.

3. Amendment of bid documents

- a) Before the deadline for submission of Bids the MCB may modify the bid documents by issuing addendum/corrigendum.
- b) Any addendum/corrigendum thus issued shall be part of the bid documents and shall be communicated through <https://eproc.punjab.gov.in> website and MCB.
- c) To give prospective Bidders reasonable time in which to take an addendum or corrigendum into account in preparing their Bids, the MCB shall extend as necessary the deadline for submission of Bids.

4. Preparation of Bid Documents:

Documents comprising the Bid: The Bids comprises of two parts viz. Technical Bid and Financial Bid and shall contain the documents as follows:

- a) Technical Bid: The Bidder would provide all the information as per Clause 5 below online. MCB would evaluate only those Proposals that are received in the required format and are complete in all respects as per Eligibility Criteria. Financial proposal shall be the financial offer made by the Bidder online for the agency as per Annexure IV. The financial proposal shall be opened if technical bids satisfies all the requirements and same are found acceptable to the Authority.

5. Technical Bid: Shall contain scanned certified copies of the following documents.

- a) Covering letter in the format set out in Annexure I.
- b) Details of the Bidder in the format set out in Annexure II.
- c) Anti-collusion certificate in the format set out in Annexure III.
- d) Proof of Eligibility in the format .
- e) Technical Proposal.
- f) EMD – screen shot/ transaction number of EMD submitted on line.

NOTE:

If the tender(s) with draw tender offer during the tender validity period, his entire E.M.D shall be forfeited.

5.A. Financial Proposal: The rates shall be filled in online tender. (There is no separate provision to quote rates in physical form) as set in out Annexure IV.

- I. The contract shall be for the whole works as described in Scope of work.
- II. The Financial Bid should include all duties, taxes, and other levies if any payable by the Successful Bidder under the contract, or for any other cause.
- III. And any other materials required to be completed and submitted by the Bidders is in accordance with these instructions.

6. Proposal validity:

- I. The Proposal shall remain valid for a period not less than 90 days from the bid Due Date (Proposal Validity Period). MCB reserves the right to reject any Bid, which does not meet this requirement.
- II. In exceptional circumstances, prior to expiry of the original time limit, MCB may request that the Bidder may extend the period of validity for a specified additional period. The request and the Bidder's responses shall be made in writing. A Bidder may refuse the request without forfeiting his earnest money deposit. A Bidder agreeing to the request will not be required or permitted to modify his Bids but will be required to extend the validity of his earnest money deposit for a period of the extension.

7. Earnest Money Deposit (EMD)

- 1) The Bidder shall pay an Earnest Money Deposit (EMD) amount of Rs.175000 (Rupees One Lakh Seventy Five thousand only) for bidding.
- 2) Bid(s) must be accompanied by EMD of the amount specified above shall be paid online through Net-banking at portaleproc.punjab.gov.in. The details of the transaction/ acknowledgement receipt shall be submitted by the bidder in the form of scanned copy/ screen shot/ transaction number.
- 3) Any Bid not accompanied by an acceptable earnest money deposit and not secured as indicated in Sub-Clauses 7.1 above shall be rejected by the MCB as non-responsive.
- 4) The EMD of unsuccessful Bidders will be returned without any interest as promptly as possible on acceptance of the Bid of the selected Bidder or when the bidding process is cancelled by MCB.
- 5) The EMD of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Guarantee of Rs. 500000/- (Rupees Five Lakhs only) in the form of a Bank Guarantee as the format approved by MCB.
- 6) The EMD may be forfeited:
 - a. If the Bidder withdraws the Bid after bid opening during the period of bid validity.
 - b. If the Bidder does not accept the correction of the bid Price, pursuant to Clause correction of error.
 - c. In the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - i) Sign the Agreement or
 - ii) Furnish the required Performance Security.

8. Modifications and Withdrawal of Bids

Bidders may modify or withdraw their bids online. The web site also has user manuals with detailed guidelines on online withdraw and online resubmission before the due date. The user manuals can be

9. Bid opening and Evaluation

MCB shall open the Technical Bids of those Bids that are found to be responsive and undertake evaluation of the Technical Proposals to determine the qualified Bidders.

10. Process to be confidential

Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the MCB's processing of Bids or award decisions may result in the rejection of his Bid.

11. Clarifications

- a) MCB would open the Technical Bid on 31.5.2021 for the purpose of evaluation. MCB will open the Technical Bids of all the Bidders received in the presence of the Bidders or their representatives who choose to attend on the date and place specified in the Schedule of Bidding process.
- b) MCB reserves the right to reject any Bid which does not contain the information/documents as set out in this bid document.
- c) To facilitate evaluation of Bids, MCB may at its sole discretion seek clarifications in writing from any Bidder.

12. Evaluation

- a) The criteria for eligibility, qualification and evaluation of Bidders are to be worked out according different clauses of RFP.
- b) As part of the evaluation, the Bids shall be checked for responsiveness with the requirements of the bid document and only those Bids which are found to be responsive would be further evaluated in accordance with the Eligibility criteria.
- c) The Bid would be considered to be responsive if it meets the following conditions:
 - i. It contains all the information and documents as requested in the bid document.
 - ii. It contains information in formats specified in this bid document.
 - iii. It mentions the validity period.
 - iv. It provides information in reasonable detail. ("Reasonable Detail" means that, but for minor deviations, the information can be reviewed and evaluated by MCB without communication with the Bidder). MCB reserves the right to determine whether the information has been provided in reasonable detail.
 - v. There are no inconsistencies between the Bid and the supporting documents.
 - vi. A Bid that is substantially responsive is one that conforms to the preceding requirements without material deviation or reservation. A material deviation or reservation is one:
 - i) which affects in any substantial way, the scope, quality, or performance of the Service contract,or

- ii) which limits in any substantial way, inconsistent with the bid Document, MCB's rights or the Bidder's obligations under the Agreement, or
 - iii) Which would affect unfairly the competitive position of other Bidders presenting substantially responsive Proposals.
- d) The Financial Offers of only the bidders who meet the qualification criteria set out in eligibility criteria and whose Technical Proposal is found to be adequate would be opened.
- e) Evaluation of Financial Bid: The Bidder making the realistic lowest Financial Offer as accessed by the Evaluation Committee constituted by MCB would be declared as the Preferred Bidder.
- f) In case there are two or more Bidders quoting the same Financial Offer MCB may in such case select the Preferred Bidder based on documents attached during Technical bid.
- g) Notwithstanding anything contained in this bid document, MCB reserves the right to accept or reject any Bid or to annul the bidding process or reject all Bids at any time without any liability or any obligation for such rejection or annulment, without assigning any reasons thereof.
- h) A bid containing rates which are unrealistically low or high and which cannot be substantiated by the bidder shall be rejected by the Bid Evaluation Committee constituted by MCB as non-responsive.
- i) MCB reserves the right to reject any Bid, if:
 - a) at any time, a material misrepresentation is made or discovered; or
 - b) The Bidder does not respond promptly and diligently to requests for supplemental information required for the evaluation of the Proposal.
 - c) The SUCEESFUL BIDDER working earlier has any Audit objections.

13. Correction of errors

- a) Bids determined to be substantially responsive will be checked by the MCB for any arithmetic errors, if there is a discrepancy between the rates in figures and in words; the lower of the two will govern.
- b) In the event of acceptance of the Preferred Bidder with or without negotiations, MCB shall declare the Preferred Bidder as the Successful Bidder. MCB will notify the Successful Bidder through a Letter of Award (LoA) that its Bid has been accepted.
- c) The Successful Bidder shall execute the Agreement immediately after producing the above requirement.
- d) The Successful Bidder shall also furnish Performance Security by way of an irrevocable Bank Guarantee, issued by a nationalized bank or a Scheduled Bank located in India in favor of Commissioner, Municipal Corporation Bathinda as required under the Agreement for an amount of **Rs. 5,00,000** (Rupees Five lac only) and valid for the entire contract period and 3 month thereafter.
- e) Notwithstanding anything contained in this bid document, MCB reserves the right to accept or reject any Bid, or to annul the bidding process or reject all Bids, at any time without any liability or any obligation for such rejection or annulment, without assigning any reasons thereof.

14. Agreement period

- a) MCB hereby entrust the bidder with the task to providing the services for a period of one year(warranty period plus AMC period) from the appointed date (the Agreement period). However Agreement period can be extended as per this tender document.
- b) Provided that in the Event of Termination, the Agreement Period shall mean and be limited to the period commencing from the appointed date and ending with the Termination date.

15. Compliance with labour regulations:

- a) During continuance of the contract, the BIDDER shall abide at all times by all existing labour enactments and rules made hereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority.
- b) The Employees of the SUCEESFUL BIDDER in no case shall be treated as the employees of the MCB at any point of time.
- c) MCB or any of its employees shall not be responsible in any manner in the eventuality of death, injury, loss or damage being suffered/ caused to any of the personnel/ employees deployed by the bidder to discharge its obligations under this Contract.

16. General Obligations

The Bidder shall:

- a. Procure all the Applicable Permits at its own cost and expenses and be in compliance thereof at all times during the period of this Agreement.
- b. The agency shall Always comply with Applicable Laws during the period of this Agreement.
- c. Ensure that all aspects of the Service contract shall confirm to the laws pertaining to labour laws, Income tax laws, Goods, and service tax laws, EPF laws, Insurance laws or any other laws and policies and guidelines related there to.
- d. Shall obtain all necessary insurance cover of employees including accidents, personal injury, damages to third party in case of accidental death/bodily injury.
- e. Not to sub-contract any part or whole of its obligations.

17. Monitoring and Evaluation

The Bidder shall lend the helping hand in all possible aspects to the MCB, from time to time.

18. PAYMENT TERMS

- a. The bidder will submit the bill as per the accepted rate for supply and installation of cremation machine and annual maintenance contract for each item.
- b. All applicable taxes as per Govt of Punjab/Govt of India if applicable will be deducted from the bills of the bidder.

19.FORCE MAJEURE

Force Majeure Event:

Any of the following events resulting Material Adverse Effect shall constitute Force Majeure Event:

- a. earthquake, flood, inundation, landslide,
- b. fire caused by reasons not attributable to the bidder or any of the employees of the bidder for purposes of the contract.
- c. acts of terrorism, war, invasion, rebellion, riots, military action or civil war; if the Parties are rendered unable to perform any of their obligations under this Agreement because of a Force Majeure Event, save and except as expressly provided in the Agreement, neither Party hereto shall be liable in any manner whatsoever to the other Party arising out of occurrence or existence of any Force Majeure Event.

20.Events of Default

Event of Default means either Bidder Event of Default or MCB Event of Default or both as the context may admit or require.

a. Bidder Event of Default

Any of the following events shall constitute an event of default by the Bidder ("Bidder Event of Default") except where performance has been prevented by a Force Majeure Event.

- i. The Bidder fails to start the assigned responsibilities within time.
- ii. If bidder fails to supply the machinery in time.
- iii. In case of sub-standard work by bidder.
- iv. The Bidder voluntarily abandons from the service without intimation.
- v. If the Commissioner receives more than 3 complaints of non-performance from the MCB officials in writing, then the Commissioner reserves the right to terminate the agreement after due verifications and appropriate action may be taken by the Commissioner for termination
- vi. In case of any breakdown during operation of machine within warranty period the agency shall be responsible to repair/ replace the damaged part within 24 hours. The penalty of Rs 5000/- shall be imposed for Non-Performance (within 24 Hours) for 1st time in the month and subsequently penalty of Rs 10,000/- shall be imposed for Non-Performance (within 24 Hours) for 2nd time in the same month and termination if the Non-performance is repeated for the third time.
- vii. This Contract shall remain in force for a period of one year(AMC) after warranty period likely to be extendable for one more year on same terms and conditions as mentioned in the RFP and conditions subject to the satisfactory performance of the agency, MCB shall have a right to terminate this Contract without assigning/disclosing any cause or reason, by serving upon the agency one (1) months' prior written notice of its intention to terminate the Contract. The Service agency shall

have no right to terminate the Contract before the period of one year.

b. MCB Event of Default

Any of the following events shall constitute an event of default by the MCB ("MCB Event of Default"), unless caused by a Bidder Event of Default or a Force Majeure Event:

- i. The MCB has failed to make any payments due to the Bidder without assigning any reason and more than 45 days have elapsed since such default.
- ii. The MCB has failed to adhere to any other performance obligations under the Agreement; and the same has not been remedied for more than 60 days of receipt of notice thereof issued by the Service Provider.

c. Termination due to Event of Default

Termination for Bidder Event of Default Without prejudice to any other right or remedy which the MCB may have in respect thereof under this Agreement, upon the occurrence of a Bidder Event of Default, MCB may terminate this Agreement by issuing a termination notice setting out the underlying Event of Default and the termination date. The Bidder shall continue to perform its obligations under the Agreement till Termination Date.

d. Termination Payments

- a) Upon Termination of this Agreement on account of Bidder Event of Default, the Bidder would not be entitled to any compensation from MCB and the Performance Security shall be forfeited.
- b) Upon Termination of this Agreement on account of MCB Event of Default, the Bidder would be entitled to the payments due from the MCB and the Performance Security shall be released.

21. Amicable Resolution

Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to this Agreement, shall in the first instance be attempted to be resolved amicably by meetings between the Parties.

22. Arbitration

- a) Any Dispute which is not resolved amicably shall be finally settled by binding arbitration under the Arbitration and Conciliation Act, 1996. The arbitration shall be by a panel of three arbitrators, one to be appointed by each Party and the third to be appointed by the two arbitrators appointed by the Parties. The Party requiring arbitration shall appoint an arbitrator in writing, inform the other Party about such appointment and call upon the other party to appoint its arbitrator. If within 30 days of receipt of such intimation, the other Party fails to appoint its arbitrator, the Party seeking appointment of arbitrator may take steps in accordance with Arbitration Act.

- b) Pending the submission of and/or decision on a dispute, the Parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such arbitration award.
- c) The place of arbitration shall ordinarily be Bathinda

23. Governing Law and Jurisdiction

This Agreement shall be governed by the laws of India and courts at Bathinda shall have jurisdiction relating to all matters arising from this Agreement.

24. Amendments

This Agreement and the Schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

25. Invalid Provisions

If any provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future Law, and if the rights or obligations under this Agreement shall not be materially and adversely affected thereby, (a) such provision shall be fully severable; (b) this Agreement shall be construed and enforced as if such illegal, invalid, or unenforceable provision had never comprised a part hereof; (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance here from.

26. Additional Document

Each Party hereto shall promptly execute and deliver such additional documents and RFP as are envisaged in this Agreement and any other Agreement or document as may be reasonably required for the purpose of implementing this Agreement, provided that no such document or Agreement shall be inconsistent with the spirit and intent of this Agreement



Superintending Engineer
Municipal Corporation Bathinda

Covering Letter

(On the Letter-head of the Bidders)

Date:

To,
The Commissioner,
Municipal Corporation, Bathinda

Sub: Supply and Installation of Gas Cremation machine and Annual maintenance.

Ref: Your notification No. _____ dated _____

Sir/Madam,

Being duly authorized to represent and act on behalf of (hereinafter referred to as "the Bidder"), and having reviewed and fully understood all of the Proposal requirements and information provided and collected, the undersigned hereby submits the bid on behalf of (Name of Bidder) for the Service contract with the details as per the requirements of the bid, for your evaluation.

We confirm that our Proposal is valid for a period of 90 days from [insert Proposal Due Date].

Yours faithfully,

For and on behalf of (Name of Bidder)

Duly signed by the Authorized Signatory of the Bidder
(Name, Title and Address of the Authorized Signatory)

Details of Bidder

(On the Letter Head of the Bidder)

- 1)
 - a) Name of Bidder
 - b) Address of the office(s)
 - c) Date of incorporation and/or commencement of Business/activities.
 - d) Date of Registration and year
- 2) Brief description of the Bidder's main lines of business/activities.
- 3) Details of individual(s) who will serve as the point of contact / communication for MCB with the Bidder:
 - a) Name:
 - b) Designation :
 - c) SUCEESFUL BIDDERS/Society:
 - d) Address:
 - e) Telephone number:
 - f) E-mail address:
 - g) Fax number:
 - h) Mobile number:
- 4) Name, Designation, Address and Phone Numbers of Authorized Signatory of the Bidder
 - i) Name:
 - j) Designation :
 - k) SUCEESFUL BIDDERS/Society:
 - l) Address:
 - m) Telephone number:
 - n) E-mail address:
 - o) Fax number:
 - p) Mobile number:

Annexure III

Format for Anti-Collusion Certificate Anti-Collusion Certificate2

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We hereby certify and confirm that in the preparation and submission of our bid, we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti-competitive. We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or agency in connection with the instant Proposal.

Dated thisDay of, 2021.

.....

(Name of the Bidder)

.....

(Signature of the Authorized Person)

.....

(Name of the Authorized Person)

Annexure IV

Financial Proposal

To:

The Commissioner
Municipal Corporation Bathinda

Sub: Supply and Installation of Gas Cremation machine and Annual maintenance contract.

Ref: Your Notification No. __ dated __

Sir/Madam,

Having gone through this bid document and having fully understood the Scope of Work and Terms and Conditions as set out by MCB in the bid document for Supply and Installation of Gas Cremation machine and Annual maintenance contract.

We are pleased to inform that we would offer our financial proposal for the work as follows:

Sr no	Item	Financial Offer
A.	Civil and Electrical works	
B.	Supply and Installation of Gas Cremation machine.	
C.	Annual maintenance Contract for one year after warranty period	

We have reviewed all the terms and conditions of the Invitation for Bids and would undertake to abide by all the terms and conditions contained therein. I / we hereby declare that there are, and shall be, no deviations from the stated terms in the bid document.

Yours faithfully,
For and on behalf of (Name of Bidder)

Duly signed by the Authorized Signatory of the Bidder
(Name, Designation and Address of the Authorized Signatory)

Note: Please do not fill rates here. This is for guidelines only. The rates are to be filled online only in the "BOQ" tab of the tender in Punjab Governments portal: <https://eproc.punjab.gov.in>

Annexure V

WORK COMPLETION CERTIFICATE

Format of Work Completion Certificate

Certificate shall be produced on letter head of certificate issuing authority. Certificate should be stamped and signed by officer not below the rank of Executive Engineer or equivalent (Actual authority who is legally entitled to certify the work)

This is to Certify that M/s._____ have been awarded the following project and successfully executed the work.

Name of Work :
Address of employer :
Work Order No. :
Agreement Date, Number. :
Date of Commencement of work :
Contract Duration :
Total Amount(Rs.)as per Agreement :

F. Year	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21
Supply and Installation of Gas Cremation machine and Annual maintenance contract.					

Note:1. Copy of Agreement, Work order shall be submitted along with this certificate.

2. Work completion certificate must be submitted separately for each work order.

Annexure VI

PERFORMANCE SECURITY (PROFORMA OF BANK GUARANTEE)

THIS DEED OF GUARANTEE executed on this the ____ day of ____ at
____ by ____ (Name of the Bank) having its
Head/Registered office at ____ hereinafter
referred to as "the Guarantor" which expression shall unless it be repugnant to the
subject or context thereof include successors and assigns.

In favour of

MCB represented by the Commissioner, and having its office at [insert address of MCB]
hereinafter referred to as "MCB", which expression shall, unless repugnant to the context
or meaning thereof include its administrators, successors or assigns.

WHEREAS

By the Agreement ("the Agreement") dated ----- entered into between MCB and [insert name of
Successful Bidder], having its registered office/ permanent address at [insert address], ("the
Bidder"), the Bidder has agreed Supply and Installation of Gas Cremation machine and Annual
maintenance contract.

- A. (hereinafter referred to as "the Service contract").
- B. In terms of the said Agreement, the Bidder is required to furnish to MCB, an
unconditional and irrevocable bank guarantee for an amount of Rs. 5,00,000
[Rupees Five lac only] as security for due and punctual performance/discharge of
its obligations under the Agreement, relating to the execution of the Contract.
- C. At the request of the agency, the Guarantor has agreed to provide bank guarantee,
being these presents guaranteeing the due and punctual performance/discharge by
the Bidder of its obligations relating to the Contract

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

1. The Guarantor hereby irrevocably guarantees the due and punctual performance
by Bidder of all its obligations relating to the contract and in connection with
execution of the contract as envisaged in the Agreement.
2. The Guarantor shall, without demur, pay to MCB sums not exceeding in
aggregate Rs. 5,00,000 (Rupees Five lac Only) within 30 calendar days of receipt
of a written demand therefore from MCB stating that the Bidder has failed to
meet its obligations under the Agreement. The Guarantor shall not go into the
veracity of any breach or failure on the part of the Bidder or validity of demand so

made by MCB and shall pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute whatsoever raised by the agency or any other Person. The Guarantor's obligations hereunder shall subsist until all such demands are duly met and discharged in accordance with the provisions hereof.

3. In order to give effect to this Guarantee, MCB shall be entitled to treat the Guarantor as the principal debtor. The obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Agreement or other documents or by the extension of time for performance granted to the Bidder or postponement/non exercise/ delayed exercise of any of its rights by MCB or any indulgence shown by MCB to the Bidder and the Guarantor shall not be relieved from its obligations under this Guarantee on account of any such variation, extension, postponement, non-exercise, delayed exercise of any of its rights by MCB or any indulgence shown by MCB, provided nothing contained herein shall enlarge the Guarantor's obligation here under.
4. This Guarantee shall be irrevocable and shall remain in full force and effect until One years unless discharged/ released earlier by MCB in accordance with the provisions of the Agreement. The Guarantor's liability in aggregate be limited to a sum of Rs. 5,00,000 (Rupees Five lac Only).
5. This Guarantee shall not be affected by any change in the constitution or winding up of the agency/the Guarantor or any absorption, merger or amalgamation of the agency/the Guarantor with any other person.
6. The Guarantor has power to issue this guarantee and discharge the obligations contemplated herein, and the undersigned is duly authorized to execute this Guarantee.

IN WITNESS WHEREOF THE GUARANTOR HAS SET ITS HANDS HEREUNTO
ON THE DAY, MONTH AND YEAR FIRST HEREINABOVE WRITTEN

SIGNED AND DELIVERED

by _____ Bank by the hand of Shri _____
its _____ and authorized official

Annexure VII

Draft Agreement (On Rs.100 India Non Judicial Stamp Paper)

This Agreement (the "Agreement" or the "Contract") is made and entered into between <Company Name.....> ("Successful Bidder"), having its principal offices at <Address.....>, <Company Name.....> and <Municipal Corporation Bathinda, having its office located at.>("Municipality").

WITNESSETH

WHEREAS, Municipal Corporation Bathinda desires to "Supply and Installation of Gas Cremation machine and Annual maintenance contract."

WHEREAS, Successful Bidder is engaged in the business of [.....]:

WHEREAS, the Municipal Corporation Bathinda is a body of Local government Department, Punjab that select the Successful Bidder, negotiate and sign the Contract, and administer all contractual responsibilities on their behalf;

WHEREAS, Successful Bidder has submitted a response to the Tender Inviting Authority pertaining to the "Supply and Installation of Gas Cremation machine and Annual maintenance contract.
and

WHEREAS, Municipal Corporation Bathinda relying on the tender submitted by the Successful Bidder and based on the representations made by the Successful Bidder issued Letter of Acceptance, dated..... to the Successful Bidder and the parties have hence agreed to execute this Contract as per the terms & conditions of RFP issued by MCB for inviting bids through E-Tendering procurement process. All terms and conditions of RFP along with its Tender Forms (if any) shall form an integral part of the Agreement.

THEREFORE, based on the above background, the parties agree as follows:

The following documents shall be deemed to form and be read and construed as part of this Agreement.

- 1) Letter of Acceptance
 - 2) RFP issued by MCB along with its Tenders Forms
 - 3) Proceeding of Negotiation Meeting (if applicable)
 - 4) Schedule of Supply
 - 5) Employer's Requirement and Specifications.
- IN WITNESS HEREOF, the parties below execute this Agreement.

Signature Successful Bidder Date

.....
Signature
SE.MCB

Attachments:

- 1) Letter of Acceptance
- 2) RFP issued by MCB along with its Tenders Forms
- 3) Proceeding of Negotiation Meeting (if applicable)
- 4) Schedule of Supply
- 5) Employer's Requirement and Specifications

.....
Signature SE.MCB

Quantities of Civil/electrical work

S. No.	CSR ref.	Description	Qty	Unit
1	6.6	Earth work in excavation in foundations, trenches etc. in all kinds of soil where pick jumper work is not involved and not exceeding 2.0 meters depth including dressing of bottom and sides of trenches, stacking the excavated soil clear from the edge of excavation.	84.36	Cum
2	10.1	Cement concrete 1:4:8 with stone aggregate 40 mm nominal size in foundation and plinth.	7.51	Cum
3	10.86+10.95(a)	Cement concrete 1:2:4 with stone aggregate 20 mm nominal size for reinforced concrete work for walls exceeding 20 cm thickness (straight and curved) beams etc. excluding steel reinforcement but including centering and shuttering complete in all respect.		
		Extra over above item if mix is used M-20 instead of 1:2:4	57.64	Cum
4	N.S	Heat treatment of above with heat resistant chemicals so as to withstand high stress temperature. (Divided in 6" layers)	150.00	Sft
5	11.8	First class burnt brick work laid in cement sand mortar 1:5 in foundation and plinth up to 4 meters above plinth level.	39.46	Cum
6	14.137	Providing and laying 80 mm thick ISI Marked interlocking paver blocks of all shapes and colours in design mix cement M-35 over a bed of 30 mm thick fine sand complete in all respect.	55.81	Sqm
7	14.89	Providing and fixing vitrified tiles of size 600x600 mm of approved make in flooring laid in any pattern as specified over base of 20 mm thick cement coarse sand mortar 1:3 and jointed with white cement slurry mixed with pigment to match the shade to tiles. (Tiles shall be of premium first quality of reputed make like NITCO, KAJA-RIA, SOMANI, ORIENT, JOHNSON & RAK.	139.53	Sqm
8	15.1	12 mm thick cement plaster 1:5	169.30	Sqm
9	15.17	Plastering on walls 16 mm thick cement plaster 1:5 in two coat work	169.30	Sqm
10	N.S	Heat treatment of above with heat resistant chemicals so as to withstand high stress temperature. (inner side only)	1820.00	Sqm
11	16.65	Preparation of concrete or plastered surfaces for painting or oil-bound distemper including sand papering the surface applying one coat of linseed oil and filling with approved quality filler, consisting of white lead, linseed-oil varnish and chalk mitti including finishing the surface to the required finish complete.	338.60	Sqm
12	16.63	Providing two coats of exterior acrylic emulsion paint of first quality	338.60	Sqm
13	18.53	Supplying, hoisting and placing in position tubular trusses including runners, purlins, consisting of steel tubes conforming to I.S. specifications of tested quality duly welded with 6mm thick throughout including wind bracing including cost of nut and bolts and one coat of red oxide zinc chromate primer of approved quality assembling and fixed in position complete in all respect.		
		For roof trusses, well curbs, plates and trussed girders, etc. of any span for buildings and bridges up to 15 m span.	19.50	Qtl

14	N.S	Supply and laying of machine coated MS sheet 1.07mm thickness with extra heat treatment coating at bottom side from factory it self with heat treatment .	215.00	Sqm
15	18.11	Supplying and fixing rolling shutters of approved make, M.S. Laths, interlocked together through their entire length, and jointed together, at the end by end locks, mounted on specially designed pipe shaft, with brackets, side guides 27.5 cm long wire spring grade No. 2 and arrangement for inside and outside locking, with push and pull operation complete, including top cover 0.80mm thick (payment is to be made for the exact size of opening; where rolling shutter is to be fixed).	28.35	Sqm
		(a) 80mm*1.00mm MS Laths		
	(c)	Ball bearings for shutter.	1.00	Each
16	18.18	Cold twisted deformed (ribbed/tor steel) for RCC work where not included in the complete rate of RCC including bending, binding and placing in position complete: Up to 20mm dia bars.	150.00	Qtl
17	29.46 bi	Providing, lowering, laying cutting (cut surface to be uniformly finished) jointing with rubber rings marked with IS:5382 and testing of SPIGOT AND SOCKETTED RCC NP2 MARKED WITH IS:458-1988 and specials into trenches for all depths including , carriage ,loading, unloading, stacking, handling and re-handling etc. complete in all respects to the satisfaction to the EIC.		
		600 mm i/d.	9.00	Mtr
18	N.S	Supply and laying of extra chemical heat resistant layer coating inner side in RCC pipe NP2to withstand high temperature stresses coming from machine.	186	Sft
19	34.02	Electrical wiring:		
	a (i)	Wiring fan point without fan box in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5sq. mm, 1100volts grade with step type electronic fan regulator 100watts.	8	No
	a (ii)	Wiring light point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade.	14	No
	a (iv)	Wiring 3 Pin 5 Amp. Plug control comprising wall socket(shuttered) and switch including bonding to existing earthwith PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1 sq. mm, 1100volts grade complete.	6	No
20	34.12	Supply & erection of PVC Conduit Pipes (ISI marked) as per IS9537:Part-III & HDPE pipes (ISI marked) as per IS:4984:1995 for wiring purposes including bends, junction boxes, Steel hooks, M.S. saddle clamps and other petty materials etc., as per PWD General Specifications:-		
	(ix)	Heavy Gauge PVC Conduit Pipe 20mm dia. (Flushed)	30	Mtr
	(x)	Heavy Gauge PVC Conduit Pipe 25mm dia.(Flushed)	60	Mtr

21	34.14 iii (a)	Earthing with electrolytic Copper Tape rivetted (with 5Nos. copper rivets)/Steel Nut & bolts (with 4Nos. 32mm long, 8mm thick with washer and double nut) to 30cm x 120cm x 2mm thick copper plate (made cylindrical) buried 10.50 metre (34.44 feet) below ground level in the hole of excavation having bore dia. 125mm and surrounded by salt & charcoal dust mixture (20 kg.) including fixing the Copper Tape recessed in wall and in floor etc., up to 14metre in Length (including bore Length). G.I. pipe 20mm dia. (A-class), 9metre long should be laid in the hole of excavation 1 feet below ground level and having GI Reducer 50mm x 20mm with PVC Cap (For pouring water) fixed on the top level of the pipe. 300mm x 300mm x 300mm deep haudi of First class bricks finished with 1:4 cement plaster and haudi covered with cast iron lid having size 300mm x 300mm (Heavy) around the hole of excavation:-	2	No
	34.14 V (d)	Fixing additional Length of earthing with Copper Tape (On Surface/Flushed) with petty material as required etc.: Additional Length 25mm x 5mm thick Copper Tape	26	Mtr
22	34.16	CIRCUIT BREAKERS: Supply and erection of Miniature Circuit Breaker MCB's for circuit protection against overload and short circuit current fault suitable for 240/415 volts 50cycles AC supply with breaking capacity of 10kA, Curve-C and low watt losses as per IS/IEC 60898-1, energy limitation class-3, true contact indication, label holder facility in the existing MCB distribution board as per PWD General Specifications including connections with suitable size of thimbles/lugs:-		
	A (ii)	MCB Single Pole 6-32amp. (10kA, Curve-C)	9	No
	A(viii)	MCB Double Pole 50, 63amp. (10kA, Curve-	3	No
	A (xvi)	MCB Four Pole 50, 63amp. (10kA, Curve-C)	1	No
23	34.18	IRON CLAD SWITCHES: Supply and erection of sheet metal Iron Clad Switches on existing surface with G.I. bolts & nuts/ rag bolts and nuts etc., according to the size of holes in the body of the enclosure including connections with suitable size of thimbles and bonding to the existing earth as Per PWD General Specifications:-		
	(vii)	ICTPN Switch 100amp., 415volts	1	No
	(viii)	ICTPN Switch 200amp., 415volts	2	No
24	34.19	Supply and erection of sheet metal Iron Clad Changeover Switch on existing surface with G.I. bolts & nuts/rag bolts and nuts etc., according to the size of holes in the body of the switch including connections with suitable size of thimbles and bonding to the existing earth as per PWD General Specifications:		
	(vi)	IC Four Pole Changeover Switch 100amp., 415volts	1	No
	(vii)	IC Four Pole Changeover Switch 200amp., 415volts	1	No
25	34.2	Supply and erection of sheet metal busbar chamber (factory fabricated) duly powder coated on existing surface with required 4Nos. of tin plated copper busbar strips of suitable length and cross sectional area mounted on DMC/ SMC moulds at sufficient distance, enclosure made of M.S. sheet 1.6mm thick with hinged cover and lock, fitted with dust excluding gaskets and secured with sufficient no. of cadmium plated iron screws and of given overall dimensions and to be fixed with G.I. bolts and nuts/ rag bolts and		

		nuts etc. complete with all accessories including connections with suitable size of thimbles, bonding to the existing earth and painting etc. as		
	(iv)	Bus Bar Chamber 200amp.. 415volts Overall Dimensions (350mm x 450mm x 150mm) nominal	1	No
26	31.31	Supply and erection of metal clad bus bar chamber made from 1.6 mm thick MS Sheet fixed with rag bolts on wall or existing pedestal / angle iron frame including bonding to earth , detachable top and bottom painting and necessary connections etc.(copper bars)		
	(iv)	Sheet metal bus bar chamber suitable for 200amp. 415 volts capacity with 4 tinned copper strip bus bars each of length 55cm and cross sectional area (25mm x 5mm) enclosure having over all dimensions (60cm x 45cm x 18cm) nominal	4	No
27	NS	Supply and erection of 220 Volt, 25 watt. LED street light of reputed make complete with bend and connecting wire.		
28	NS	Supply & erection of public health GI 1/2" pipe for taking the connection from main line for wet scrubber of machine	1	LS
		Add Extra Carriage of Material	1	LS

Specifications for Gas Cremation Machine			
Sr. No.	Item Description	Qty.	Unit
1	<p>Design, engineering, fabrication, supply, erection, testing and commissioning of PLC based control panel and with separate attached HMI (7 inch touch screen Human Machine Interface Panel of size 380mmX 210mm for showing graphics of running machine) furnace control panel complete with required control cables and all necessary switches, auxiliary and power contactors, measuring instruments, indicating lamps, etc.</p> <p>The furnace control panel should be attached with machine will dust and vermin proof, fabrication from sheet metal work of 16 SWG thick MS Sheet with hinged cover with locking arrangement. The top, bottom and the rear door (where the instrument will be mounted) will be made of 16 SWG thick MS Sheet. The Panel will be painted 2 coats of Red Oxide as primer and final by synthetic light grey shade/powder coated as per IS - 631. 1000 X 600 X 300 mm (L X H X D) i) Pilot Lamp Contractors. ii) Start On/Off Switches, iii) Fuses, push buttons, contactor, relays, MCB's etc. iv) Ammeter & Voltmeter with selector Switch. v) Digital Indicating Temperature Controllers. vi) Thermocouples with sensors for both the Chambers. vii) Motorized Door ON/OFF Switches. viii) Safety interlocking system. (ix) Necessary required VFT drive for motors. The controlling components for following will also be the part of control panel</p> <p>(a) 5 BHP 3 Phase ID Fan (b) 2 BHP 3 Phase gate Motor (c) 2 BHP 3 Phase Wet Scrubber Motor (d) 2 Nos. Control Panels for two burners upto 1 BHP capacity motors including toggle switches for auto-manual mode and required phase indicators. (e) 2 nos. Digital Temperature controller (f) Digital meter showing voltage, current and frequency all in one cabinet. (g) Reverse/forward direction switch for gate motors. (h) Port for limit switch cabling for controlling the gate.</p>	1	Item
2	<p>Supply, installation, testing and commissioning of Fresh Air injection system - Supply of fresh air forced draught fan having out forced capacity up to 300 water column, for supplying the fresh air to primary chamber for combustion of corpse and for supplying fresh air to dilution chamber/quenching chamber for reducing the outlet heat before entering the chimney through wet scrubber, with required dampers and gate valves etc. The motor installed should be 2 BHP 3 Phase.</p>	1	Item

3	Supply & fixing of Inconel Thermocouple - Heat sensing range 0 to 1200 degree Celsius having (Cr - Al) sensor housed in SS 304 casing of dimension 600 mm long × 8 mm Outer Dia complete encased and to be fitted with terminal on other end for connection of fire retardant. Compensating wire of 2 cores 0.5 sq. mm. for heat sensing from thermocouple to Temperature controller covered with asbestos embedded rope about 50 m length as per direction of EIC.	1	Item
4	Supply & laying of armoured cable from furnace control panel to different motors in Trench /Tray/Wall surface. 1.1 KV grade 4 core 2.5 sq mm Fire Retardant PVC (Copper) including S&F M.S. saddles with earthing attachment in 1 x no. 10 SWG G.I. wire making holes etc. as necessary (Polycab /Havells/KE/ Gloster) including double compression flame proof glanding and termination. ii) 1.1 KV grade 4 core armoured cable 16 sq. mm (aluminium) including S & F M.S Saddles with earthing arrangement as required at site.	150 40	Mtr
5	Burners : 2 Nos. Automatic compact or split type software controlled LPG Burners with technical specifications as under: Maximum input rating – 1400000 BTU/Hr or equivalent or sufficient for burning of 20-30 kg LPG in one hour with temperature range of 850 ± 50°C Cremation Rate - upto 130-150 Kg./hr. Normal operating Temperature with primary chamber - 800± 50 degree centigrade Normal operating Temperature with secondary chamber - 1050 ± 50 degree centigrade The burner should have the feature of auto control inbuilt fuel air mixture chamber and should itself take required air from surrounding atmosphere or FD system, flame detecting sensors and have a auto ignition & auto shut off facility in case of any fault or emergency. The motor/drive should also be a inbuilt feature of burner with all electrical controls compactable with main PLC control panel. The burners should run in compatible with Ringlemann Chart Sensors for controlling the output smoke	1	Set
6	Design, fabrication, supply and Installation and testing commissioning of complete MS structural work for furnace with structural pipes and sheets of minimum 5 mm thick for supporting the internal refractory linings / Bricks and to bear heat stresses of temperature up to 1600 degree centigrade's below:(a)MS Steel Cremation Machine Size – 3600 mm. Lx1700mm. Wx2600mm. H. (b)Primary Chamber Size (including body hearth bricks) & volume of chamber - 2400mm length X950mm width X 900mm Height , Volume should not less than 2.00 Cubic Meter.(c)Outside furnace skin Temp.- 30 °C above ambient temperature(d) Door Operating Motor - 2 HP, 900-1440 RPM, 415 V, 3 PH.sq. cage, H class insulation to be	1	Item

controlled from VFT drive of PLC control cable. CONSTRUCTION OF INCINERATION CHAMBER : Design of the Furnace is a double/ stage combustion chamber. Primary chamber is to be used for corpse burning and secondary chamber is to be used for burning the odour and black heavy smoke or can be used as quenching chamber or tunnel, before discharging it into atmosphere via wet scrubber. The elements installed in these chambers should work through ringelmann gas analyser and take command from it through PLC control panel for increasing or decreasing the temperature . The outer structure of the combustion chamber is made of Prime Quality Mild Steel Plates/ structural pipes, of minimum 5mm, thickness as per IS specification suitable to withstand temperature of 1300°C. The structure is sturdy to withstand any stresses or strains formed during operation. the external casing is reinforced with structural pipes ,angles & channels with minimum 2mm thickness and should be powder coated with any colour as approved by Engineer-in-Charge. PRIMARY CHAMBER: Body is loaded into this chamber through a charging Door and loading trolley. This chamber is fitted with elements which are automatically operated and maintain the temperature in the chamber to the desired level of 800±50°C or as desired. The temperature inside the chamber is controlled using a PLC control sensors and solid state digital temperature indicating controller. Once the desired temperature is achieved the elements will automatically trip off and vice versa the same shall automatically start to maintain the desired temperature. Altogether the indicators ensure complete combustion. This controlled temperature eliminates all possibilities of odour.(a) The Gas based human body cremation machine incorporates full automatic control including that of flue gas emissions. It should meets and exceeds the Indian and most stringent international pollution, environmental, health and air emission regulations controlled through **Ringelmann chart** of smoke detection through machine and to be work on online method, ie There should be a fully automatic control mechanism that normally results in flue gases without black smoke and odour. Any potential increase in black smoke must be automatically detected and the air increased so that waste gases are completely combusted at a sufficiently high temperature to eliminate odors. (b) The exhaust chimney should be preferably mounted off centre and should satisfy all local regulations pertaining to environmental norms.(c)The cremation machine operates on Gas power and employs the proven chamber design for clean discharge and reliable operation. There should be concentration on providing a simplified control interface requiring no special operator skills

7	MS with outer face strip of SS 310, Furnace Charge Door motorized and manually operated with gear box or C.I. made counter weight. Dimensions of gate - 1150 mm Width X 1050mm. Height X 150 mm thickness (made from MS 8mm thick plate & B Class C channel) MOTORISED BODY CHARGING DOOR : The CHARGING DOOR should be motorized for automatically opening and closing the primary chamber by mere pressing the push buttons provided on the control panel. This enables the door to move to and fro (sliding on main structure), which eases the operation. The motor rating shall be 2 HP, 900-1440 rpm., 415 V, 3 Ph and the same shall be provided along with door operating mechanism, safety guards, Limit switches etc. In case of Power failure or while not in operation the door can be opened manually. It should be lined with 128 density of ceramic fibre and whytheat K quality castables.	1	Item
8	Supply, installation, testing & commissioning of position cantilever type spring loaded body Charging trolley with handle. Mechanically operated MS Steel chequered plate top 3mm thick, Pantograph trolley approx. dimensions 4800 mm long X 800 mm width X lift 180/220 MM with lifting and lowering mechanism.	1	Item
9.	Supply, installation, testing and commissioning of complete set of High Alumina Element refractory shaped bricks with Refractory work of furnace in both primary and secondary combustion chambers (a), The furnace is lined with 70% percent High Alumina Refractory Bricks, backed up with Cold Face and high quality insulation bricks/Hysil blocks and ceramic fibre blanket of 128 density for making the total wall thickness from outer surface of machine 325mm ,withstanding capacity of High Temperature of 1400°C The inner most refractory, which is hot face is composed of 70% percent HIGH Alumina and having high thermal stress. Hot face refractory bricks are backed up with cold face refractory insulation/Hysil blocks . The two layers of ceramic wool or ceramic board insulation provided between the cold face refractory and the outer body of the Furnace. Thus the temperature of the outer body of the Furnace doesn't exceed 30°C above the ambient temperature. Refractory Bricks confirm to IS 2042. (b)Complete lining & assembling of entire cremation chamber according to standard size with proper arrangement of accommodation of elements , resting of dead body with sufficient opening for falling of ashes to the ash chamber and sufficient ventilation for fresh air spraying (c) Complete lining and assembling of entire cremation chamber according to standard size with provision of drawing out ashes from the rear side and sufficient ventilation for fresh air injection (d) Complete lining and assembling of entire cremation chamber according to the standard size with provision of air inlet supplying by fresh air blower and arrangement of multi ventilation path for fresh air injection to the ash chamber and cremation chamber.	1.	Set

10	FLUE GAS DUCTINGS : The flue gas ducting shall be made from 3 mm thick M.S. sheet and flanges from 5 mm thick plate confirming to specifications, flanges, bends, gaskets. The ducting shall carry the gases from the Post Combustion Chamber to Venturi System and then Scrubbing System to the I.D. Fan/Blower. The diameter of the duct shall be 400/300 mm externally and all the ducting shall be internally lined with 50mm thick ceramic insulation lining.	12	mtr.
11	Design, engineering, fabrication, supply, installation testing and commissioning of Stainless Steel (304) Pollution Control Device - Stainless steel (grade 304) 5mm thick sheet, wet scrubber cyclone dia of 800 mm, with inbuilt facility of SS Jali and water spray on incoming gases, 200mm dia arrangement for inlet and outlet for gas, with 3mm Tank with minimum water capacity of 3200 litres. & (for fuel economy if secondary chamber burner is not to be used for burning the carbon suspended particles and quenching tunnel to be used for passing of flue gases before wet scrubber) A vertical type recirculation tank capacity 3200 litres, manufactured from 3mm thick stainless sheet of 304 grade with adequate drain system for circulating 5% caustic solution through cyclone scrubber shall also be provided. The complete accessories like valves, fittings are provided. Recirculation pump 2 BHP 3 phase, manufactured by branded company is to be provided for re-circulating scrubbing solution. An overhead HDPE tank of 1000 Litres shall also have to be provided by agency which shall be used to make up the water in this the tank. <i>BREIF ON WET SCRUBBING SYSTEM</i> cyclone Scrubbers are the most common wet scrubber systems used for particulate removal and odor. flue Gases are cooled immediately upon entering the system in a pre-cooled (quench) to approximately 180 °F (82 °C). After the quench tunnel section the gases enter the cyclone with water injection/ sprayed through nozzles usually above and within the cyclone. The spray action of water and dirty gas results in a wetting of particulate matter which settled down in water tank and should be drain out after every 40-50 cremations. And cooled gas is drawn out in the chimney with the help of ID Fan	1	Item
12	Design, engineering, Supply, installation, testing and commissioning of induced draft fan impeller made of alloy steel to withstand temperature rise in continuous duty in surrounding ambience. MS sheet covering, with induction motor 3BHP, 3 phase, 415v, 50 hz and other accessories such as belt pulley & The gases coming from the wet Scrubbing System will pass to the chimney stack through the Blower/I.D. Fan. The I.D. fan/Blower shall be designed to suck the hot gases from the wet scrubber and pump them to the chimney stack and shall have the capacity to compensate the	1	Item

	pressure drop in the wet scrubbing system. It shall be 'V' belt driven and provided with suitable bearings, dampers, anti-vibration rubber pads, safety guards where ever necessary.		
13	Design, engineering, supply, delivery at site, installation, testing and commissioning of MS self supported chimney with inspection door and MS Ladder upto Operating platform. Chimney should be made with 10mm thick sheet at bottom, then 6mm and then 4mm pipe of MS. Base should be 1200mm, and top is 324 mm. Base plates with 12mm ring with ribs and stiffeners. 12 nos. foundation bolts with 32mm dia and 1500 mm length supported with SS steel rope of 8 mm square, 3 sides from 2nd top flange of chimney including 2 coat of heat resistant paint to avoid corrosion of metal. chimney should be equipped with ' Ringelmann chart sensors ' at Operating platform and an optical/signal wire should be connected from sensors to PLC control Panel so that the burners run accordingly the command given by ' Ringelmann chart sensors '.	1	Item
14.	Design, engineering, supply, installation ,testing and commissioning of re-circulation water pump motor along with necessary pipeline and accessories. 2 HP, 1440 RPM, 415 V, 3 Phase sq cage.	2	Item