INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

GT ROAD, KALYANPUR, KANPUR – 208016

UTTAR PRADESH, INDIA

TENDER REFERENCE NO.: IITK/CSP/AE/MIS/2026-27/05

OPEN TENDER ENQUIRY

TENDER DOCUMENT

For

"Design, Supply, Installation, Commissioning & Testing of Supersonic Wind Tunnel Facility"

Bid Document

The Indian Institute of Technology Kanpur ("the IITK") invites Bids ("Bids") from eligible, qualified, and capable companies for the supply and delivery of "the Goods" and provision of associated services ("Associated Services") according to the requirements as defined in the Tender document.

Dates	As per the Central Public Procurement Portal
Contact details For technical clarification	ibrahim@iitk.ac.in, Tel. No. 0512-259-6345
Contact details For tender related clarification	eprocure@iitk.ac.in, Tel. No. 0512-259-7214
Address for EMD submission	Officer-In-charge (Central Stores and Purchase Section) Indian Institute of Technology, Kalyanpur, Kanpur Kanpur-208016 (U.P)

Interested parties may view and download the tender document containing the detailed terms & conditions from the website http://eprocure.gov.in/eprocure/app

(The bids must be submitted online in electronic form on www.eprocure.gov.in only. No physical bids will be accepted.)

(Part-A)

Instructions for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: https://eprocure.gov.in/eprocure/app.

1. REGISTRATION

1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app) by clicking on the link "**Online bidder Enrollment**" on the CPP Portal which is free of charge.

2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

2. SEARCHING FOR TENDER DOCUMENTS

1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e- mail in case there is any corrigendum issued to the tender document.

3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

3. PREPARATION OF BIDS

1) Bidder should take into account any corrigendum published on the tender document

before submitting their bids.

2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or ''Other Important Documents'' area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: *My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.*

4. SUBMISSION OF BIDS

1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

3) Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.

4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be rejected.

5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

6) The server time (which is displayed on the bidders' dashboard) will be considered as

the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

9) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

5. ASSISTANCE TO BIDDERS

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

(Part-B)

Instruction For e-Procurement

1. PREPARATION AND SUBMISSION OF BIDS:

1.1 The detailed tender documents may be downloaded from http://eprocure.gov.in/eprocure/app till the last date of submission of tender. The Tender may be submitted online through CPP Portal http://eprocure.gov.in/eprocure/app

1.2 The bidder should submit the bid online in two parts viz. Technical Bid and Financial Bid. Technical Bid should be upload online in cover-1 and Financial Bid in ". Xls" should be upload online in cover-2

2. SUBMISSION OF THE BID:

2.1 All interested eligible bidders are requested to submit their bids online on CPP Portal: http://eprocure.gov.in/eprocure/appas per the criteria given in this document:

(a) Technical Bid should be uploaded online in cover-1.

(b) Financial Bid should be uploaded online in cover-2.

Both Technical and Financial Bid covers should be placed online on the CPP Portal (http://eprocure.gov.in/eprocure/app).

3. TECHNICAL BID:

3.1 Signed and Scanned copies of the Technical bid documents as under must be submitted online on CPP Portal: http://eprocure.gov.in/eprocure/app .

(a) List of Documents to be scanned and uploaded (Under Cover-1) within the period of bid submission: -

1. Scanned copy of Bank details and EMD.
2. Scanned copy of work experience.
3. Scanned copy of certificate of GST.
4. Scanned copy of specifications/brochures & tender acceptance letter, land border sharing and local content on Appendix 1-3.
   - (i) For The tender value upto Rs. 10 Crores - Self-Certificate for local content from the bidder.
   - (ii) For the tender value above Rs. 10 Crores - Certificate for local content from Statutory Auditor/Cost Auditor/Cost Accountant/CA.
5. Scanned copy of other documents mentioned in tender terms and conditions (if any)
6. Declaration for turn-over and Bidder's credentials on Appendix 4-5.

Note: - No indication of the rates/amounts be made in any of the documents submitted with the Technical Bid.

4. FINANCIAL BID

4.1 The currency of all quoted rates shall be Indian Rupees.

4.2 In preparing the financial bids, bidders are expected to take into account the requirements and conditions laid down in this Tender document. The financial bids should be uploaded online as per the specified **".Xls"** format i.e. Price Bid Excel sheet attached as **'.Xls'** with the tender and based on the scope of work, service conditions and other terms of the Tender document. It should include all costs associated with the Terms of Reference/Scope of Work of the assignment.

4.3 The Financial Proposal should be inclusive of all applicable taxes, duties, fees, levies, and other charges imposed under the applicable laws. The rates quoted in the Tender are inclusive of all applicable taxes, duties etc. **except service tax.** The service tax component shall be re-immersible by the department after receipt of paid challans etc. if applicable.

5. LAST DATE FOR SUBMISSION OF TENDER:

5.1 Online bids complete in all respects, must be submitted on or before the last date and time specified in the schedule of events.

5.2 The IIT, Kanpur may, at its own discretion, alter/extend the last date for submission of tenders.

6. BID VALIDITY

6.1 All the Bids must be valid for a period of 90 days from the last date of submission of the tender for execution of Contract. However, the quoted rates should be valid for the initial/ extended period of the Contract from the effective date of the Contract. No request will be considered for price revision during the original Contract period.

6.2 A bid valid for a shorter period shall be declared as non-responsive.

6.3 In exceptional circumstances, prior to expiry of the original time limit, the IIT may request the bidders to extend the period of validity for a specified additional period beyond the original validity of 90 days. The request and the bidders' responses shall be made in writing. The bidders, not agreeing for such extensions will be allowed to withdraw their bids without forfeiture of their Bid Security.

7. MODIFICATION / SUBSTITUTION/ WITHDRAWAL OF BIDS:

7.1 No Bid shall be modified, substituted or withdrawn by the Bidder after the due date of the Bid.

7.2 Any alteration/ modification in the Bid or additional information supplied subsequent to the Bid's due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

8. REJECTION OF THE BID:

8.1 The bid submitted shall become invalid and tender fee shall not be refunded if:-

(a) The bidder is found ineligible.

(b) The bidder does not upload all the documents as stipulated in the bid document.

9. SELECTION CRITERIA:

9.1 **PHASE-I: Technical Evaluation**

(a) Technical evaluation will be done on the basis of information given by technical bid submitted by the bidders. A bid containing partial, incomplete, unclear and superfluous and unwanted information will be summarily rejected.

(b) Technical declaration must be supported with relevant documents. Discrepancy in relevant supporting documents and technical compliance sheets will lead to rejection of technical bids.

9.2 **PHASE-II: Financial Evaluation**

(a) Financial bids of technically qualified bidders shall be opened.

(b) Financial evaluation is purely done on the total financial implication.

(c) Any superfluous, unreasonable assets rate quotes will be summarily rejected.

10. Instruction to the bidder of countries which share land border with India (Rule 144(xi) GFRs)

10.1 Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade (DPIIT).

10.2 "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company , including any member of a consortium or joint venture (that is an association of several persons, or firms or companies) , every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

10.3 "Bidder from a country which shares a land border with India" for the purpose of this Order means: -

(a) An entity incorporated, established, or registered in such a country; or

(b) A subsidiary of an entity incorporated, established, or registered in such a country; or

(c) An entity substantially controlled through entities incorporated, established, or registered in such a country; or

(d) An entity whose beneficial owner is situated in such a country; or

(e) An Indian (or other) agent of such an entity; or

(f) A natural person who is a citizen of such a country; or

(g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

10.4 The beneficial owner for the purpose of (iii) above will be as under:

(a) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means .

Explanation-

(i) "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company.

(ii) "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.

(b) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

(c) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

(d) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.

(e) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

10.5 An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

10.6 In case of tenders for Works contracts, including Turnkey contracts, The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority .

11. MII & Purchase Preference:

11.1 As per the Ministry of Commerce and Industry Order No. P-45021/2/2017-PP(BE-II) dated 04.06.2020 preference shall be given to Make in India products for which it is mandatory for bidders to declare Country of Origin of goods and percentage of Local contents in the product.

Definitions:

"**Local Content**" means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

"**Class-I Local Supplier**" means a supplier or service provider, whose goods, services or works offered for procurement, has local content to or more than 50%, as defined under this order.

"**Class-II Local Supplier**" means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this order.

"**Margin of Purchase Preference**" means the maximum extent to which the price quoted by a Class-I local supplier may be above the L1 for the purpose of purchase preference. (shall be 20%)

Purchase Preference:

(a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.

(b) In the procurements of goods or works, which are covered by para 3(b) above and which are divisible in nature, the Class-l local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

    (i) Among all qualified bids, the lowest bid will be termed as L1. If L1 is Class local supplier', the contract for full quantity will be awarded to L1.

    (ii) If L1 bid is not a 'Class-l local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-l local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-l local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-l local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-l local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-l local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-l local suppliers, then such balance quantity may also be ordered on the L1 bidder.

(c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-1 local supplier' shall get purchase preference over 'Class-ul local supplier' as well as 'Non-local supplier', as per following procedure:

    (i) Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-1 local supplier', the contract will be awarded to L1.

    (ii) If L1 is not 'Class-1 local supplier', the lowest bidder among the 'Class-l local supplier', will be invited to match the L1 price subject to Class-l local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-l local supplier' subject to matching the L1 price.

    (iii) In case such lowest eligible 'Class-1 local supplier' fails to match the L1 price, the 'Class-1 local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-1 local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

(d) "**Class-II Local Supplier**" will not get purchase preference in any procurement undertaken by procuring entities.

12. Benefits:

12.1 Bidders will get all benefits under Rule-153 of GFR, 2017.

13. Integrity Pact (IP):

13.1 The Integrity Pact will be applicable only for tenders valued above 1 crore. The Integrity Pact shall be applicable for all tenders valued above Rupees one (1) crore.

13.2 The Integrity Pact shall be part of the tender documents / Bid documents / Contract.

13.3 (The IP is implemented through a Panel of Independent External Monitors (IEMs) appointed in consultation with the Central Vigilance Commission. The IEMs are mandated to monitor the tender process and the execution of the contract for compliance with the abovementioned principles. Following two IEMs have been appointed in the IIT, Kanpur:

(i) IEM1@iitk.ac.in
(ii) IEM2@iitk.ac.in

13.4 All bidders must upload a signed soft copy online of the Integrity Pact **(ANNEXURE-I)** with their bid documents for tenders over ₹1 crore. However, only the L-1 bidder (after the opening of the financial bid) shall be required to submit the Integrity Pact on a ₹100 non-judicial stamp paper in hard copy

13.5 If the Bidder does not submit the signed copy of the IP with the Technical Bid documents, the Bid will not be considered.

Annexure-1

Pre-Contract Integrity Pact
(Applicable for all tenders of the value above Rs.1 Crore)

General

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on ____ day of the month of _______ 202__.

BY AND BETWEEN

The Indian Institute of Technology Kanpur represented through **"The Registrar"**, having its office located at G.T. Road, Kalyanpur, Kanpur, Uttar Pradesh – 208016 (hereinafter called the **"BUYER",** which expression shall mean and include, unless ***the*** context otherwise requires, his successors in office and assigns) of the **First Party**;

AND

M/s____a company incorporated under the Companies Act, 2013 through its representative/authorized signatory (insert name and designation of the officer) vide resolution dated __________ passed by the Board of Directors, having its registered office at____

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(hereinafter referred to as **"The Bidder(s)/Contractor(s)"** which terms or expression shall, unless excluded by or repugnant to the subject or context, mean and include its successor-in-office, administrators or permitted assignees) of the **Second Party**;

WHEREAS, the Institute/Buyer has floated the Tender bearing No. _______________ __________ (hereinafter referred to as **"Tender/Bid"**) and intends to award, under laid down organization procedures, contract(s) for ________________________________ ________________________________ (Name of the work/goods/ services). The Institution values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidder(s) and/or Contractor(s).

AND WHEREAS, the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a body corporate and has been established under the provisions of the Institutes of Technology Act, 1961.

AND WHEREAS, in order to achieve these goals, in consultation with the CVC, the Govt. of India, Ministry of Education has appointed Independent External Monitors (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

NOW, THEREFORE, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

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Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERs to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Section 1: Commitments of the BUYER

1. The BUYER commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

    (a) No employee of the BUYER, personally or through family members, shall in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

    (b) The BUYER shall treat all Bidder(s) with equity and reason during the tender process. The BUYER shall, in particular, before and during the tender process, provide to all Bidder(s) the same information and shall not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in the tender process or the contract execution.

    (c) The BUYER shall exclude from the process all known persons having conflict of interest.

2. If the BUYER obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the BUYER shall inform the Chief Vigilance Officer, IIT Kanpur and in addition shall initiate disciplinary proceedings.

Section 2: Commitments of BIDDERs

1. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

    (a) The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

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(b) The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.

(c) The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of the foreign entity or associates, if any. Further details as mentioned in the "Guidelines of Indian Agents of Foreign suppliers" shall be disclosed by the Bidders(s)/Contractor(s). Further, as mentioned in the Guidelines all payments made to the Indian Agent/representative have to be in Indian Rupees only.

(d) BIDDERs shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

(e) The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorised government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

(f) The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

(g) The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

(h) The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

(i) The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

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(j) The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

(k) The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

(l) If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender. The term 'relative' for this purpose would be as defined in Section 2(77) of the Companies Act, 2013.

(m) The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

Section 3: Disqualification from tender process and exclusion from future contracts:

1. If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Institute/Buyer is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the procedure mentioned in the "Guidelines on Banning of Business Dealing".

2 Any violation of Integrity Pact would entail disqualification of the bidder(s) and exclusion from future business dealings, as per the existing provisions of GFR-2017, PC Act, 1988 and other Financial Rules/Guidelines etc. as may be applicable to the organization concerned.

Section 4: Compensation for Damages:

1. If the Institute/Buyer has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Institute/Buyer is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.

2. If the Institute/Buyer has terminated the contract according to Section 3, or if the Institute/Buyer is entitled to terminate the contract according to Section 3, the Institute/Buyer shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5: Previous Transgression

1. THE BIDDER(S) to disclose any transgressions with any other public/government organization that may impinge on the anti-corruption principle. The date of such transgressions, for the purpose of disclosure by the BIDDER(s) in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The period for which such transgression(s) is/are to be reported by the bidders

shall be the last **three years** to be reckoned from date of bid submission. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the BIDDERS.

2. The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6: Equal Treatment of all Bidders/Contractors/Sub-Contractors:

1. In the case of sub–contracting, the principal/main Contractor shall take the responsibilities of adoption of the Integrity Pact by the Sub-contractor.

2. The BUYER will enter into agreements with the identical conditions as this one with all bidders and Contractors.

3. The BUYER will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7: Criminal Charges against violating Bidder(s)/Contractor(s)/Sub-Contractors:

1. If the Buyer obtains knowledge of the conduct of a Bidder, Contractor or Sub-contractor, or of an employee or a representative or an associate of a Bidder, Contractor or Sub-contractor which constitutes corruption, or if the Institute/Buyer has substantive suspicion in this regard, the Institute/Buyer will inform the same to the Chief Vigilance Officer, IIT Kanpur.

Section 8: Sanctions for Violations

1. Any breach of the aforesaid provisions by the BIDDER or anyone employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required: -

   (i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

   (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason, therefore.

   (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

   (iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2%. higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection

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with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments already made by the BUYER, along with interest.

(vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall• be liable to pay compensation for any loss ·or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes of the Institute for a minimum period of two years, which may be further extended at the discretion of the BUYER.

(viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

2. The BUYER will be entitled to take all or any of the actions mentioned at para 9.1 (i) to (x) of this Pact also on the Commission by the BIDDER or anyone employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

3. The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

Section 9: Fall Clause

1. The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub-systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

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Section 10: Independent Monitors

1. The IEMs have been appointed by the Ministry of Education in consultation with the Central Vigilance Commission. The details of the IEMs are as follows:

   (a) IEM1@iitk.ac.in
   (b) IEM2@iitk.ac.in

2. The task of the Monitor shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

3. The Monitor shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

4. Both the parties accept that the Monitor has the right to access all the documents relating to the project/procurement, including minutes of meetings.

5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

6. The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

7. The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8. The Monitor will submit a written report to the designated Authority of BUYER within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

9. A person signing the IP Pact shall not approach the Court while representing the matter to IEMs and shall await the decision in the matter.

10. The IP would be implemented through a panel of Independent External Monitors (IEMs), appointed by the Ministry. The IEM would review independently and objectively whether and to what extent parties have complied with their obligations under the Pact on receipt of any complaint by them from the Bidder(s).

11. Integrity Pact (IP), in respect of a particular contract, shall be operative from the date IP is signed by both parties. The IEMs shall examine all the representations/ grievances/complaints received by them from the bidders or their authorized representatives related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid

Ugevaluation criteria, commercial terms & conditions, choice of technology/specifications etc.

12. For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on the records.

13. In the event of any dispute between the management and the contractor relating to those contracts where Integrity Pact is applicable, in case, both the parties are agreeable, they may try to settle dispute through mediation before the panel of IEMs in a time-bound manner. If required, the organization may adopt any mediation rules for this purpose.

    In case, the dispute remains unresolved even after mediation by the panel of IEMs, the organization may take further action as per the terms & conditions of the contract.

    The fees/expenses on dispute resolution shall be equally shared by both parties.

14. If the Monitor has reported to the Management of the BUYER a substantiated suspicion of an offense under the relevant IPC/ PC Act, the Management of the BUYER will take action after examination of the veracity of the intent of the action.

15. The word **"Monitor"** would include both singular and plural.

Section 11: Facilitation of Investigation

1. In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents, including the Books of Accounts of the BIDDER, and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

Section 12: Law and Place of Jurisdiction

1. This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER i.e., Kanpur Nagar.

Section 13: Other Provisions

1. The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

2. Changes and supplements, as well as termination notices, need to be made in writing. Side agreements have not been made.

3. In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of sub-contracting, the principal contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).

4. Issues like Warranty/Guarantee etc. shall be outside the purview of the IEMs.

5. This Integrity Pact is deemed as part of the contract.

Section 14: Validity

1. The validity of this Integrity Pact shall be from the date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including the warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

2. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement with their original intentions.

IN WITNESS WHEREOF, the parties hereunto set their hands and seals and executed this Integrity Pact as of the date/month/year first above written in the presence of following witnesses:

For & on behalf of
The Indian Institute of Technology Kanpur
(First Party)
Signed, Sealed and delivered by

Viss.

Name: **Vishwa Ranjan**
Designation: **Registrar,**
Address: **IIT Kanpur**
(*Authorized Signatory*)

विश्व रंजन / Vishwa Ranjan
कुलसचिव / Registrar
भारतीय प्रौद्योगिकी संस्थान कानपुर
INDIAN INSTITUTE OF TECHNOLOGY KANPUR
कानपुर - 208 016 (उ.प्र.) भारत
KANPUR - 208 016 (U.P.) INDIA

For & on behalf of
The M/s ....
(Second Party)
Signed, Sealed and delivered by

Name: ....
Designation: ....
Address: ....
(Authorized Signatory vide resolution dated .... passed by the Board of Directors)

***In the presence of Witness*:**

1. ....(Indenter)
2. ....

1. ....
2. ....

Viss.

(Part-C)

Commercial Terms and Conditions

1. DEFINITIONS

These Commercial Terms and Conditions shall constitute the General Conditions of Contract, where no separate contract is signed with the selected Bidder(s), and, the Bidders by putting their signature and stamp on each page of this Section V are binding themselves to these Terms and Conditions. In the Commercial Terms and Conditions as defined below, words and expressions shall have the following meanings assigned to them:

1.1 "**Contract**" means the agreement of the Parties relating to the procurement of Goods and / or the IITK Purchase Order (PO), and all attachments incorporated by reference, which shall form an integral part of the Contract. In the event of any discrepancy, the documents to prevail shall be given precedence in the following order: (i) the Contract (where separately signed), (ii) the IITK Purchase Order, (iii) its attachments, and (iv) these Commercial Terms and Conditions.

1.2 "**Contractor**" means the person or entity named in the 'CONTRACTOR' named field of the IITK Purchase Order and any agreed in writing by the IITK legal successor(s) in title.

1.3 "**Day**" means any calendar day.

1.4 "**Delivery Date**" means the latest possible date by which the Goods shall be delivered by the Contractor to the IITK, as specified in the 'DELIVERY DATE' named field of the IITK Purchase Order.

1.5 "**Force Majeure**" shall mean any unforeseeable exceptional situation or event beyond the Parties' control which prevents either of them from fulfilling any of their obligations under the Contract, was not attributable to error or negligence on their part (or of their partners, contractors, agents or employees), and could not have been avoided by the exercise of due diligence. Defects in equipment or material or delays in making them available, labour disputes, strikes or financial problems cannot be invoked as Force Majeure by the defaulting Party. Neither of the Parties shall be held liable for breach of its obligations under the Contract if it is prevented from fulfilling them by Force Majeure. The Party invoking Force Majeure shall notify the other without delay, stating the nature, likely duration and foreseeable effect, and take any measure to minimize possible damage.

1.6 "**Goods**" means all of the goods to be supplied to the IITK by the Contractor under the Contract.

1.7 "**IITK**" means the Indian Institute of Technology Kanpur.

1.8 "**IITK Purchase Order**" means the IITK's official Purchase Order document.

1.9 "**Party**" means the IITK, or the Contractor and "Parties" means the IITK and the Contractor; and "Place(s) of Delivery" means the location(s) or place(s) where the Goods are to be delivered, as specified in the 'SHIP TO' named field of the IITK Purchase Order.

2. CONCLUSION OF THE CONTRACT

2.1. The Contract is made between the IITK and the Contractor. The Contractor is engaged as an independent contractor for the sole purpose of delivering the Goods.

2.2. The Contract shall be concluded upon the Contractor duly following the countersigning procedure as stated in the IITK Letter of Intent (LOI).

3. FUNDING

3.1 This Contract shall become and remain effective only on the condition that an official Purchase Order is issued by IITK following the conclusion of tender exercise. In the event this is not or no longer shall the case, the IITK without unreasonable delay notify the Contractor thereof.

3.2 Any continuation of the Contractor’s performance under this Contract after being notified by the IITK shall be at the Contractor’s risk and expense.

4. DELIVERY AND TAKE-OVER OF GOODS

4.1 The Contractor shall deliver the Goods at the Place(s) of Delivery. On behalf of the IITK, a duly authorised representative(s), shall take-over the Goods upon delivery. Take-over of the Goods by the IITK shall not be deemed acceptance of the Goods by the IITK. The time of delivery as specified in the Contract / PO shall be strictly adhered to, and time shall be of the essence.

5. QUALITY OF GOODS

5.1 The Contractor shall deliver Goods that are:

(a) of the quality, quantity and description as required by the Contract / PO; and

(b) free from any right or claim of a third party, including rights based on industrial property or other intellectual property.

5.2 Should the Goods be of the type “homogeneously defined” or disposable, the Contractor shall undertake, certify, and guarantee that all Goods delivered shall be of the same quality and characteristics as mentioned in the specifications.

6. INSPECTION AND ACCEPTANCE

6.1 The duly authorized representative(s) of the IITK shall have the right, before payment, to inspect the Goods either at the Contractor's stores, during manufacture, at the ports and/or in places of shipment, or at the Place(s) of Delivery. The Contractor shall provide all facilities for such inspection. The IITK may issue a written waiver of inspection. Any inspection carried out by representative(s) of the IITK, or any waiver thereof shall be without prejudice to other provisions of the Contract concerning obligations assumed by the Contractor, including specifications of the Goods.

6.2 Upon delivery and inspection of the Goods, the IITK shall inspect the goods as soon as possible and complete the Goods Receiving Document. Should any Goods fail to conform to the technical specifications, codes and standards under the Contract, the IITK may reject the Goods. The Contractor shall, at no cost to the IITK, replace the rejected Goods or, alternatively, rectify the non-conformity.

6.3 In the case of Goods ordered on the basis of specifications, the IITK shall have the right to reject the Goods or any part thereof and terminate the Contract if the Goods do not conform to the specifications. Nothing in this clause shall in any way release the Contractor from any warranty or other obligations under the Contract.

7. SHIPPING AND INSURANCE

7.1 For overseas orders, shipping arrangements shall be co-ordinated by IITK. Original shipping documents including the packing list shall be airmailed/emailed by the Contractor to the (Assistant Registrar (S&P), IIT, Kanpur – 208 016, UP, India).

8. OBSERVANCE OF LAW AND EXPORT LICENCES

8.1 The Contractor shall comply with all laws, ordinance, rules and regulations bearing upon the performance of its obligations under the terms of the Contract. If an export licence or any other governmental authorisation is required for the Goods, it shall be the obligation of the Contractor to obtain such licence or governmental authorisation. In the event of the Contractor's failure to obtain such licence or authorisation within a reasonable time, the IITK may immediately terminate the Contract. Where the award procedure or execution of the Contract is vitiated by substantial errors or irregularities or by fraud, the IITK shall suspend execution of the Contract.

8.2 Where such errors, irregularities or fraud are attributable to the Contractor, the IITK may also refuse to make payments or may recover monies already paid, in proportion to the seriousness of the errors, irregularities or fraud. The purpose of suspending the Contract shall be to verify whether presumed substantial errors and irregularities or fraud have actually occurred. If they are not confirmed, execution of the Contract shall resume as soon as possible. A substantial error or irregularity shall be any infringement of a contract or regulatory provision of India, resulting from an act or an omission that causes or might cause a financial loss.

9. PRICE

9.1 The price of the Goods shall be as stated in the Purchase Order and may not be increased.

10. PAYMENT

10.1 Unless otherwise stipulated in the Purchase Order, the IITK shall make payment within thirty (30) Days of the later of:

(a) Successful delivery of the goods to IITK as confirmed by the consignee (Assistant Registrar, Store & Purchase, IIT-Kanpur), endorsed by the indenter and approved by the indenters' Head of Department / Section.

(b) Receipt of customary shipping documents and any other documents specified in the Contract; and (c) Receipt of the original invoice issued by the Contractor.

10.2 All invoices shall be in original and shall contain the IITK Purchase Order number, and a description, the quantities, unit and total price(s) of the Goods delivered. The currency of the invoice and payment shall be as specified in the Purchase Order. Unless otherwise authorized by the IITK, a separate invoice shall be submitted for each shipment under the Contract / PO. Subject to Clause 11 below ('Tax Exemption'), if applicable, the GST amount shall be separately identified in the invoice.

10.3 Payments shall be made in the currency stated in the Contract / PO, on the basis of the equivalent value of INR on the day of payment and paid directly into the nominated bank account.

10.4 The IITK shall not pay any charge for late payments.

11. TAX EXEMPTION

11.1 The Contractor's price shall reflect any tax exemption to which the IITK is entitled. If it is subsequently determined that any taxes that have been included in the price are not required to be paid or if, having been paid, any such taxes are subject to refunding, the IITK shall deduct the amount from the Contract price. Payment of such adjusted amount shall constitute full payment by the IITK. In the event that any taxing authority refuses to recognize the IITK's exemption from taxes, the Contractor shall immediately consult with the IITK to determine a mutually acceptable procedure for settling the applicable amount.

12. WARRANTY

12.1 The Contractor warrants that the Goods furnished under the Contract conform to the technical specifications, description and standards specified in the Contract, and are new and unused, and free from defects in design, workmanship and/or materials.

12.2 The Contractor shall provide a warranty for the Goods for a period of one year from the date of acceptance of the Goods by the IITK, unless the standard manufacturer's warranty period is longer in which case the longer period shall apply.

12.3 In the case of "homogeneously defined" or disposable goods, should any portion of the Goods, at any time, not comply with clause 5.1 or 5.2 herein or otherwise prove to be defective, the Contractor shall, upon written notification from the IITK, replace that portion of the Goods and bear all costs associated with the replacement of same.

13. PACKING

13.1 The Goods shall be packed and marked in a proper manner and in accordance with the Contract and any statutory requirements and any requirements of the carrier(s). In particular, the Goods shall be marked with the IITK Purchase Order number and the net, gross and tare weights, the name of the contents shall be clearly marked on each container and all containers of hazardous goods (and all documents relating thereto) shall bear prominent and adequate warnings.

13.2 The Contractor shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination and the absence of appropriate handling facilities at all points in transit.

13.3 All packaging materials shall be non-returnable.

14. DEFAULT AND DAMAGES

14.1 If due to reasons attributable to the Contractor, the Contractor fails or refuses to:

a. deliver any or all of the Goods under the Purchase Order.
b. comply with any or all of the terms and conditions set out in the Purchase Order; or
c. deliver any or all of the Goods under the Purchase Order on or before the Delivery Date; the IITK may hold the Contractor in default under the Purchase Order.

14.2 When the Contractor is thus in default, the IITK may, by written notice to the Contractor, immediately terminate the Purchase Order in whole or in such part or parts thereof in respect of which the Contractor is in default.

14.3 Alternatively, to clause 14 above when the Contractor is thus in default, the IITK may, at its own discretion, set a reasonable period of time for the Contractor to remedy its default. Any new Delivery Date shall be specified in a written amendment to the Purchase Order, duly countersigned by the Contractor.

14.4 The IITK may, at its discretion, impose penalties upon the Contractor calculated in accordance with clause 15 for each Day the Contractor is late in delivering the Goods past the Delivery Date initially specified in the Purchase Order.

14.5 If the Contractor does not remedy its default within the period accorded under clause 16, the IITK may, by written notice to the Contractor, terminate the Purchase Order with immediate effect.

14.6 Upon any termination of the Purchase Order, in whole or such part(s) thereof in respect of which the Contractor is in default, the IITK may engage another contractor to deliver the Goods and recover any difference in price and any additional costs from the Contractor.

14.7 The Contractor shall indemnify the IITK for all losses, charges, costs and expenses, which the IITK may suffer or incur as a result the Contractor's default, including those resulting from engaging another contractor pursuant to this clause 14.

15. PENALTIES

15.1 If, in accordance with clause 15, the IITK imposes penalties on the Contractor, such penalties shall amount to point five percent (0.5%) of the total Purchase Order price for each week following the initial Delivery Date specified in the Purchase Order but shall not amount to more than Ten percent (10%) of the total Purchase Order value. The penalties for the delay may be deducted by IITK from any sum(s) due, or to become due, by the IITK to the Contractor.

16. DELAY NOT ATTRIBUTABLE TO THE CONTRACTOR

16.1 If the Contractor is delayed at any time in the delivery of the Goods or fulfilment of any other of the Contractor's obligations by any act or omission of the IITK, or by any of its officials, or by any separate contractor(s) contracted by the IITK, or by changes ordered in the type and/or quantity of the ordered Goods, or the Place(s) of Delivery, or any causes beyond the Contractor's reasonable control, or by any other cause, which the IITK determines may reasonably justify the delay, the Delivery Date of the Goods, or fulfilment of any other of the Contractor's applicable obligations shall be extended for such reasonable period of time as the IITK and the Contractor mutually determine. The set reasonable period of time and any amended delivery date shall be specified in a written amendment to the Contract / PO, duly countersigned by the Contractor.

17. FORCE MAJEURE

17.1 As soon as possible after the occurrence of any event constituting Force Majeure, but no later than three (3) Days, the Contractor shall give notice and full particulars in writing to the IITK of the Force Majeure. If the Contractor is thereby rendered unable, wholly or in part, to meet its obligations under the Contract, the IITK may terminate the Contract / PO with immediate effect by providing written notice to the Contractor.

18. INDEMNITY

18.1 The Contractor shall indemnify, hold and save harmless and defend at its own expense the IITK, and all of the foregoing's officials, agents, servants and employees from and against all suits, claims, demands and liability of any nature or kind, including costs and expenses, arising out of acts or omissions of the Contractor or its employees, agents or subcontractors in the performance of the Contract.

18.2 Clause 18 shall include, without limitation, claims and liabilities in the nature of workmen's compensation and claims and liabilities arising out of the use of patented inventions or devices.

19. ASSIGNMENT

19.1 The Contractor shall not assign, transfer, pledge or make other disposition of the Purchase Order or any part thereof or of any of the Contractor's rights, claims or obligations under the Purchase Order except with the express written consent of the IITK. Any assignment made without such consent shall be void and of no effect.

19.2 The Contractor shall not subcontract any of its obligations under the Contract / PO without the express written consent of the IITK. The IITK may require the Contractor to furnish particulars of the proposed subcontract as the IITK deems necessary.

19.3 The IITK's approval of any subcontracting shall not relieve the Contractor from any liability or obligation under the Contract. In any subcontract, the Contractor agrees to bind the subcontractor by the same terms and conditions by which the Contractor is bound under the Contract / PO.

20. INSOLVENCY AND BANKRUPTCY

20.1 Should the Contractor become insolvent or should control of the Contractor change by virtue of insolvency, the IITK may with immediate effect and without prejudice to any other right or remedy available to it, suspend the performance of the Contractor's obligations or terminate the Purchase Order with immediate effect, by providing the Contractor with written notice thereof.

20.2 Should the Contractor be adjudged bankrupt, or should the Contractor make a general assignment for the benefit of its creditors, or should a receiver be appointed on account of the Contractor's insolvency, the IITK may, without prejudice to any other right or remedy available to it, terminate the Purchase Order with immediate effect by providing the Contractor with written notice thereof.

21. TERMINATION

21.1 The IITK shall have the right to terminate the Purchase Order or any of the provisions thereof at any time by serving a three days' notice to the Contractor.

22. WAIVER

22.1 A waiver of any breach of or default under the Contract / PO shall not constitute a waiver of any other breach or default and shall not affect the other terms of the Contract / PO. The rights and remedies provided by the Purchase Order are cumulative and are not exclusive of any other rights or remedies.

23. ADVERTISING

23.1 The Contractor shall not advertise or otherwise make public the fact that it is a contractor to the IITK. The Contractor shall not in any way use the name, emblem, logo, official seal, or any abbreviation of the IITK.

24. DISCRETION AND CONFIDENTIALITY

24.1 The Contractor is required to exercise the utmost discretion in all matters relating to the Contract / Purchase Order. Unless required in connection with the performance of the Purchase Order or expressly authorised in writing by the IITK, the Contractor shall not disclose at any time to any third party any information which has not been made public and which is known to the Contractor by reason of its association with the IITK. The Contractor shall not, at any time, use such information to any private advantage. These obligations do not lapse upon any completion, expiration, cancellation or termination of the Contract / PO.

25. NOTICES

25.1 Any notice given in connection with the Contract shall be given in English and in writing and shall be deemed to be validly given if sent by registered mail or by fax or by email to the other Party at the following:

a. for the IITK: the contact details set out in the 'IITK BUYER' name field of the Purchase Order; and

b. for the Contractor: the contact details set out in the 'CONTRACTOR' named field of the IITK Contract/Purchase Order.

26. STAFF MEMBERS NOT TO BENEFIT

26.1 The Contractor shall not grant to any official of the IITK any direct or indirect benefit or preferential treatment on the basis of the Purchase Order or the award thereof. Any breach of this provision shall constitute a fundamental breach of the Purchase Order.

27. GOVERNING LAW

27.1 The Contract shall be governed by and construed in accordance with the substantive laws of the Republic of India.

28. SETTLEMENT OF DISPUTES

28.1 The Parties shall use their best efforts to negotiate and amicably settle any disputes, controversies or claims arising out of, or in connection with, the Contract / Purchase Order or its interpretation.

28.2 If the Parties fail to settle the dispute amicably within thirty (30) Days of commencement of the negotiations, the dispute shall be settled through arbitration. One (1) sole arbitrator shall be appointed by the Director of IITK who full powers shall have to make final and binding decisions subject to prevailing laws of India. The appointing authority shall be the Director of IITK. The place of arbitration shall be Kanpur, and the language used in the arbitration proceedings shall be English.

29. PRIVILEGES AND IMMUNITIES

29.1 No provision of the Contract / Purchase Order shall be deemed, or interpreted as, a waiver of the privileges and immunities enjoyed by the IITK.

30. AMENDMENTS

30.1 No modification, amendment or change to the Contract/Purchase Order, or waiver of any of its provisions, or any additional contractual relationship with the Contractor shall be valid unless approved in the form of a written amendment to the Contract/Purchase Order, signed by a fully authorised representative of each Party.

31. VALIDITY

31.1 The invalidity in whole or part of any condition of the Contract / Purchase Order or clause thereof shall not affect the validity of the remainder of such condition or clause.

32. ENTIRE AGREEMENT

32.1 The Contract / Purchase Order constitute the entire agreement and understanding of the Parties and supersede any previous agreement, whether orally or in writing, between the Parties relating to the subject matter of the Contract.

33. GOVERNING LANGUAGE

33.1 The Contract / Purchase Order shall be executed in the English language which shall be the binding and controlling language for all matters relating to the meaning and interpretation of the Contract / Purchase Order.

Department of Aerospace Engineering
Indian Institute of Technology Kanpur
Kanpur (UP) 208016 India

Enquiry date:27.07.2026 Enquiry No: IITK/CSP/AE/MIS/2026-27/05

Bidders are invited to provide the online quotation for **Design, Supply, Installation, Commissioning & Testing of Supersonic Wind tunnel Facility** at the Department of Aerospace Engineering, Indian Institute of Technology, Kanpur.

SCOPE OF WORK DOCUMENT FOR WIND TUNNEL UPGRADATION (IITK)

1. INTRODUCTION

The Department of Aerospace Engineering, Indian Institute of Technology Kanpur intends to upgrade its existing blowdown high-speed wind tunnel facility to enhance its capability for experimental investigations in compressible aerodynamics. The upgraded facility is intended to provide stable and repeatable flow conditions corresponding to Mach 2, Mach 3, and Mach 4 (future upgradation) through interchangeable contoured nozzles.

The existing facility comprises compressed-air storage vessels with a combined storage capacity of approximately 85 m^3, associated high-pressure piping, settling chamber, and test section. The proposed upgradation includes modernization of the high-pressure air feed and regulation system, refurbishment of the settling chamber, fabrication of new contoured nozzles and a modular test section, installation of an advanced control and monitoring system, and integration of a high-speed data acquisition system. The upgraded facility shall ensure reliable operation, improved flow quality, repeatability of test conditions, enhanced operational safety, and provision for future expansion.

The work shall be executed on a turnkey basis, covering the complete cycle of detailed engineering, design verification, procurement, fabrication, assembly, inspection, testing, transportation, installation, commissioning, performance demonstration, documentation, and training. The successful bidder shall be responsible for supplying all equipment, materials, software, instrumentation, accessories, and services necessary for the successful realization of the upgraded wind tunnel facility, irrespective of whether every individual item is explicitly identified in this document.

The design of all pressure-containing components, piping systems, instrumentation, electrical systems, and control architecture shall conform to the latest applicable national and international standards, including relevant ASME, ASTM, API, IEC, ISO, and IS standards. The contractor shall ensure that the complete facility satisfies the specified performance requirements while maintaining the highest standards of safety, reliability, maintainability, and operational flexibility. The upgraded facility shall incorporate a PLC-based control and SCADA monitoring system for fully automated operation with manual override, comprehensive safety interlocks, emergency shutdown provisions. The system shall also provide adequate provisions for future expansion of instrumentation and integration of additional experimental modules.

All drawings, design calculations, Piping and Instrumentation Diagrams (P&IDs), equipment specifications, quality assurance plans, fabrication procedures, inspection methodologies, and acceptance test procedures shall be submitted to IIT Kanpur for review and approval before fabrication. The upgraded facility shall be commissioned only after successful completion of Factory Acceptance Tests (FAT), Site Acceptance Tests (SAT), and demonstration of the specified performance requirements under actual operating conditions.

The objective of this tender is to select a technically competent and experienced contractor capable of delivering a safe, reliable, and fully integrated high-speed wind tunnel facility that meets the performance requirements of IIT Kanpur and supports future research activities in compressible and high-speed aerodynamics.

2. EXISTING FACILITY DESCRIPTION

The existing experimental facility at the Department of Aerospace Engineering, IIT Kanpur, is a blowdown-type high-speed wind tunnel designed for aerodynamic testing using compressed air as the working medium. The facility is supported by a high-pressure compressed-air storage system consisting of multiple interconnected storage vessels with a combined storage capacity of approximately 85 m^3, capable of storing compressed air at pressures up to 15–20 bar (designed). Currently, third-party UT and hydro test is undergoing which will get us the exact operational pressure for the tanks which will be approximately 12 bar, that will be communicated to the selected vendor/contractor after the work gets assigned. During operation, the compressed air is discharged through a pressure regulation system into a settling chamber, followed by a convergent-divergent nozzle to generate the desired supersonic flow in the test section.

The present facility includes air storage vessels, interconnecting piping, manually operated isolation valves, a settling chamber, nozzle mounting arrangement, test section, and downstream exhaust system. While the basic infrastructure remains functional, several critical subsystems require modernization to meet the current research requirements. The existing air-feed system does not provide the precise mass flow regulation necessary for maintaining constant stagnation pressure during long-duration test runs. Furthermore, the control philosophy is primarily manual and lacks an integrated automation platform for accurate regulation, monitoring, data acquisition, and safety interlocks.

The existing piping and manifolding arrangement require refurbishment and reconfiguration to minimize pressure losses and ensure uniform flow delivery to the settling chamber. Several components of the pressure regulation system have reached the end of their intended service life and require replacement with modern remotely operated valves and high-capacity flow control devices capable of delivering stable flow conditions over the entire operating range. The upgraded facility is expected to accommodate significantly higher flow rates while maintaining repeatable operating conditions for multiple test runs which will help us in upgrading to Mach 4 operation in future. The present nozzle mounting arrangement is to be upgraded to facilitate rapid interchangeability between Mach 2, Mach 3, and Mach 4 contoured nozzles without extensive disassembly. In addition, the existing test section will be replaced with a new modular rectangular test section incorporating larger optical access windows for flow visualization, provisions for mounting aerodynamic models, pressure measurement ports, sensor cable routing, and an angle-of-attack adjustment mechanism.

The proposed upgradation has been conceived to maximize the utilization of the existing infrastructure while incorporating modern engineering practices, improved safety features, and enhanced operational flexibility. Existing pressure vessels, shall be retained and integrated into the upgraded system. After the third-party inspection of the tanks, the blasting and painting will be under the scope the current work. The contractor shall verify the condition and compatibility of all existing equipment during the detailed engineering phase and incorporate any additional modifications necessary to ensure safe, reliable, and repeatable operation of the complete wind tunnel facility.

3. TECHNICAL REQUIREMENTS

3.1. High-pressure Tank to Convergent Divergent Assembly

The existing compressed-air storage system consists of multiple interconnected storage vessels with a combined storage capacity of approximately 85 m^3, capable of storing compressed air at designed pressure ranging from 15 to 20 bar. The existing storage vessels shall be retained and integrated into the upgraded facility post blasting and painting.
Since complete discharge of compressed air from the storage vessels is not feasible during a test run, the air regulation system shall be designed such that the storage vessels always retain the minimum residual pressure (4 bar) necessary for safe operation and subsequent recharge.

3.1.1 Functional Requirements

The upgraded high-pressure air system shall perform the following functions:

- Supply compressed air to the wind tunnel for Mach 2, Mach 3 operation.
- Maintain stable settling chamber pressure throughout the prescribed test duration.
- Minimize pressure fluctuations during operation.
- Ensure repeatability of flow conditions over multiple consecutive runs.
- Permit remote operation of all major valves from the control room.
- Provide continuous monitoring of pressure and other operating parameters.
- Ensure safe shutdown under emergency conditions.
- Allow future expansion of the storage system through additional storage tanks.

The complete flow regulation system shall be capable of delivering the required mass flow rates while maintaining uniform stagnation pressure at the inlet of the settling chamber. The required mass flow rate will vary between 8-32 kg/s based on operational Mach number.

3.1.2 Air Flow Regulation System

The contractor shall design and supply a dedicated high-capacity air regulation system consisting of remotely operated isolation valves, a high-flow control valve, pressure instrumentation, manifolds, and associated piping. The proposed flow regulation system shall include:

- Remotely operated upstream isolation valves for each storage vessel.
- High-capacity axial flow or equivalent mass flow/pressure control valve.
- Pressure gauges and transmitters upstream and downstream of the control valve.
- Manual isolation and vent valves for instrumentation.
- Interconnecting piping and manifolds.
- Supports, anchors, expansion provisions, and structural hardware.

The regulation system shall be capable of maintaining nearly constant flow conditions throughout the complete duration of the experimental run. The contractor shall select the appropriate valve sizing (C_v), actuator capacity, response characteristics, and control philosophy to satisfy the required operating envelope.

3.1.3 High-Pressure Piping System

The complete piping system shall connect the existing storage vessels to the settling chamber through the newly designed flow regulation system. The piping system shall include main supply headers, interconnecting manifolds, high-pressure pipelines, pipe fittings, flanges, reducers, elbows, supports and anchors, as well as drain and vent connections.

3.1.4 Major Equipment

The high-pressure air system shall include, but not be limited to, the following equipment:

- Storage vessel manifolding
- Remotely operated isolation valves
- High-capacity mass flow/pressure control valve
- Pressure gauges
- Pressure transmitters
- Needle valves
- High-pressure piping

- Pipe fittings and flanges
- Instrumentation tubing
- Supports and structural members

The contractor shall supply all auxiliary hardware necessary for successful installation even if not explicitly listed in the Bill of Quantities.

3.1.5 Instrumentation

The air-feed system shall incorporate adequate instrumentation for continuous monitoring of operating parameters. Pressure transmitters shall interface directly with the PLC-based control system for monitoring, recording, alarm generation, and closed-loop control. Instrumentation shall be installed at all critical locations including:

- Storage manifolds
- Upstream of isolation valves
- Upstream of control valve
- Downstream of control valve
- Settling chamber

3.1.6 Inspection and Testing

The contractor shall fabricate, assemble, inspect, and qualify the complete air-feed system in accordance with the approved Quality Assurance Plan.

The scope shall include:

- Material traceability.
- Qualified welding procedures (WPS/PQR).
- Radiographic and dye penetrant examination where applicable.
- Hydrostatic testing.
- Pneumatic leak testing.
- Cleaning and flushing of pipelines.
- Functional testing of valves.
- Calibration of pressure instrumentation.
- Factory Acceptance Test (FAT).
- Site Acceptance Test (SAT).

3.2 Refurbishment of Settling Chamber

The existing settling chamber shall be refurbished and modified to meet the aerodynamic, structural, and operational requirements of the upgraded blowdown wind tunnel. The scope of refurbishment shall include, but not be limited to, the following:

- Assess the structural integrity and serviceability of the existing settling chamber prior to refurbishment.
- Refurbish the settling chamber to ensure safe operation at the specified design pressure and flow conditions.
- Modify the settling chamber geometry, wherever required, to achieve the desired flow conditioning characteristics and provide a uniform stagnation pressure distribution at the nozzle inlet.
- Incorporate suitable flow-conditioning devices, such as honeycombs, perforated plates, wire screens, or equivalent arrangements, based on the detailed aerodynamic design to minimize flow non-uniformity and turbulence.

- Ensure that the refurbished settling chamber provides the required flow quality necessary for stable operation of the Mach 2, Mach 3, and Mach 4 nozzles.
- Redesign and fabricate suitable nozzle mounting interfaces to facilitate quick interchangeability of the three nozzles without significant modification to the settling chamber.
- Replace or refurbish damaged flanges, sealing surfaces, gaskets, fasteners, and other associated components as required.
- Provide adequate instrumentation ports for pressure measurement, temperature measurement, calibration, venting, and future instrumentation requirements.
- Provide inspection and maintenance access wherever necessary without compromising the pressure integrity of the chamber.
- Ensure compatibility of the settling chamber with the upgraded high-pressure piping system and flow regulation system.
- Conduct dimensional inspection, hydrostatic or pneumatic pressure testing (as applicable), leak testing, and functional verification after refurbishment.

3.3 Convergent-Divergent (C-D) Nozzles

The contractor shall design, manufacture, inspect, test, and commission a set of precision interchangeable Convergent-Divergent (C-D) nozzles for the upgraded blowdown wind tunnel. The nozzles shall be designed to generate high-quality supersonic flow corresponding to Mach 2, Mach 3, and Mach 4 and shall be fully compatible with the refurbished settling chamber and the proposed rectangular test section. The scope shall include, but not be limited to, the following:

- Design and manufacture three (03) interchangeable contoured C-D nozzles for Mach 2, Mach 3, and Mach 4 operation.
- The nozzles shall be designed using the Method of Characteristics (MoC) or an equivalent proven supersonic nozzle design methodology to achieve uniform, shock-free design flow.
- The contractor shall carry out the complete aerodynamic design of the nozzles based on the operating conditions specified by IIT Kanpur.
- The nozzle exit shall be designed to interface directly with the rectangular test section having internal dimensions of 180 mm (Width) × 230 mm (Height).
- The exit geometry of each nozzle shall ensure smooth transition into the test section without introducing flow separation, shock formation, or significant total pressure losses.
- The nozzle contour shall be designed to provide:
    - Uniform Mach number distribution at the nozzle exit.
    - Uniform stagnation pressure distribution.
    - Minimum flow angularity.
    - Low turbulence intensity.
    - High flow uniformity across the complete test-section cross-section.
    - Minimal boundary-layer growth at the nozzle exit.
- The contractor shall determine the throat dimensions, area ratio, contour profile, and exit dimensions required to achieve the specified Mach numbers while matching the test section dimensions of 180 mm × 230 mm.

- The contractor shall ensure proper aerodynamic matching between the settling chamber, nozzle throat, nozzle exit, and rectangular test section to achieve the desired flow quality.
- The nozzle shall be designed to permit quick interchangeability without requiring modification of the settling chamber or test section.
- Suitable alignment features, locating pins, sealing arrangements, and mounting flanges shall be provided to ensure accurate positioning and leak-free operation.
- The contractor shall manufacture the nozzles using precision machining processes to achieve the specified contour accuracy, dimensional tolerances, and high-quality internal surface finish.
- The internal flow surface shall be free from machining marks, discontinuities, waviness, or geometric imperfections that may adversely affect the flow quality.

3.4 Test Section

The contractor shall design, manufacture, and commission a new modular rectangular test section for the upgraded blowdown wind tunnel. The test section shall be designed to accommodate aerodynamic models and experimental instrumentation while providing excellent optical access for flow visualization and shall be fully integrated with the newly designed convergent-divergent nozzles at the upstream end and the existing diffuser and exhaust system at the downstream end. The scope of work shall include, but not be limited to, the following:

- Design and manufacture a rectangular test section having an internal cross-sectional area of 180 mm (Width) × 230 mm (Height).
- The test section shall be designed for operation with interchangeable Mach 2, Mach 3, and Mach 4 nozzles supplied under this tender.
- The upstream interface shall be compatible with the convergent-divergent nozzles, while the downstream interface shall be designed for seamless integration with the existing diffuser and exhaust system available at IIT Kanpur.
- Suitable transition sections, adapter flanges, and sealing arrangements shall be provided wherever required to achieve smooth aerodynamic and mechanical integration with the existing diffuser.
- The test section shall provide adequate optical access through high-strength transparent optical windows of 300mm diameter on the side walls to facilitate optical diagnostics.
- The optical windows shall be flush-mounted with the internal wall surface and designed to withstand the operating pressure differential without significant deformation.
- The contractor shall provide suitable provisions for mounting aerodynamic models, sting supports, pressure tubing, electrical wiring, and other experimental instrumentation.
- Adequate pressure tapping locations shall be incorporated for monitoring static pressure distribution within the test section.
- A precision Angle-of-Attack (AoA) adjustment mechanism between $\pm 15°$ shall be incorporated for positioning the test model. The mechanism shall provide smooth, accurate, and repeatable angular adjustment while maintaining the pressure integrity of the test section.
- Suitable access ports shall be provided for installation, removal, inspection, and maintenance of experimental models and instrumentation.

3.5 Control Panel

The contractor shall design, manufacture, supply, install, test, and commission a PLC-based Control Panel for the operation, monitoring, and protection of the upgraded blowdown wind tunnel facility. The control panel shall integrate the complete high-pressure air supply system, remotely operated valves, instrumentation, settling chamber, test section, and data acquisition system into a centralized control architecture. The scope of work shall include, but not be limited to, the following:

- Design and supply a state-of-the-art industrial PLC-based control panel with SCADA-based Human Machine Interface (HMI).
- The control system shall precisely operate the complete air feed system according to predefined operating sequences and maintain the desired pressure and flow conditions at the test section throughout the test duration.
- The facility shall support fully automatic operation, remote monitoring, and manual override of all operating functions.
- Provide real-time display and monitoring of all critical operating parameters, including storage pressure, settling chamber pressure, line pressure, flow parameters, valve status, alarms, and system health.
- The control panel shall incorporate an Emergency Shutdown (ESD) push button and associated hardwired safety interlocks. During any PLC, SCADA, power, or emergency failure, all air-feed isolation valves shall automatically close to ensure safe shutdown of the facility.
- The system shall include automated checkout functions for calibration of feed lines, functional checking of valves, verification of safety interlocks, and emergency shutdown logic prior to commencement of each test.
- The control system shall be expandable to accommodate additional input/output channels and future instrumentation requirements.
- The control panel shall include PLC, licensed SCADA software, operator workstation, power supplies, relay modules, communication modules, terminal blocks, MCBs, cooling arrangement, cable management, and all associated accessories necessary for complete operation.
- All field instruments, pressure transmitters, pressure gauges, remotely operated valves, and other process equipment shall be interfaced with the control panel through field junction boxes and appropriate signal and power cabling.
- Internal wiring shall be properly identified with ferrule markers, and all terminal blocks shall be suitably numbered for ease of maintenance and troubleshooting.

4. QUALITY ASSURANCE PLAN

4.1 General Information

- Raw material and all the components / assemblies shall be inspected and tested in accordance with the quality assurance plan.
- The manufacturer shall undertake chemical and mechanical testing of raw material in accordance with the relevant specification quoted in the manufacturing drawings/ QAP of raw material.
- The manufacturer shall arrange testing of raw material by NABL or government recognized laboratories.
- All tests and hardness check of components/assemblies shall be undertaken by the manufacturer as per QAP.
- The manufacturer shall undertake manufacture of necessary testing or assembly fixture/setups including those required for checking of geometrical features with the

approval of IIT Kanpur and provide facilities for such testing/checking along with these fixtures/setups. The templates and gauges may be fabricated and calibrated before use in inspection if standard templates and gauges are not available.

- All inspection, measuring and monitoring devices (M&MD) used for quality control activities shall have calibration and copies of certificates of calibration for M&MD shall be made available to IIT along with the inspection report.
- The vendor shall carefully read the document which covers technical specifications, manufacturing aspects, Quality Assurance Plan, inspection, test procedures and acceptance criteria wherever applicable and the drawings supplied before commencing manufacture. Any clarification required shall be immediately reported to document issuing authority and work shall not be proceeding on affected components until the necessary authentic clearances are received.
- Inspection shall be carried out by vender QC at first as per QAP. QC agency is IIT, Kanpur or its authorized agency.
- Indian and International Standards have been referred and quoted for further reference in this document.

4.2 General Requirements

Contractor shall submit a comprehensive QA plan along with design documents. Details of QA plan shall include following: -

- Material details (chemical composition and mechanical properties)
- Material testing requirement.
- Fabrication and erection / installation methodology.
- Inspection of fabricated item.
- WPS, PQR and welder Qualification
- Related NDT procedures.
- Assembly integration.
- Leak Test (as per ASME BPVC Sec-8)
- Hydraulic proof pressure test (as per ASME BPVC Sec-8)
- Bought out item's inspection and test certificates.
- Functional testing of critical items.
- Calibration details of sensors. (pressure gauges)
- Test plan / procedure to demonstrate the functionality of the system.
- Relevant Reports.
- List of references, Standards, and Document.

The manufacturer shall also ensure the following aspects:

- Acceptance of the raw material shall be as per the material test certificate produced by the contractor.
- The weld procedure and welders are to be qualified before initiating the work.
- Weld joints shall be radio graphed after welding (before and after pressure test)
- All the measuring instruments to be used for the inspection and quality control shall be calibrated and certified.
- All weld joints shall be tested by Red Dye Penetrant before and after pressure test.
- All pressure gauges / sensors used for testing shall be calibrated.
- For all hydraulic tests de-mineralized water shall be used as testing medium.

- Contractor shall carry out proof pressure testing as per the test plans.
- All test reports pertaining to each component shall be documented giving the details from raw material traceability to final metrological inspection and applicable acceptance tests.

4.3 Final Inspection

After successful completion of dispatch of raw material, the on-site inspection will be carried out in presence of IITK QA rep. The inspection will be carried out stage wise. The scheduled stages of on-site inspection of different processes will be finalized based on comprehensive execution plan that will be intimated later. The process parameters will be monitored in each stage will be finalized based on manufacturing plan provided by firm in design document.

5. ENGINEERING DOCUMENTATION & DELIVERABLES

In addition to the supply, installation, testing, and commissioning of the equipment specified in this tender, the contractor shall submit the following engineering documents and deliverables:

- Complete detailed engineering package.
- Approved P&ID and piping layouts.
- Design calculations.
- Method of Characteristics (MoC) calculations.
- Nozzle contour coordinates.
- CFD validation (if applicable).
- Fabrication drawings.
- Material and test certificates.
- Quality Assurance documentation.
- Factory Acceptance Test reports.
- Site Acceptance Test reports.
- Operation and Maintenance Manual.
- Spare parts catalogue.
- As-built drawings.

6. ADDITIONAL REQUIREMENTS

- The contractor shall prepare complete piping layouts, piping isometrics, stress analysis (where applicable), support drawings, and fabrication drawings for approval prior to fabrication.
- The detailed nozzle design parameters (design Mach number, area ratio, contour coordinates, throat dimensions, exit dimensions, and permissible manufacturing tolerances) shall be finalized by the contractor during the detailed engineering phase based on the operating conditions and shall be submitted to IIT Kanpur for review and approval before commencement of manufacturing.
- The design document prepared by the contractor shall be reviewed by an expert committee assigned by IITK and after deliberations, its recommendations/ suggestions/ modifications shall be implemented by the contractor.
- All inspection records, calibration certificates, material test certificates, and test reports shall be submitted as part of the final documentation.
- Training of IIT Kanpur personnel on operation and maintenance of the complete high-pressure air system.

- The contractor shall provide complete PLC programming and SCADA development for Calibration of feed lines, Functional checking of valves, Safety interlock verification, Automatic execution of operating sequences, Real-time monitoring, Alarm generation, Data logging and report generation.
- An additional automation program for carrying out dry run of automation events needs to be provided by the contractor. In this program, the interlocks will need to be disabled.
- User should be able to do any changes in the program initially supplied by the contractor. Software with "locks" or password codes for making changes shall not be accepted. Source code shall be provided to IIT Kanpur for all the programs / modules developed for automation.
- Contractor shall provide a detailed line diagram for the system supplied which shall be approved by IITK. The line diagram shall be prepared as per standard format prevalent in industry. All the connections, electrical or otherwise, shall be clearly and unambiguously mentioned in the line diagram. A soft copy of the line diagram shall also be provided to IITK to facilitate updating by IITK at later stage.
- The tenderer may suggest any improvement for the betterment of the operation of the system, which shall be reviewed by department as necessary.
- All necessary facilities like tools, tackles, safety appliances, measuring and testing equipment / instruments, accessories and material handling equipment, manpower etc. shall be provided by the successful tenderer to enable stage wise inspection of the system during fabrication, erection and testing at IITK.
- The contractor should note that current scope of work is on turnkey basis. If there are any item / hardware which are required but are not listed here, then the same should be considered by the contractor and mentioned in the technical offer.
- Provision of environmental protection of all the hardware shall be the responsibility of the contractor. The contractor shall ensure that the pressure switches, limits switches and all other hardware are properly protected from the environment.

7. BILL of MATERIALS

The tentative bill of materials covering majority of the system and subsystem levels are given in below table. However, it is to be noted that above deliverables and sizing are just indicative, the contractor design can have different numbers.

S No.	Item	Specification	Quantity
1	Isolation Valves	Valves for existing reservoir tanks Isolation, to be remotely operated from the control room, Size is 12 inch, #300 pressure rating as per ASME standard which is close to 50 bar, Material of Construction: Wrought Carbon Steel Grade B	4
2	Control Valve	Axial Flow Control valve to be placed upstream of the settling chamber, Material of Construction: Wrought Carbon Steel Grade B, Internal working parts to be made from Grade 316 Stainless Steel. Fast Acting Quick Control with Smart Positioner, Size is 12 inch, #300 pressure rating as per ASME standard which is close to 50 bar	1
3	New Piping Line Installation and Upgradation of Existing Ones	Piping and manifolding of existing vessels and newer pipeline for future connection to additional tanks, #300 pressure rating (~ 50 bar), RT & hydro testing, painting, and third-party qualification, MOC: Carbon steel grade A105/A106	1
4	Tank Refurbishment	Blasting and painting of existing vessels of 3 quantity combining volume of 85 m^3	1

5	Refurbishment of Settling Chamber	Refurbishment of settling chamber and transition duct upstream to the nozzle for a chamber pressure of around 20 bar	1
6	Convergent-Divergent nozzle	3 contoured nozzles (Mach 2,3,4) and supporting structure with nozzle-changing mechanism system, MOC - Aluminium or Equivalent as per Final Design	1
7	Test Section	New rectangular test section (18 cm width, 23cm height) with angle-of-attack control system, provision of smooth door closing mechanism, equipped with 300 mm view ports, and arrangements for taking the sensor cables out with proper shielding, pressure ports on the bottom floor, MOC - Aluminium or Equivalent as per Final Design	1
8	Control System	Control system for remote operation of valves and monitoring of complete facility with Required Instrumentation, wiring and Licenced software as per user requirement	1
9	DAQ & Measurement	NI module for acquiring responses at a minimum acquisition rate of 500Ks/s. 16 channel Pressure scanner for connecting to the pressure ports in the test section. PCB/Kulite sensors along with connections in the settling chamber and nozzle to ensure the Mach number and fill conditions in all the run. Fixed Kulite sensors on the test section wall to ensure repeatability of freestream conditions.	1
10	Packing, transport, installation	Packing and Transport of all Equipment to and from IITK. Also, should include installation of the components on-site.	1

8. CONTRACTOR SELECTION CRITERIA

- The contractors are advised to submit the following details along with techno-commercial bid. No. separate request will be sent afterwards for these details. Contractors will be considered for techno-commercial evaluation committee subject to fulfilling the following criteria:
- Business history – the contractor must provide a brief history of its business since its establishments. No contractor having an experience of less than 7 years will be considered for techno-commercial evaluation.
- Management capability – to provide details of manpower in terms of skilled qualified welder, CAD Engineers, semi-skilled and unskilled clearly mentioning their trades.
- Financial capability – Annual turnover of the contractor should be minimum 1 Cr.
- Manufacturing capability – the contractor must provide the details of workshop like the location, size, list of equipment available to accomplish similar fabrication and manufacturing works.
- Previous experiences – contractor must provide the list of contractor's/establishments/ organizations / laboratories, along with addresses and contact numbers, where they have earlier supplied similar equipment.
- No deviations in technical specifications by the contractors at any stage of design and fabrication will be considered.
- Authorized dealers / agents – must provide a certificate in this regard from the concerned authority of the Indian/Foreign OEM along with the above-mentioned details of OEM.

Terms and Conditions:

General terms and conditions	1	Ensure to specify the make & model of the offered product and provide the compliance sheet.
	2.	The price should be **F.O.R IIT Kanpur.**
	3.	Past 3 years, PO copies or installation certificates of the same or similar model along-with contact details of end users, need to be submitted as proof of supply.
	4.	Feedback from previous customers will be part of the technical evaluation.
	5.	The Institute reserves the right to cancel the tender at any stage without assigning any reason thereof.
OEM/OSP Authorization	:	Tender specific Manufacturer Authorization Form from the OEM/OSP is required. (i) Subject to provisions in the Tender Document, participation in this Tender Process is open to all bidders who fulfil the 'Eligibility' and 'Qualification criteria. The bidder should meet the eligibility criteria as of the date of their bid submission and should continue to meet these till the award of the contract. Bidder shall be required to declare fulfilment of Eligibility Criteria mentioned in the tender document. The Bidder must be a natural person, private entity, or public entity (State-owned enterprise or institution) or be a manufacturer of the product offered or be dealer authorized by the Principal/ OEM. (ii) A Principal can authorize only one agent, and an agent should not represent or quote on behalf of more than one Principal. However, this shall not debar more than one Authorised distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate. OR (iii) A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a Joint Venture (JV).
Warranty	:	The warranty of the product must be 1 years.
Payment Terms	:	80% Payment will be released after delivery and remaining after successful installation and final acceptance.
Delivery Period	:	180 days

Experience	:	Bidders must have 3 years of experience in supplying similar types of equipment and long-term services for the same/similar model of equipment in IITs/NITs or any other Govt. Organization.
Minimum Average Annual Turnover of the Bidder (Last 3 years)	:	1.29 Cr
OEM Average Turnover (Last 3 years)	:	10 Cr
Performance Security	:	The Successful bidder has to submit **Performance Security of 3% of the contract value** in favour of the **Registrar, IIT Kanpur** in the form of an Account Payee Demand Draft/Fixed Deposit Receipt from a commercial bank/Bank Guarantee (including e-Bank Guarantee).
Earnest Money Deposit (EMD)	:	The bidders must furnish Rs. 5,16,200/- as EMD in the form of the Demand Draft/FDR/BG in favour of the Registrar, IIT Kanpur, payable at Kanpur. The EMD is to be submitted at the address given below. Bids without EMD will be summarily rejected.
Reasonableness of Rates	:	To validate the reasonableness of the quoted rates, the bidder(s) must submit a detailed price breakdown of the items listed in the past purchase orders pertaining to the same or similar items supplied to IITs/NITs/any other educational institutions in India. This breakdown must clearly specify the price of goods/services (Ex-works), handling, packing, shipping, insurance costs, foreign bank fee (LC), agency commission (INR), etc.

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Appendix -1

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date: _____________

To,
The Officer-in-charge
R&D Office
IIT Kanpur-208016

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: ________________________

Name of Tender / Work: - ____

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: ____as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _______ to ______ (including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Appendix -2

Certificate for Tender

(To be given on Company Letter Head)

Date: _____________

To,
The Officer-in-charge
R&D Office
IIT Kanpur-208016

Sub: Certificate of compliance as per Rule 144 (xi) GFR's 2017

Tender Reference No: ________________________

Name of Tender / Work: - ____

1."I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

2. "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all the requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Appendix - 3

Declaration for Local Content
(To be given on Company Letter Head - For tender value below Rs.10 Crores)
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above Rs.10 Crores)

Date: ______________

To,
The Officer-in-charge
R&D Office
IIT Kanpur-208016

Sub: Declaration of Local content

Tender Reference No: __________________________

Name of Tender / Work: - ____

1. Country of Origin of Goods being offered: _______________________
2. We hereby declare that items offered has ____% local content.
3. Details of location(s) at which the local value addition is made: __________

"Local Content" means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

*"*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law."*

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Appendix - 4

FINANCIAL INFORMATION

(On the letter head of CA)

Tender No: ___________________________________ dated: __________

Item Name: ____

Bidder's/Firm's Name: ____

Address and Contact No: ____

____

PAN No.: __________________, GST No: __________________________

Details to be furnished duly supported by figures in the Balance Sheet/ Profit & Loss Account for the last three preceding years (Financial years) duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (copies to be attached).

Sl. No.	Details	Year ending 31st March		
		FY 2023-24	FY 2024-25	FY 2025-26
01	Gross annual turnover			
02	Profit (+)/ Loss (-)			

1. Income Tax Return
2. Audited Account of the company for last three years

This is to certify that to the best of my knowledge and belief, the aforesaid facts and figures are correct and in conformity with the books of accounts of the establishment.

Dated: Signature of Chartered Accountant
with seal and membership number

Appendix-5

Bidder's Details

(On the letter head of the Bidder)

1	Name of the Firm/ Company		
2	Offered Product Name, Make and Model		
3	Name and Designation of Authorised Signatory		
4	Office Address of the Firm / Communication Address:		
5	Phone No/Mobile No:		
6	E-Mail ID:		
7	GST registration Number:		
8	PAN Number:		
9	Firm's Bank Account details	Bank Account No.:	
		Name of the Bank:	
		IFS Code No.:	
		Name of Branch:	
Particular Details of the Bidders Representative			
10	Contact Person: Mobile No:	Name of Person:	
		Designation:	
		Tele/Mobile No:	
		Email ID:	

Authorized Signatory (signature in full):

Name and Title of Signatory:

Company Rubber Stamp: