



No. A3(14536)2024/PUR/SERC

Date: 23.07.2025

GLOBAL TENDER DOCUMENT
FOR
E-PROCUREMENT OF
SUPPLY, INSTALLATION, COMMISSIONING, INTEGRATION, TRAINING &
DOCUMENTATION OF ELECTRODYNAMIC SHAKER SYSTEM WITH CLIMATIC
CHAMBER

Pre Bid Conference Meeting	:	12.08.2025 at 11.00 AM
Venue for Pre-Bid conference	:	KRD Conference Hall
Tender Closing Date	:	23.09.2025 at 3.00 PM
Tender Opening Date	:	24.09.2025 at 3.00 PM
Seeking Clarification Start Date	:	24.07.2025 at 6.00 PM
Seeking Clarification End Date	:	11.08.2025 at 5.00 PM

CSIR-STRUCTURAL ENGINEERING RESEARCH CENTRE(CSIR-SERC)

CSIR Road, Taramani

CHENNAI – 600 113

Tamilnadu, INDIA

Tel : 91 - 44 – 2254 9108,2254 4777

Email : puroff@serc.res.in/puroff.serc@csir.res.in

INVITATION FOR BIDS / NIT

01. Director, CSIR – Structural Engineering Research Center, Taramani, Chennai - 600 113, INDIA, (CSIR-SERC) invites encrypted bids on www.etenders.gov.in from Original Equipment Manufacturers, Foreign Principals, Indian Agents of Foreign principals, Authorized distributors of Original Equipment manufacturer for procurement and installation of items listed below.
02. The tender is open for local suppliers in terms of **Make in India, Order No. P-45021/2/2017-PP (BE-II) dt 16th September, 2020** and Non-local suppliers (those not meeting the local content, Foreign OEM, Foreign principals or their authorized Indian agents)

	Tender No.	Description of items	Qty.	Single/ Double bid	Bid Security (EMD)					
					INR	USD	EURO	GBP	JPY	CHF
01.	A3(14536)2024/PUR/SERC	Supply, Installation, Commissioning, Integration, Training & Documentation of Electrodynamics Shaker System with Climatic Chamber (As per chapter-4)	1 Set (As per chapter-4)	TWO BID (Single stage Two Envelopes system)	42,00,000.00	48,594.00	41,386.00	35,883.00	71,30,793.00	38,491.00

Interested Bidders may obtain further information from the office of the
Controller of Stores & Purchase
CSIR-STRUCTURAL ENGINEERING RESEARCH CENTRE(CSIR-SERC)
CSIR Road, Taramani
CHENNAI – 600 113
Tamilnadu, INDIA
Tel : 91 - 44 – 22549108,22544477
Email : puroff@serc.res.in / puroff.serc@csir.res.in

03. **A Pre-Bid Conference will be held at 11.00 a.m. on 12.08.2025 in KRD Conference Hall.**
All prospective bidders are requested to kindly submit their queries, if any to the email id – puroff@serc.res.in/puroff.serc@csir.res.in on or before 11.08.2025@5.00 p.m.
04. The Tender Document is available at www.etenders.gov.in and is downloadable free of cost. The Tender Document can also be seen at our website www.serc.res.in under the heading “Tenders”.
05. **All bids must be accompanied by a proof of bid security in favor of Director, CSIR-SERC as specified above. The EMD may be in the shape of Bank Guarantee / Bid Securing Declaration (Annexure – V) / electronically transfer in form of NEFT/RTGS and must be delivered to the above office prior to the due date and time for submission of the bid as indicated above.** EMD exemption is available for MSEs. Traders are outside the ambit of MSE policy.

06. As per Govt. of India procurement policies,

a. The tender is open for all suppliers whether Global or local. However, purchase preference is applicable for class 1 local suppliers in terms of Make in Order, 2017 with all subsequent amendments till date.

b. Purchase preference would also be applicable for MSE's in terms of MSMED Act. However, traders are outside the ambit of MSE policy.

07. **The above tender is non-divisible in nature.**

08. **The Integrity Pact is available at Annexure – XV and the same needs to be filled up and signed to become eligible for participating in this tender.**

09. The Director, CSIR-SERC, Chennai, reserves the right to accept any or all tenders either in part or in full or to split the order without assigning any reasons there for.

**Controller of Stores & Purchase
(For & On behalf of Council of Scientific &
Industrial Research)**

INDEX

<u>Chapter</u>	<u>Contents</u>	<u>Page No.</u>
1	Instructions to Bidders	8-35
2	General Conditions of Contract & Special Conditions of Contract	36-58
3	Schedule of Requirements	59
4	Specifications and Allied Technical Details	60-80
5	Price Schedule Forms	81
6	Contract Form	82-83
7	Other Forms to be Enclosed With Technical Bid	84-126

CRITICAL DATE SHEET

Sl. No.	Stage	Date & Time
1.	Publish Date & Time	23.07.2025 / 7.00 PM
2.	Document Download Start Date & Time	23.07.2025 / 7.00 PM
3.	Last Date & Time for receipt of queries	11.08.2025 / 5.00 PM
4.	Pre-Bid Conference	12.08.2025/11.00AM
5.	Bid Submission Start Date & Time	19.08.2025 /5.00 PM
6.	Bid Submission End Date & Time	23.09.2025 /3.00 PM
7.	Bid Opening Date & Time	24.09.2025 /3.00 PM

TENTATIVE TIME SCHEDULE OF PROCUREMENT PLANNING

Sl. No.	Stage	Tentative Frame Time
1.	Date of Bid Opening	XX
2.	Date of Completion of Technical Bid Evaluation	XX + 30
3.	Date of Communication of Rejection of Bids	XX + 40
4.	Date of Receipt of context, if any, form Bidders	XX + 50
5.	Opening of Financial Bid	XX + 60
6.	Notification of Award	XX + 90

CHAPTER - 1

INSTRUCTIONS TO BIDDERS

Contents of Chapter – 1

<u>Content</u>		<u>Page No.</u>
<u>A. Introduction</u>		
1.1	Eligible Bidders	8-11
1.2	Cost of Bidding	11
1.3	Code of Integrity for Public Procurement	11-13
<u>B. The Bidding Document</u>		
1.4	Cost of Tender Documents	13
1.5	Content of Tender Documents	13-14
1.6	Clarification of Bidding Documents	14
1.7	Amendment of Tender Documents	14-15
<u>C. Preparation of Bids</u>		
1.8	Language of Bid	15
1.9	Purchase Preference Policies	15
1.10	Documents Comprising the Bid	16
1.11	Bid form and price schedule	17
1.12	Bid Prices	17-18
1.13	Bid Currencies	19
1.14	Documents Establishing Bidder's Eligibility and Qualifications	19
1.15	Documents Establishing Goods' Eligibility and Conformity to Bidding Documents	19-20
1.16	Bid Security	20-21
1.17	Period of Validity of Bids	22
1.18	Format and Signing of Bid	22
<u>D. Submission and Sealing of Bids</u>		
1.19	Submission, Sealing and Marking of Bids	22
1.20	Deadline for Submission of Bids	22-23
1.21	Withdrawal, substitution and Modification of Bids	23

<u>Content</u>		<u>Page No.</u>
<u>E. Opening and Evaluation of Bids</u>		
1.22	Opening of Bids by the Purchaser	23
1.23	Confidentiality	23
1.24	Clarification of Bids	23
1.25	Preliminary Examination	23-24
1.26	Bidders right to question rejection	24-25
1.27	Responsiveness of Bids	25
1.28	Non-Conformity, Error and Omission	26
1.29	Examination of Terms & Conditions, Technical Evaluation	26-27
1.30	Conversion to Single Currency	27
1.31	Evaluation and Comparison of bids	27-30
1.32	Contacting the Purchaser	30
1.33	Post qualification	30
<u>F. Award of Contract</u>		
1.34	Negotiations	30
1.35	Award Criteria	30
1.36	Purchaser's right to vary Quantities at Time of Award	31
1.37	Option Clause	31
1.38	Purchaser's right to accept any Bid and to reject any or all Bids	31
1.39	Notification of Award	31
1.40	Signing of Contract	31
1.41	Order Acceptance	32
1.42	Performance Security	32-33
1.43	Pre-bid Conference	33
1.44	Integrity Pact	34-35

A. INTRODUCTION

1.1. Eligible Bidders

1.1.1 This Invitation for Bids is open to Original Equipment Manufacturers, Foreign Principals and Indian Agents of Foreign principals, and Authorized distributors of Original Equipment manufacturer. *The offer(s) will not be entertained if the same distributor/dealer is representing more than one OEM. Similarly, one OEM should not authorize more than distributor / dealer for this tender. Further, an authorized distributor/dealer and the OEM should not quote simultaneously.*

1.1.1 (a) The Invitation for bids is open for local suppliers Class-I and Class-II and Non-local suppliers. Class-I local suppliers are eligible for purchase preference over Class-II local suppliers and Non-local suppliers. Class-II local and Non-local suppliers are not eligible for purchase preference.

1.1.2 **Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.**

1.1.3 **One distributor/dealer can participate in a tender on behalf of one manufacturer. The offer(s) will not be entertained if the same distributor/dealer is representing more than one OEM. Similarly, an authorized distributor/dealer and the OEM should not quote simultaneously such offers will be treated as nonresponsive and will be rejected summarily.**

1.1.4 A supplier or bidder shall be considered to be local supplier if the local content of the product is either

(i) 50% or above (Eligible for preferential purchases)

(ii) 20% or above

As per public procurement (Preference to Make in India), Order 2017 – Revision No. P-45021/2/2017-PP (BE-II) dt 16th September, 2020 and subsequent amendment there on.

In global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with Class-I local suppliers and class-II local suppliers. Non-local suppliers would include foreign Original Equipment Manufacturers, foreign principals, their Indian agent and those not meeting the local content.

1.1.5 MSEs would be treated as owned by Scheduled Caste/Schedule Tribe enterprises as under:

(a) In case of proprietary MSE, proprietor(s) shall be SC/ST.

- In case of partnership MSE, the SC/ST partners shall be holding at least 51% (fifty-one percent) shares in the unit.
- In case of Private Limited Companies, at least 51% (fifty-one percent) share shall be held by SC/ST promoters

1.1.6 MSEs owned by women shall also be determined as per the above analogy/criteria.

1.1.7 Bids from Joint Ventures, Consortium or Associations so long as they are formed and registered prior to the bid submission date is acceptable.

1.1.8 The bidders who have been temporarily suspended or removed from the list of registered suppliers by the purchaser or banned from Ministry/country wide procurement shall be ineligible for participation in the bidding process.

1.1.9 – i) 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 Competent Authority.

ii) “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.

iii) “Bidder from a country which shares a land border with India” for the purpose of the Order means:-

- An entity incorporated, established or registered in such a country; or
- A subsidiary of an entity incorporated, established or registered in such a country; or
- An entity substantially controlled through entities incorporated, established or registered in such a country; or
- An entity whose beneficial owner is situated in such a country; or
- An Indian (or other) agent of such an entity; or
- A natural person who is a citizen of such a country; or
- A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

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

- 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.

- i. “Controlling ownership interest” means ownership of or entitlement to more than twenty-five percent 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 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.
- v) An agent is a person employed to do any act for another, or to represent another in dealings with third person.
- vi) 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.

1.1.10 Reciprocity clause

Entities of countries which have been identified by the nodal Ministry / Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry / Department, except for the list of items published by the Ministry / Department permitting their participation.

Bidders are requested to furnish GEM seller ID in their Technical Bid. In any case the GEM seller ID should be available before placing the order and a reference to the GEM seller ID is to be made in the Purchase order failing which no order will be released.

Bidder's unable to furnish GEM seller ID may be overlooked from placement of Purchase order even if they are otherwise eligible.

1.2 Cost of Bidding

1.2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

1.3 Code of Integrity

1.3.1 The bidders/suppliers should sign declaration about abiding by the Code of Integrity for Public Procurement in bid documents. In case of any transgression of this code, the bidder is not only liable to be removed from the list of registered suppliers, but it would be liable for other punitive actions such as cancellation of contracts, banning and blacklisting or action in Competition Commission of India, and so on.

1.3.2 **Code of integrity for Public Procurement:** The Purchaser as well as bidders, suppliers, contractors and consultants should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:

"corrupt practice": making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;

"fraudulent practice": any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;

"anti-competitive practice": any collusion, bid rigging or anti-competitive arrangement, or any other practice, coming under the purview of the Competition Act, 2002, between two or more bidders, with or without the knowledge of the purchaser, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;

"Coercive practice": harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

“conflict of interest”: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any officials of purchaser who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the purchaser with an intent to gain unfair advantage in the procurement process or for personal gain; and

“Obstructive practice”: materially impede the purchaser’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the purchaser’s Entity’s rights of audit or access to information;

1.3.3 Obligations for Proactive disclosures:

- i. The purchaser as well as bidders, suppliers, contractors and consultants, is obliged under Code of Integrity for Public Procurement to suo-moto proactively declare any conflicts of interest (coming under the definition mentioned above – pre-existing or as and as soon as these arise at any stage) in any procurement process or execution of contract. Failure to do so would amount to violation of this code of integrity; and
- ii. The bidder must declare, whether asked or not in a bid document, any previous transgressions of such a code of integrity with any entity in any country during the last three years of being debarred by any other Procuring Entity. Failure to do so would amount to violation of this code of integrity;
- iii. To encourage voluntary disclosures, such declarations would not mean automatic disqualification for the bidder making such declarations. The declared conflict of interest would be evaluated and mitigation steps, if possible, taken by the purchaser. Similarly, voluntary reporting of previous transgressions of Code of Integrity elsewhere may be evaluated and barring cases of various grades of debarment, an alert watch may be kept on the bidder’s actions in the tender and subsequent contract.

1.3.4 Punitive Provisions:

Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder/supplier, directly or through an agent, has violated this code of integrity in competing for the contract or in executing a contract, the purchaser may take appropriate measures including one or more of the following:

- i) **If his bids are under consideration in any procurement:**
 - a) Forfeiture or encashment of bid security;
 - b) Calling off of any pre-contract negotiations; and
 - c) Rejection and exclusion of the bidder from the procurement process.
- ii) **If a contract has already been awarded**
 - a) Cancellation of the relevant contract and recovery of compensation for loss incurred by the purchaser;
 - b) Forfeiture or encashment of any other security or bond relating to the procurement;
 - c) Recovery of payments including advance payments, if any, made by the purchaser along with interest thereon at the prevailing rate.
- iii) **Provisions in addition to above:**
 - a) Removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the purchaser for a period not less than one year;
 - b) In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India;
 - c) Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

B THE BIDDING DOCUMENTS

1.4 Cost of Tender Documents

1.4.1 The bidding documents can be downloaded from our Website as indicated in the Invitation for Bids/NIT free of cost as also from www.etenders.gov.in under the relevant Tender-ID or from CSIR-SERC website www.serc.res.in .

1.5 Content of Tender Documents

1.5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction. The bidding documents, apart from the invitation for bids have been divided into 7 chapters as under:

- Chapter 1: Instructions to Bidder (ITB)
- Chapter 2: General Conditions of Contract (GCC) and Special Conditions of Contract (SCC)
- Chapter 3: Schedule of Requirements
- Chapter 4: Specifications and Allied Technical Details
- Chapter 5: Price Schedule Forms
- Chapter 6: Contract Form
- Chapter 7: Other Standard Forms comprising:
 - 1) Bidder Information Form – Annexure I
 - 2) Code of Integrity and conflict of interest – Annexure II

- 3) Manufacturers' Authorization Form - Annexure III
- 4) Bid security as specified in the Invitation to Bid – Annexure IV
- 5) Bid Securing Declaration – Annexure V
- 6) Performance Statement Form – Annexure VI
- 7) Technical Compliance Statement / Deviation Statement Form – Annexure VII
- 8) Pre-Installation Requirement – Annexure VIII
- 9) Service Support Detail Form - Annexure IX
- 10) Bid Form – Annexure X
- 11) Format for certificate of Local Content in letter head (Annexure XI & XII) (.pdf) (if applicable)
- 12) Performance Security Form – Annexure XIII (.pdf)
- 13) Acceptance Certificate Form – Annexure XIV (.pdf)
- 14) Integrity Pact – Annexure XV (.pdf)
- 15) Self-certification with regard to the bidder land border with India (Annexure XVI) (.pdf)
- 16) Terms & Conditions- Annexure- XVII
- 17) Tender Acceptance Letter- XVIII

1.5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

1.6 Clarification of bidding documents

1.6.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC), latest by the date specified in the critical date sheet or correspond through "seek clarification" online on www.etenders.gov.in. No request for clarification or query shall normally be entertained after the deadline/pre-bid conference if any. Should the Purchaser deem it necessary to amend the Tender Documents as a result of a clarification, it shall do so following the procedure under Clause relating to amendment of Tender Documents and Clause relating to Deadline for Submission of Bids.

The queries, clarifications and amendments issued would also be hosted on the website of the Purchaser and as corrigendum on www.etenders.gov.in for the benefit of the other prospective bidders and also shall be sent to all bidders who have purchased the tender documents.

1.7 Amendment of Bidding Documents

1.7.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment. The same would

also be hosted on the website of the Purchaser / CPP Portal against the Tender Enquiry and all prospective bidders are expected to surf the website / CPP Portal against the Tender Enquiry before submitting their bids and before the due date for the submission of the bids to take cognizance of the amendments.

1.7.2 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids and host the changes on the website of the Purchaser.

C. PREPARATION OF BIDS

1.8. Language of Bid

1.8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical.

1.8.2 The Supplier shall bear all costs of translation, if any, to the English language and bear all risks of the accuracy of such translation, for documents provided by the Supplier.

1.9. Purchase Preference Policies

1.9.1 The purchaser intends to give purchase preference in line with current Govt. of India procurement policies to help inclusive national economic growth by providing long term support to Medium and Small enterprises (MSEs) and disadvantaged sections of the society and to address environmental concerns along with preferential market access in govt. procurements.

1.9.2 For the above purpose, local supplier means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed in DIPP Order No.P-45021/2/2017-PP (BE-II) dated 16th September, 2020 and subsequent amendment there on or by the competent Ministries/Departments in pursuance of this order and 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 items 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.

1.9.3 **A class 1 local supplier is a bidder which has local content of more than 50% in the product as defined above and is eligible to have purchase preference over class 2 local supplier (local content of 20% or above till 50%) and non-local suppliers (local content of less than 20%, foreign manufacturers or their Indian agents).**

1.10. Documents Comprising the Bid

1.10.1 The bid prepared by the Bidder shall include:

A. Technical-commercial bid – COVER 1

- (a) Bidder Information Form - Annexure I (Technical Bid);
- (b) Code of Integrity and conflict of interest – Annexure II (Technical Bid);
- (c) Manufacturer's Authorization Form - Annexure III (Technical Bid);
- (d) Bid security as specified in the Invitation to Bid – Annexure IV (Technical Bid);
- (e) Bid Securing Declaration - Annexure V (Technical Bid);
- (e) Performance Statement Form - Annexure VI (Technical Bid);
- (f) Technical compliance Statement/Deviation Statement Form - Annexure VII (Technical Bid);
- (g) Pre-Installation Requirement - Annexure VIII (Technical Bid);
- (h) Service support details form - Annexure IX (Technical Bid);
- (i) Self certification that the item offered meets the minimum local content of 50% or 20% as the case may be giving details of the location(s) at which the local value addition is made in case the bidder wishes to avail the benefits under the make in India policy, if applicable. - Annexure –XI (if applicable) (Technical Bid);
- (j) Integrity Pact - to be executed on Company's Letter head duly stamped and signed - Annexure – XV (Technical bid);
- (k) Self-certification with regard to the bidder land border with India - Annexure – XVI (Technical Bid);
- (l) Terms & Conditions- Annexure-XVII (Technical Bid)
- (m) Tender Acceptance Letter-Annexure-XVIII (Technical Bid)
- (n) Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted (Technical Bid);
- (o) Documents establishing goods eligibility and conformity to bidding documents; indicating the Indian Customs Tariff Number (ICT & HSN No.) (Technical Bid);
- (P) Schedule of requirements - Chapter 3 (Technical Bid);
- (q) Documentary evidence about the status of the bidder i.e. whether MSE or not, owned by SC/ST or not and whether the MSE is owned by a women entrepreneur or not. (Technical bid)
- (r) Techno-commercial quotation along with warranty and payment terms without the price. (Technical Bid);

B Financial bid – Cover 2

- (i) Bid form; - Annexure X (.pdf)
- (ii) Price break up of Local Content – Annexure XII (.pdf) (if applicable)
- (iii) BoQ Price Schedule Form (.xls);

1.11. Bid form and price schedule

1.11.1 The bidder shall complete the Bid Form and the appropriate price schedule form furnished in the bidding documents. These forms must be completed without any alterations to its format and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. The Bid Form and the appropriate Price Schedule form shall be submitted in accordance with Clause 1.18.3 of the bidding documents.

1.12. Bid Prices

1.12.1 The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the goods it proposes to supply under the contract.

1.12.2 Prices indicated on the price-schedule form shall be mentioned separately in the following manner:

(a) For Goods manufactured within India

- (i) The price of the goods quoted Ex -works including taxes already paid.
- (ii) The rate of GST payable on the goods if the contract is awarded should be indicated clearly.
- (iii) The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
- (iv) The installation, commissioning, warranty, training charges and any incidental service charges, if any.
- (v) Annual Maintenance charges for labor only must be indicated for three years after the warranty period. AMC charges will be added and taken for evaluation of bid. As per the quoted AMC charges by the bidder, AMC may be availed after the expiry of warranty period at the discretion of the Director, CSIR-SERC, Chennai.

(b) For Goods manufactured abroad

- (i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form. The Airport must be International Gateway airport and the seaport must be international gateway seaport for FCA and FOB respectively.
- (ii) The charges for insurance and transportation of the goods to the port/place of destination. (CIP Price)

- (iii) This Institute is also exempted from payment of Customs Duty as per notification No.51/96 – Customs. However, from 1st March 2002 the Government of India has imposed a ad-valorem Customs Duty up to 5.5% vide Notification 24/2002–Customs on all imports covered under Notification No.51/96.
- (iv) The agency commission charges, if any.
- (v) The installation, commissioning, warranty, training charges and any incidental service charges, if any.
- (vi) Annual Maintenance charges for labor only must be indicated for three years after the warranty period. AMC charges will be added and taken for evaluation of bid. As per the quoted AMC charges by the bidder, AMC may be availed after the expiry of warranty period at the discretion of the Director, CSIR-SERC, Chennai.

1.12.3 The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris. Currently Incoterms 2020 applies.

1.12.4 **Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offer shall be rejected as incomplete.**

1.12.5 The price quoted shall remain fixed during the contract period and shall not vary on any account

1.12.6 All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule but reflecting in the specification shall be assumed to be included in the bid.

1.12.7 The purchases made by the purchaser for scientific purposes are levied a concessional customs duty.

1.12.8 Please states specifically in your offer whether the duties and taxes are extra over the prices quoted, failing which it will be presumed that the prices are inclusive of taxes and duties and no claim would be entertained for statutory variations at a later date.

1.12.9 Stipulations like “ GST is presently not applicable but the same will be charged if it becomes leviable later on” is not acceptable unless in such cases. It is clearly stated that GST will not be charged if the same becomes applicable later on due to increase in turn over etc. If a bidder fails to comply with this requirement, his quoted price shall be loaded with the quantum of duty which is normally applicable on the item in question for the purpose of comparison with the prices of other tenderers.

Note: All payments due under the contract shall be paid after deduction of statutory levies at source (like ESIC, IT, etc.), wherever applicable.

1.13. Bid Currencies

1.13.1 Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries i.e. domestic tenderers are to quote and accept their payment in Indian currency; Indian agents of foreign suppliers are to receive their agency commission in Indian currency; cost of imported goods & services rendered in India, which are directly imported against the contract, may be quoted in foreign currency (currencies).

1.14. Documents Establishing Bidder's Eligibility and qualifications

1.14.1 The bidder shall furnish, as part of its bid, documents establishing the bidders' eligibility to bid and its qualification to perform the contract if its bid is accepted.

1.14.2 The documentary evidence of the bidder's qualification to perform the contract if the bid is accepted shall establish to the purchaser's satisfaction that;

- (a) The bidder meets the qualification criteria listed in bidding documents if any.
- (b) Bidder who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form (MAF) using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and/or supply the goods.
- (c) In case a bidder not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period.

1.14.3 **Conditional tenders shall not be accepted.**

1.15. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents

1.15.1 To establish the goods' eligibility, the documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.

1.15.2 To establish the conformity of the goods and services to the specifications and schedule of requirements of the bidding document, the documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:

- (a) A detailed description of the essential technical and performance characteristics of the goods;

- (b) A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period following commencement of the use of the goods by the Purchaser in the Priced-bid; and
- (c) An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

1.15.3 For purposes of the commentary to be furnished pursuant to above, the Bidder shall note that standards for workmanship, material and equipment, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute these in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

1.16. Bid Security

1.16.1 The Bidder shall furnish, as part of its bid, a bid security (BS) for an amount as specified in notice. In the case of foreign bidders, the BS shall be submitted either by the principal or by the Indian agent and in the case of indigenous bidder, the BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.

1.16.2 The bid security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the security's forfeiture.

1.16.3 The bid security shall be in Indian Rupees for offers received for supply within India and denominated in the currency of the bid or in any freely convertible foreign exchange in the case of offers received for supplies from foreign countries in equivalent Indian Rupees. The bid security shall be in one of the following forms at the bidders' option:

- (a) A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank operating in India in the form provided in the bidding documents and valid for 60 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a nationalized /Scheduled Indian bank; or
- (b) RTGS / NEFT to account of Director, CSIR – SERC
- (c) Bid Securing Declaration – Annexure - V

1.16.4 The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the ITB clause 1.16.10 are invoked.

1.16.5 The bid security should be submitted in its original form. Copies shall not be accepted.

- 1.16.6 The bid security of unsuccessful bidder will be discharged /returned as promptly as possible positively within a period of 30 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.
- 1.16.7 The successful Bidder's bid security will be discharged upon the Bidder furnishing the performance security, without any interest.
- 1.16.8 Bidders that are currently registered with the purchaser, registered as MSEs will continue to remain registered during the tender validity period also and are exempted from payment of EMD. In case the tenderer falls in these categories, the bidder should furnish a certified copy of its valid registration details. Except for MSEs, this exemption is valid for the trade group and monetary value of registration only. The MSEs are provided tender document free of cost and are exempted from the payment of Bid Security provided the goods are produced and the services are rendered by them and not for any trading activities undertaken by them. Further firms who are having Udyog Aadhar Memorandum are entitled to all benefits available for MSEs under the Public Procurement Policies for MSEs and can get registered with any of the following agencies:
- a) District Industries Centre
 - b) Khadi and Village Industries Commission
 - c) Khadi and Village Industries Board
 - d) Coir Board
 - e) National Small Industries Corporation
 - f) Directorate of Handicraft and handloom and
 - g) Any other body specified by the Ministry of MSME
- 1.16.9 Where any aggregator has been appointed by the Ministry of MSME, themselves quote on behalf of some MSE units, such offers will be considered as offer from MSE units and all such facilities would be extended to these aggregators also.
- 1.16.10 The bid security may be forfeited:
- (a) If a Bidder withdraws or amends or modifies or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; or
 - (b) In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 14 days of the order or fails to sign the contract and/or fails to furnish Performance Security within 21 days from the date of contract/ order.
- 1.16.11 Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.**

1.17. Period of Validity of Bids

- 1.17.1 Bids shall remain valid for minimum of 180 days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 1.17.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable, telex, fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.
- 1.17.3 Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

1.18. Format and Signing of Bid

- 1.18.1 The bids may be submitted in **TWO BID (Single stage Two Envelopes system)** through **CPP Portal** as specified in the Invitation for Bids / NIT.
- 1.18.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid detailing his/her name and contact details.
- 1.18.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the persons or persons signing the bid.

D SUBMISSION AND SEALING OF BIDS

1.19. Submission, Sealing and Marking of Bids

- 1.19.1 The bidders should submit their duly encrypted bids on the www.etenders.gov.in before the due date and time. You are requested to go through the uploading process well in advance so as to avoid last minute hitches. (Bids received by FAX/E- mail would not be considered for evaluation.)

1.20. Deadline for Submission of Bids

- 1.20.1 Bids must be uploaded on www.etenders.gov.in against the relevant Tender-ID before the due date and time.

1.20.2 The Purchaser may, at its discretion, extend the deadline for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended. Such amendments would appear as a corrigendum on www.etenders.gov.in against the applicable Tender – ID.

1.21. Withdrawal, substitution and Modification of Bids.

1.21.1 It would be governed by the standard operating procedure of the e-procurement portal.

E. OPENING AND EVALUATION OF BIDS

1.22 Opening of Bids by the Purchaser

1.22.1 The decryption of the bids would be done at the time enumerated on the e-procurement portal. In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened at the appointed time and location on the next working day. In two-part bidding, the financial bid shall be opened only after technical evaluation.

1.23. Confidentiality

1.23.1 Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.

1.23.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.

1.24. Clarification of Bids

1.24.1 To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no negotiation shall be held except with the lowest bidder, at the discretion of the purchaser. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered.

1.25. Preliminary Examination

- 1.25.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 1.10 have been provided, and to determine the completeness of each document submitted.
- 1.25.2 The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.
- (a) Bid Form and Price Schedule, in accordance with ITB Clause 1.10;
 - (b) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the tender enquiry document. The tenders, who do not meet the basic requirements, are to be treated as unresponsive and ignored. The following are some of the important points, for which a tender may be declared as unresponsive and to be ignored, during the initial scrutiny:
 - (i) The Bid is unsigned.
 - (ii) The Bidder is not eligible.
 - (iii) The Bid validity is shorter than the required period.
 - (iv) The Bidder has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer.
 - (v) Bidder has not agreed to give the required performance security.
 - (vi) The goods quoted are sub-standard, not meeting the required specification, etc.
 - (vii) Against the schedule of Requirement (incorporated in the tender enquiry), the tenderer has not quoted for the entire requirement as specified in that schedule.
 - (viii) The tenderer has not agreed to some essential condition(s) incorporated in the tender enquiry.

1.26 Bidder's right to question rejection.

- 1.26.1 A Bidder shall have the right to be heard in case he feels that a proper procurement process is not being followed and/or his tender has been rejected wrongly. Only a directly affected bidder can represent in this regard as under:
- i) Only a bidder who has participated in the concerned procurement process i.e. pre-qualification, bidder registration or bidding, as the case may be, can make such representation;
 - ii) In case pre-qualification bid has been evaluated before the bidding of technical bids, an application for review in relation to the technical bid may be filed only by a bidder who has qualified in pre-qualification bid;

- iii) In case technical bid has been evaluated before the opening of the financial bid, an application for review in relation to the financial bid may be filed only by a bidder whose technical bid is found to be acceptable.
- iv) Following decisions of the purchaser in accordance with the provision of internal guidelines shall not be subject to review:
 - a) Determination of the need for procurement;
 - b) Selection of the mode of procurement or bidding system;
 - c) Choice of selection procedure;
 - d) Provisions limiting participation of bidders in the procurement process;
 - e) The decision to enter into negotiations with the L1 bidder;
 - f) Cancellation of the procurement process except where it is intended to subsequently re-tender the same requirements;
 - g) Issues related to ambiguity in contract terms may not be taken up after a contract has been signed, all such issues should be highlighted before consummation of the contract by the vendor/contractor; and
 - h) Complaints against specifications except under the premise that they are either vague or too specific so as to limit competition may be permissible.

1.26.2 In case a Bidder feels aggrieved by the decision of the purchaser, he may then send his representation in writing to the Purchaser's address as indicated in special conditions of contract (SCC) within 05 working days from the date of communication of the purchaser intimating the rejection for reconsideration of the decision by the purchaser.

1.27 Responsiveness of Bids

1.27.1 Prior to the detailed evaluation, the purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of this clause, a substantive responsive bid is one, which conforms to all terms and condition of the bidding documents without material deviations, reservations or omissions. A material deviation, reservation or omission is one that:

- (a) Affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
- (b) Limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or
- (c) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

1.27.2 The purchasers' determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

- 1.27.3 If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.
- 1.27.4 If a bidder quotes Nil charges/consideration, the bid shall be treated as unresponsive and will not be considered.

1.28 Non-Conformity, Error and Omission

- 1.28.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities or omissions in the Bid that do not constitute a material deviation.
- 1.28.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 1.28.3 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
- (a) if there is a discrepancy between the unit price and the line-item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line-item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line-item total as quoted shall govern and the unit price shall be corrected;
 - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 1.28.4 Provided that a bid is substantially responsive, the purchaser may request that a bidder may confirm the correctness of arithmetic errors as done by the purchaser within a target date. In case, no reply is received then the bid submitted shall be ignored and its Bid Security may be forfeited.

1.29 Examination of Terms & Conditions, Technical Evaluation

- 1.29.1 The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.

- 1.29.2 The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 1.15, to confirm that all requirements specified in Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation.
- 1.29.3 If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB Clause 1.27, it shall reject the Bid.

1.30 Conversion to Single Currency

- 1.30.1 To facilitate evaluation and comparison, the Purchaser will convert all quoted prices expressed in various currencies to Indian Rupees at the selling exchange rate established by any bank in India as notified in the Newspapers or RBI reference rates on the date of bid opening (techno-commercial bid in the case of two-part bidding) For this purpose, exchange rate notified in www.xe.com or www.rbi.org or any other website could also be used by the purchaser.

1.31 Evaluation and comparison of bids

- 1.31.1 The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.
- 1.31.2 To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology shall be permitted.
- 1.31.3 Purchase preference shall be given to all 'Class-I local suppliers' in all procurements undertaken by the purchaser in the following manner:

In the procurements of goods which are not divisible in nature the Class-I local supplier shall get purchase preference over 'Class-II local supplier' and non-local supplier as per following procedure:-

- a) Among all qualified bids, the lowest bid will be termed as L1. If L1 is from a Class-I local supplier, the contract will be awarded to L1.
- b) If L1 is not from a 'Class-I local supplier', the lowest bidder among the 'Class-I local suppliers, will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
- c) In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the Class-I 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-I local suppliers' within the margin

of purchase preference matches the L1 price, then the contract may be awarded to the L1 bidder 'Class-II local supplier 'or non-local supplier.

d) 'Class-II local supplier' and non-local supplier will not get purchase preference in any procurement undertaken by the procuring entity.

1.31.4 Within this 25% (Twenty five Percent) quantity, a purchase preference of 25 (twenty five) per cent out of 25 (twenty five) per cent) is reserved for MSEs owned by Scheduled Caste (SC)/Scheduled Tribe (ST) entrepreneurs (if they participate in the tender process and match the L1 price). Further, out of the total annual procurement from the MSEs, (3%) three percent from within the 25% target shall be earmarked for procurement from MSEs owned by women. Provided that, in the event of failure of such SC/ST MSE to participate in tender process or meet tender requirements and L1 price, four per cent sub-target shall be met from other MSE.

1.31.5 In case the items are not divisible, then the MSE quoting price within price band L1 + 15% may be awarded for full/complete supply of total tendered quantity to MSE, considering the spirit of the policy for enhancing the Government procurement from MSEs.

A MSE firm will be preferred over a non-MSE Class 1 Local supplier. The **preference is subject to meeting the technical specification, being in the preference range as indicated above and matching the price of L1.**

1.31.6 The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

(a) For Goods manufactured within India

- (i) The price of the goods quoted Ex -works including taxes already paid.
- (ii) The rate of GST payable on the goods if the contract is awarded should be indicated clearly.
- (iii) The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
- (iv) The installation, commissioning, warranty, training charges and any incidental service charges, if any.
- (v) Annual Maintenance charges for labor only must be indicated for three years after the warranty period. AMC charges will be added and taken for evaluation of bid. As per the quoted AMC charges by the bidder, AMC may be availed after the expiry of warranty period at the discretion of the Director, CSIR-SERC, Chennai.

(b) For Goods manufactured abroad

- (i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form. The Airport must be International Gateway airport and the seaport must be international gateway seaport for FCA and ~~FOB~~ respectively.
- (ii) The charges for insurance and transportation of the goods to the port/place of destination. (CIP Price)
- (iii) This Institute is also exempted from payment of Customs Duty as per notification No.51/96 – Customs. However, from 1st March 2002 the Government of India has imposed a ad-valorem Customs Duty up to 5.5% vide Notification 24/2002–Customs on all imports covered under Notification No.51/96.
- (iv) The agency commission charges, if any.
- (v) The installation, commissioning, warranty, training charges and any incidental service charges, if any.
- (vi) Annual Maintenance charges for labor only must be indicated for three years after the warranty period. AMC charges will be added and taken for evaluation of bid. As per the quoted AMC charges by the bidder, AMC may be availed after the expiry of warranty period at the discretion of the Director, CSIR-SERC, Chennai.

1.31.8 The comparison between the indigenous and the foreign offers shall be made on FOR destination basis and CIF/CIP basis respectively. However, the CIF/CIP prices quoted by any foreign bidder shall be loaded further as under:

- (a) Towards customs duty and other statutory levies—as per applicable rates.
- (b) Towards custom clearance, inland transportation etc. - 2% of the CIF/CIP value.

The bidder should give a clear cut breakup of EXW, FOB/FCA, CIF/CIP prices to facilitate proper comparison with the purchaser reserving the right to order on either basis, failing which the bid would be summarily ignored.

Note: Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offers shall be rejected as incomplete.

1.31.9 Orders for imported stores need not necessarily be on FOB/FCA basis rather it can be on the basis of any of the incoterm specified in ICC Incoterms 2020 as may be amended from time to time by the ICC or any other designated authority and favorable to the purchaser.

- 1.31.10 wherever the price quoted on FOB /FCA and CIF/CIP basis are the same, the Contract would be made on CIF / CIP basis only.
- 1.31.11 The GCC and the SCC shall specify the mode of transport i.e., whether by air/ocean/road/rail.
- 1.31.12. There is no provision to purchase optional items. The specifications embodied in the tender documents would be the basis of evaluating the responsiveness of bids received.
- 1.31.13 The Purchaser shall compare all substantially responsive bids to determine the lowest evaluated bid, in accordance with ITB Clause 1.33.

1.32 Contacting the Purchaser

- 1.32.1 Subject to ITB Clause 1.25, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- 1.32.2 Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

1.33 Post qualification

- 1.33.1 In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 1.14.
- 1.33.2 The determination will take into account the eligibility criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.
- 1.33.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.

F. AWARD OF CONTRACT

1.34 Negotiations

- 1.34.1 There shall not be any negotiation normally. Negotiations, if at all, shall be an exception and only in the case of items with limited source of supply. Negotiations shall be held with the lowest evaluated responsive bidder. Counter offers tantamount to negotiations and shall be treated at par with negotiations in the case of one time purchases.

1.35 Award Criteria

- 1.35.1 Subject to ITB Clause 1.39, the Purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily. The details of the award would be hosted on the website of the Purchaser.

1.36 Purchaser's right to vary Quantities at Time of Award

- 1.36.1 The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. Further, at the discretion of the purchaser, the quantities in the contract may be enhanced by 25% within the delivery period.

1.37 Option Clause

- 1.37.1 The Purchaser reserves the right to increase or decrease the quantity of the required goods up to 25% (Twenty-Five) per cent at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period)

1.38 Purchaser's right to accept Any Bid and to reject any or All Bids

- 1.38.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.

1.39 Notification of Award

- 1.39.1 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by cable or telex or fax or e mail that the bid has been accepted and a separate purchase order shall follow through post.
- 1.39.2 Until a formal contract is prepared and executed, the notification of award should constitute a binding contract.
- 1.39.3 Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to ITB Clause 1.41, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security.

1.40 Signing of Contract

- 1.40.1 Promptly after notification, the Purchaser shall send the successful Bidder the Agreement/PO.
- 1.40.2 Within twenty-one (21) days of date of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.

1.41 Order Acceptance

- 1.41.1 The successful bidder should submit Order acceptance within 14 days from the date of issue, failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited pursuant to clause 1.16.9 of ITB.
- 1.41.2 The order confirmation must be received within 14 days. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation / PS are not received, the contract shall be cancelled and limited tenders irrespective of the value shall be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable, provided there is no change in specifications. In such cases the defaulting firm shall not be considered again for re-tendering in the particular case.

1.42 Performance Security

- 1.42.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.
- 1.42.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 1.42.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
- 1.42.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.

1.42.5 The Performance security shall be in one of the following forms:

- (a) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/ Scheduled bank located in India or a foreign bank with preferably its operating branch in India in the form provided in the bidding documents. Or
- (b) A Banker's cheque or Account Payee demand draft in favour of the purchaser.

1.42.6 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.

1.42.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.

1.42.8 The order confirmation should be received within 14 days from the date of notification of award. However, the purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.

1.42.9 Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, and then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

1.43 Pre-Bid Conference (PBC)

1.43.1 A Pre-bid Conference shall be held as indicated in invitation to bid. All prospective bidders are requested to kindly attend the Pre-bid Conference. In order to facilitate the purchaser, the proper conduct of the Pre-bid Conference, all prospective bidders are requested to kindly submit their queries either through email giving refer to Tender No. and item description to puroff@serc.res.in (email id) or by post (with envelope bearing Tender No. and Date on top and marked "Queries for Pre-bid Conference") so as to reach the purchaser as indicated in invitation to bid. The purchaser shall answer the queries during the pre-bid conference, which would become a part of the proceedings of the Pre-bid Conference. The proceeding of the Pre-Bid Conference would be hosted on the website of the purchaser. Before formulating and submitting their bids, all prospective bidders are advised to surf through the purchaser's website after the Pre-

bid Conference, in order to enable them take cognizance of the revised tender conditions.

1.44 Integrity Pact

1.44.1 Integrity Pact binds both buyers and sellers to ethical conduct and transparency in all activities from pre-selection of bidders, bidding and contracting, implementation, completion and operation related to the contract.

1.44.2 The Integrity pact essentially envisages an agreement between the prospective vendors/bidders and the buyer, committing the persons/officials of both sides, not to resort to any corrupt practices in any aspect/stage of the contract. Only those vendors/bidders, who commit themselves to such a Pact with the buyer, would be considered competent to participate in the bidding process. In other words, entering into this Pact would be a preliminary qualification. The essential ingredients of the Pact include:

- i) Promise on the part of the Purchaser to treat all bidders with equity and reason and not to seek or accept any benefit, which is not legally available;
- ii) Promise on the part of bidders not to offer any benefit to the employees of the Purchaser not available legally and also not to commit any offence under Prevention of Corruption Act, 1988 or Indian Penal Code 1860;
- iii) Promise on the part of bidders not to enter into any undisclosed agreement or understanding with other bidders with respect to prices, specifications, certifications, subsidiary contracts; etc.
- iv) Undertaking (as part of Fall Clause) by the bidders that they have not and will not sell the same material/equipment at prices lower than the bid price;
- iv) Foreign bidders to disclose the name and address of agents and representatives in India and Indian Bidders to disclose their foreign principals or associates;
- v) Bidders to disclose the payments to be made by them to agents/brokers or any other intermediary;
- vi) Bidders to disclose any past transgressions committed over the specified period with any other company in India or Abroad that may impinge on the anti-corruption principle;
- vii) Integrity Pact lays down the punitive actions for any violation.

- 1.44.3 Each page of such Integrity pact proforma would be duly signed by Purchaser's competent signatory. All pages of the Integrity Pact are to be returned by the bidder (along with the technical bid) duly signed by the same signatory who signed the bid, i.e. who is duly authorized to sign the bid and to make binding commitments on behalf of his company. Any bid not accompanied by Integrity Pact duly signed by the bidder shall be considered to be a non-responsive bid and shall be rejected straightway.
- 1.44.4 The SCC shall specify whether there is a need to enter into a separate Integrity pact or not.
- 1.44.5 The Integrity Pact would be effective from the date of invitation of bids till complete execution of the contract.
- 1.44.6 The names and contact details of the Independent External Monitors (IEM) on the event of the need of IP is as detailed in the SCC.
- 1.44.7 The modal format of IP is at Chapter-7.

CHAPTER – 2

CONDITIONS OF CONTRACT

A GENERAL CONDITIONS OF CONTRACT

Contents of Chapter 2

Sl. No.	Clause	Page No.
2.1.	Definitions	37-38
2.2.	Contract Documents	38
2.3.	Code of Integrity	39
2.4.	Joint Venture, Consortium or Association	39
2.5.	Scope of Supply	39
2.6.	Suppliers' Responsibilities	40
2.7.	Contract price	40
2.8.	Copy Right	40
2.9.	Application	40
2.10.	Standards	40
2.11.	Use of Contract Documents and Information	40-41
2.12.	Patent Indemnity	41
2.13.	Performance Security	41-42
2.14.	Inspections and Tests	42
2.15.	Packing	42-43
2.16.	Delivery and Documents	43
2.17.	Insurance	43
2.18.	Transportation	44
2.19.	Incidental Services	44
2.20.	Spare Parts	44
2.21.	Warranty	45
2.22.	Terms of Payment	45-46
2.23.	Change Orders and Contract Amendments	46
2.24.	Assignment	46
2.25.	Subcontracts	47
2.26.	Extension of time	47
2.27.	Liquidated Damages Clause	47
2.28.	Termination for Default	47
2.29.	Force Majeure	48
2.30.	Termination for insolvency	48
2.31.	Termination for Convenience	48-49
2.32.	Settlement of Disputes	50
2.33.	Governing Language	50
2.34.	Applicable Law	50
2.35.	Notice	50
2.36.	Taxes and Duties	50-51
2.37.	Right to use Defective Goods	51
2.38.	Protection against Damage	51
2.39.	Site preparation and installation	51
2.40.	Import and Export Licenses	52
2.41.	Risk Purchase Clause	52
2.42.	Option Clause	52
2.43.	Integrity Pact	52
2.44.	Order Acceptance	52
2.45.	Purchase preference	52

GENERAL CONDITIONS OF CONTRACT (GCC)

2.1 Definitions

2.1.1

The following words and expressions shall have the meanings hereby assigned to them:

- (a) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- (b) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
- (c) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (d) “Day” means calendar day.
- (e) “Completion” means the fulfillment of the Goods and related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (f) “GCC” means the General Conditions of Contract.
- (g) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (h) “Related Services” means the services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
- (i) “SCC” means the Special Conditions of Contract.
- (j) “Subcontractor” means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (k) “Supplier” means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (l) “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.

- (m) “Local supplier” means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed under this order or by the competent Ministries / Departments in pursuance of this order.
- (n) “Non-local supplier” means a supplier or service provider whose product or service offered for procurement does not meet the minimum local content as prescribed under this order or by the competent Ministries / Departments in pursuance of this order and would include foreign OEMs, foreign principals and their Indian agents.
- (o) “Margin of purchase preference” means the maximum extent to which the price quoted by a local supplier may be above the L1 for the purpose of purchase preference.
- (p) The “Council” means the Council of Scientific & Industrial Research (CSIR), registered under the Societies Registration Act, 1860 of the Govt. of India having its registered office at 2, Rafi Marg, New Delhi-110001, India and the

“Purchaser” means Stores & Purchase Officer, on behalf of the Director, CSIR-Structural Engineering Research Centre, Taramani, Chennai – 600113, INDIA as specified in SCC.
- (q) “The final destination,” where applicable, means the place named in the SCC.
- (r) For definitions regarding terms in Make in India please refer to order no. P-45021/2/2017-PP (BE-II) dated 16.09.2020 by Ministry of Commerce and Industry, Government of India and any amendment / revisions thereof.
- (s) For definitions regarding terms in MSE refer MSE order 2012 and amendments and revisions thereof.
- (t) For registration of bidders quoting for products from countries that share land border with India refer to Order No.P-45021/112/2020-PP(BE-II)(E-43780) dated 24.08.2020 of Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade and any amendments thereon.

2.2 Contract Documents

- 2.2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

2.3 Code of Integrity

2.3.1 Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser concludes that a (prospective) bidder/supplier, directly or through an agent, has violated this code of integrity in competing for the contract or in executing a contract, the Purchaser may take appropriate measures including one or more of the following:

- a) Cancellation of the relevant contract and recovery of compensation for loss incurred by the purchaser;
 - b) Forfeiture or encashment of any other security or bond relating to the procurement;
 - c) Recovery of payments including advance payments, if any, made by the Purchaser along with interest thereon at the prevailing rate.
- a) Provisions in addition to above:
- 1) Removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the purchaser for a period not less than one year;
 - 2) In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India;
 - 3) Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

2.4 Joint Venture, Consortium or Association

2.4.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfilment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

2.5 Scope of Supply

2.5.1 The Goods and Related Services to be supplied shall be as specified in Chapter 4 i.e. Specifications and allied technical details.

2.6 Suppliers' Responsibilities

2.6.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Scope of Supply Clause of the GCC, and the Delivery and Completion Schedule, as per GCC Clause relating to delivery and document.

2.7 Contract price

2.7.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.

2.8 Copy Right

2.8.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

2.9 Application

2.9.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

2.10 Standards

2.10.1 The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

2.11 Use of Contract Documents and Information

2.11.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.

2.11.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.

2.11.3 Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.

2.12 Patent Indemnity

2.12.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 2.12.2 Indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in India; and
- (b) the sale in any country of the products produced by the Goods.

2.12.2 If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

2.13 Performance Security

2.13.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period.

2.13.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

2.13.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries or in equivalent Indian Rupees in case the Performance Security is submitted by the Indian Agent.

2.13.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.

2.13.5 The Performance security shall be in one of the following forms:

(a) A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank operating in India in the form provided in the bidding documents and valid for 60 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalized /Scheduled Indian bank; or

(b) RTGS / NEFT to account of Director, CSIR – SERC

2.13.6 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.

2.13.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.

2.13.8 The order confirmation must be received within 14 days. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled provided that the purchaser, on being satisfied that it is not a case of cartelization and the integrity of the procurement process has been maintained, may, for cogent reasons, offer the next successful bidder an opportunity to match the financial bid of the first successful bidder, and if the offer is accepted, award the contract to the next successful bidder at the price bid of the first successful bidder.

2.13.9 Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

2.14 Inspections and Tests

2.14.1 The inspections & test, training required would be as detailed in Chapter-4 of the Bidding Document relating to Specification and Allied Technical details.

2.15 Packing

2.15.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into

consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

- 2.15.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

2.16 Delivery and Documents

- 2.16.1 Delivery of the Goods and completion and related services shall be made by the supplier in accordance with the terms specified by the Purchaser in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

2.16.2

The terms FOB, FCA, CIF, CIP, etc. shall be governed by the rules prescribed in the current edition of the Inco terms published by the International Chambers of Commerce, Paris.

2.16.3

The mode of transportation shall be as specified in SCC. In case the purchaser elects to have the transportation done through Air, then air lifting needs to be done through Air India only. In case Air India does not operate in the Airport of despatch, then the bidder is free to engage the services of any other Airlines.

2.17 Insurance

- 2.17.1 Should the purchaser elect to buy on CIF/CIP basis, the Goods supplied under the Contract shall be fully insured against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

- 2.17.2 Where delivery of the goods is required by the purchaser on CIF or CIP basis the supplier shall arrange and pay for Cargo Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.

- 2.17.3 Where delivery is on FOB or FCA basis, insurance would be the responsibility of the purchaser.

- 2.17.4 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.

2.18 Transportation

- 2.18.1 Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 2.18.2 Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 2.18.3 In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.

2.19 Incidental Services

- 2.19.1 The supplier may be required to provide any or all of the services, including training, if any, specified in chapter 4.

2.20 Spare Parts

- 2.20.1 The Supplier shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- (a) Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
 - (b) In the event of termination of production of the spare parts:
 - (i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
 - (ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

2.21 Warranty

- 2.21.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 2.21.2 The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
- 2.21.3 Unless otherwise specified in the SCC, the warranty shall remain valid for Twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for Eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 2.21.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 2.21.5 Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 2.21.6 If having been notified, the Supplier fails to remedy the defect within a reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- 2.21.7 Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.

2.22 Terms of Payment

- 2.22.1 The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.
- 2.22.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfilment of other obligations stipulated in the contract.
- 2.22.3 Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the invoice or claim by the Supplier. While claiming the

payment, the supplier should certify in the bill/invoice that the payment being claimed strictly in terms of the contract and all obligations on the part of the supplier for claiming the payment have been fulfilled as required under the contract.

2.22.4 Payment shall be made in currency as indicated in the contract.

2.23 Change Orders and Contract Amendments

2.23.1 The Purchaser may at any time, by written order given to the Supplier pursuant to Clause on Notices of the GCC make changes within the general scope of the Contract in any one or more of the following:

- (a) Increase or decrease in the quantity required, exercise of quantity opinion clause;
- (b) Changes in schedule of deliveries and terms of delivery;
- (c) The changes in inspection arrangements;
- (d) Changes in terms of payments and statutory levies;
- (e) Changes due to any other situation not anticipated;

2.23.2 No changes in the price quoted shall be permitted after the purchase order has been issued except on account of statutory variations.

2.23.3 No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.

2.24 Assignment

2.24.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

2.25 Subcontracts

2.25.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or duties or obligation under the contract.

2.26 Extension of time.

2.26.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.

2.26.2 If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.

2.26.3 Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to liquidated damages Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.

2.27 Liquidated Damages

2.27.1 Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value in case the delivered price of the delayed goods or unperformed services cannot be ascertained from the contract, for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause on Termination for Default.

2.28 Termination for Default

2.28.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part

- (a) If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause on Extension of Time; or
- (b) If the Supplier fails to perform any other obligation(s) under the Contract.
- (c) If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices etc as defined in GCC Clause and ITB clause on code of integrity in competing for or in executing the Contract.

2.28.2 In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:

- (a) The Performance Security is to be forfeited;
- (b) The purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
- (c) However, the supplier shall continue to perform the contract to the extent not terminated.

2.29 Force Majeure

2.29.1 Notwithstanding the provisions of GCC Clauses relating to extension of time, Liquidated damages and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

2.29.2 For purposes of this Clause, “Force Majeure” means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

2.29.3

If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

2.29.4

If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

2.30 Termination for Insolvency

2.30.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.

2.31 Termination for Convenience

2.31.1

The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

2.31.2

The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

- (a) To have any portion completed and delivered at the Contract terms and prices; and/or
- (b) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

2.32 **Settlement of Disputes**

2.32.1

The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

2.32.2

If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

2.32.3

The dispute settlement mechanism/arbitration proceedings shall be concluded as under:

- (a) In case of Dispute or difference arising between the Purchaser and supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Delhi International Arbitration Centre (DIAC), Delhi High Court, New Delhi. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
- (b) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

2.32.4 The venue of the arbitration shall be the place from where the purchase order or contract is issued.

2.32.5 Notwithstanding, any reference to arbitration herein,

- (a) The parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) the Purchaser shall pay the Supplier any monies due the Supplier.

2.33 Governing Language

2.33.1 The contract shall be written in English language which shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the English language only.

2.34 Applicable Law

2.34.1 The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in SCC.

2.35 Notices

2.35.1

Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX, e-mail or and confirmed in writing to the other party's address specified in the SCC.

2.35.2

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

2.36 Taxes and Duties

2.36.1

For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.

2.36.2

For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture/production.

2.36.3

If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall make its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

2.36.4

All payments due under the contract shall be paid after deduction of statutory levies (at source) (like IT, etc.) wherever applicable.

2.36.5

Customs Duty – If the supply is from abroad this Institute is permitted to import goods as per notification No.51/96 – Customs and pay a concessional duty up to 5% as per notification 24/2002 – Customs on all imports.

2.37 Right to use Defective Goods

2.37.1

If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

2.38 Protection against Damage

2.38.1

The system shall not be prone to damage during power failures and trip outs. The normal voltage and frequency conditions available at site as under:

- (a) Voltage 230 volts – Single phase/ 415 V 3 phase ($\pm 10\%$)
- (b) Frequency 50 Hz.

2.39 Site preparation and installation

2.39.1

The Purchaser is solely responsible for the construction of the equipment sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The supplier shall inform the purchaser about the site preparation, if any, needed for installation, of the goods at the purchaser's site immediately after notification of award/contract.

2.40 Import and Export Licenses

2.40.1

If the ordered materials are covered under restricted category of EXIM policy in India the Vendor / Agent may intimate such information for obtaining necessary, license in India.

2.40.2

If the ordered equipment is subject to Vendor procuring an export license from the designated government agency / country from where the goods are shipped / sold, the vendor has to mention the name, address of the government agency / authority. The vendor must also mention the time period within which the license will be granted in normal course.

2.41 Risk Purchase Clause

2.41.1

If the supplier fails to deliver the goods within the maximum delivery period specified in the contract or Purchase Order, the purchaser may procure, upon such terms and in such a manner as it deems appropriate, Goods or Services similar to those undelivered and the Supplier shall be liable to the purchaser for any excess costs incurred for such similar goods or services.

2.42 Option Clause

2.42.1

The Purchaser reserves the right to increase or decrease the quantity of the required goods up to 25% (Twenty-Five) per cent at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period)

2.43 Integrity Pact

2.43.1 The SCC shall specify whether there is a need to enter into a separate Integrity pact or not.

2.43.2 The names and contact details of the Independent External Monitors (IEM) on the event of the need of IP is as detailed in the SCC.

2.44 Order Acceptance

2.44.1 The successful bidder should submit Order acceptance within 14 days from the date of issue of order/signing of contract, failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited pursuant to clause 1.16.9 of ITB.

2.45 Purchase Preference

2.45.1 The purchaser intends to give product reservation/purchase preference/price preference in line with current Govt. of India procurement policies to help inclusive national economic growth by providing long term support to small and medium enterprises and disadvantaged sections of the society and to address environmental concerns along with preferential market access in govt. procurements under Preference to Make in India Order 2017. Bidders desirous of submitting of their bids in accordance with the Make in India Policy of GOI must submit an Affidavit of self-certification regarding minimum local content as per the format enclosed with the bidding documents.

B. SPECIAL CONDITIONS OF CONTRACT

<u>Sl. No.</u>	<u>GCC Clause</u>	<u>Page No.</u>
01.	GCC 2.1.1 (l)	54
02.	GCC 2.1.1 (m)	54
03.	GCC 2.13.1	54
04.	GCC 2.15.2	54
05.	GCC 2.16.1	54-55
06.	GCC 2.16.3	56
07.	GCC 2.17.1	56
08.	GCC 2.21.3	56
09.	GCC 2.22.1	56-57
10.	GCC 2.27.1	57
11.	GCC 2.34.1	58
12.	GCC 2.35.1	58
13.	GCC 2.43.1	58
14.	GCC 2.43.2	58
15.	GCC 2.45	58

SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 2.1.1(l)	The Purchaser is: The Director, CSIR-Structural Engineering Research Centre, Taramani, Chennai – 600113, INDIA,
GCC 2.1.1(m)	<p><u>The Final Destination is:</u></p> <p>CSIR-STRUCTURAL ENGINEERING RESEARCH CENTRE(CSIR-SERC) CSIR Road, Taramani CHENNAI – 600 113 Tamilnadu, INDIA Tel : 91 - 44 – 22549108,22544477 Email : puroff@secrc.res.in</p>
GCC 2.13.1	The amount of the Performance Security shall be 5% of the contract value.
GCC 2.15.2	<p>The marking and documentation within and outside the packages shall be:</p> <p>(a) Each package should have a packing list within it detailing the part No.(s), description, quantity etc.</p> <p>(b) Outside each package, the contract No., the name and address of the purchaser and the final destination should be indicated on all sides and top.</p> <p>(c) Each package should be marked as 1/x, 2/x, 3/x.....x/x, where “x” is the total No. of packages contained in the consignment.</p> <p>(d) All the sides and top of each package should carry an appropriate indication / label / stickers indicating the precautions to be taken while handling/storage.</p>
GCC 2.16.1	<p>Details of Shipping and other Documents to be furnished by the Supplier are :</p> <p><u>For goods manufactured within India</u></p> <p>Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by registered post / speed post and copies thereof by email.</p> <p>(a) Two copies of Supplier’s Invoice indicating, <i>inter-alia</i> Description and specification of the goods, quantity, unit price, total value; Original Invoice duly pre-receipted with revenue stamp for value</p>

	<p>above Rs.5,000/-</p> <p>(b) Delivery Challan / Packing list;</p>
GCC 2.16.1	<p>(c) Insurance certificate, if required under the contract;</p> <p>(d) Railway receipt/Consignment note;</p> <p>(e) Manufacturer's guarantee certificate and in-house inspection certificate;</p> <p>(f) Inspection certificate issued by purchaser's inspector, if any;</p> <p>(g) Operation Manual, Service and Maintenance Manual in English (Hard Copy / Media)</p> <p>(h) All required drivers and media for software installation if any, with appropriate licenses.</p> <p>(i) Any other document(s) as and when required in terms of the contract.</p> <p>Note:</p> <p>01. The nomenclature used for the item description in the invoices(s), packing list(s) and the delivery note(s) etc., should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).</p> <p>02. The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses</p> <p><u>For goods manufactured abroad</u></p> <p>Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by Registered Post/courier and copies thereof by email.</p> <p>(a) Two copies of supplier's Invoice giving full details of the goods including quantity, value, etc.;</p> <p>(b) Packing list;</p> <p>(c) Certificate of country of origin;</p> <p>(d) Manufacturer's guarantee and Inspection certificate;</p>

GCC 2.16.1	<p>(e) Inspection certificate issued by the Purchaser's Inspector, if any;</p> <p>(f) Insurance Certificate, if required under the contract;</p> <p>(g) Name of the Vessel/Carrier;</p> <p>(h) Bill of Lading/Airway Bill;</p> <p>(i) Port of Loading;</p> <p>(j) Date of Shipment;</p> <p>(k) Port of Discharge & expected date of arrival of goods;</p> <p>(l) Operation Manual, Service and Maintenance Manual in English (Hard Copy / Media)</p> <p>(m) All required drivers and media for software installation if any, with appropriate licenses.</p> <p>(n) Any other document(s) as and when required in terms of the contract.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The nomenclature used for the item description in the invoices(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s). The invoice should also indicate the harmonic system code No. for customs purposes. 2. The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.
GCC 2.16.3	<p>In case of supplies from within India, the mode of transportation shall be by Road/Courier.</p> <p>In case of supplies from abroad, the mode of transportation shall be by Air.</p>
GCC 2.17.1	<p>The Insurance shall be for an amount equal to 110% of the CIF value of the contract from within "warehouse to warehouse (final destination)" on "all risk basis" including strikes, riots and civil commotion.</p>
GCC 2.21.3	<p>One- year comprehensive on-site warranty for the complete system including all the equipment, sub systems etc., from the date of installation and acceptance of the system. All spare parts required for the trouble-free operation of the complete system during standard warranty period, needs to be supplied by the bidder, without extra cost. Fault should be resolved on-site within 2 working days of fault reporting.</p>
GCC 2.22.1	<p>The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:</p> <p><u>Payment for Goods supplied from abroad:</u></p>

	Payment of foreign currency portion shall be made in currency of the Contract <i>in</i> the following manner:
GCC2.22.1	<p>(a) On Shipment: 80% of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 2.16.</p> <p>(b) On Acceptance: 20 % of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of Goods and successful installation & commissioning upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the Performance security, if any.</p> <p>The L/C will be confirmed at the supplier's cost, if requested specifically by the supplier. All bank charges abroad shall be to the account of the beneficiary i.e. supplier and all bank charges in India shall be to the account of the opener i.e. purchaser. If L/C is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges thereof would be to the suppliers' account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed. The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the Ex-Works value.</p>
GCC 2.22.1	<p><u>Payment for Goods and Services supplied from India:</u></p> <p>The payment shall be made in Indian Rupees, as follows:</p> <p>100% Payment will be released after receipt of material in good Condition and Installation, Commissioning, Integration, Training & Documentation of Electrodynamic Shaker System with Climatic Chamber at CSIR-SERC and submission of 5% PBG for the total order value including GST valid for the period of 60 days after warranty period.</p> <p>Note: All payments due under the Contract shall be paid after deduction of statutory levies at source (like ESIC, Income Tax, etc.), wherever applicable.</p>
GCC 2.27.1	The penalty shall be 0.5% per week or part of a week towards late delivery and towards delay in installation and commissioning.
GCC 2.27.1	The maximum amount of penalty shall be 10%. The liquidated damages shall be levied on the delivered price of the delayed Goods or unperformed Services or contract value.

GCC 2.34.1	The place of jurisdiction is Chennai, India.
GCC 2.35.1	<p>For notices, the Purchaser's address is</p> <p>Attention: The Director</p> <p>Location: STRUCTURAL ENGINEERING RESEARCH CENTRE(CSIR-SERC)</p> <p>CSIR Road, Taramani</p> <p>CHENNAI – 600 113</p> <p>Tamilnadu, INDIA</p> <p>Tel : 91 - 44 – 22549108,22544777</p> <p>Email : puroff@serc.res.in / puroff.serc@csir.res.in</p>
GCC 2.43.1	The Integrity Pact – Applicable
GCC 2.43.2	<p>The Name and Contact details of the IEMs are as under: –</p> <ol style="list-style-type: none"> 1. SHRI JAGADIP NARAYAN SINGH, IAS (Retd), E-Mail: jagadipsingh@yahoo.com 2. SHRI ARUN KUMAR GUPTA, Ex-CMD, SCI, E-Mail: guptaarun55@rediffmail.com
GCC 2.45	Purchase Preference Make in India – Applicable
GCC 2.45	Purchase Preference MSE – Applicable

CHAPTER 3

SCHEDULE OF REQUIREMENT (to be submitted with techno-commercial bid)

(To be filled by the bidder and enclosed with the Technical Bid.)

Sl. No.	Brief Description of goods and services	Quantity	Physical Unit	Final destination/ Place	Delivery Schedule (to be filled by the bidder)	Time frame required for conducting installation, commissioning of the eqpt., acceptance test, etc. after the arrival of consignment (to be filled by the bidder)

Term of delivery : FCA (Named Place of Delivery) Incoterms 2020 (Bidder to specify Gateway International Airport Only) :

Period of delivery shall count from :
(to be filled by the bidder)

Scope of Supply :

Standards :

Training requirement :
(Location, no. of persons, period of training, nature of training)

Warranty:

Date :

Place :

Signature of the Bidder

PS: Authorization standards that ensure at least a equivalent quality than the standard mentioned in the Technical Specification, will also be acceptable.

CHAPTER 4

ELIGIBILITY CONDITIONS, SPECIFICATIONS AND ALLIED TECHNICAL DETAILS

4.1 Eligibility Criteria for Participation in Tender

The bidder should have supplied and commissioned the following:

- (i) Two numbers of electrodynamic shaker system of similar capacity, out of which one number should be of combined electrodynamic shaker with climatic chamber system

in Govt institutes/ Govt. research organizations/ Public funded Universities/Reputed private industries in India/Abroad in the last 10 years. The bidder should submit the copies of the purchase orders and their installation reports. The installation reports should be of the same purchase orders.

4.2 Detailed Specifications for Electrodynamic Shaker with Climatic Chamber

CSIR-SERC is planning to setup a test facility which includes an Electrodynamic Shaker with Climatic Chamber system. The required system includes an electrodynamic shaker, head expander, slip table on a common base with air isolation configurations, power supply amplifier, vibration controller, hydraulic power supply, armature cooling blower with silencer and standard accessories. A climatic chamber and its subsystems that work in tandem with the electrodynamic shaker system are needed to simulate various vibration testing conditions in a controlled environmental condition. The detailed technical specifications for the Electrodynamic Shaker with Climatic Chamber system is as follows:

Detailed Specifications for Electrodynamic Shaker with Climatic Chamber

CSIR-SERC is planning to setup a test facility which includes an Electrodynamic Shaker with Climatic Chamber system. The required system includes an electrodynamic shaker, head expander, slip table on a common base with air isolation configurations, power supply amplifier, vibration controller, hydraulic power supply, armature cooling blower with silencer and standard accessories. A climatic chamber and its subsystems that work in tandem with the electrodynamic shaker system are needed to simulate various vibration testing conditions in a controlled environmental condition. The detailed technical specifications for the Electrodynamic Shaker with Climatic Chamber system is as follows:

Technical Specifications for Electrodynamic Shaker

S.No.	Parameters	SERC Requirements
1.	Shaker Type	Electro Dynamic
2.	Sine Force Rating (peak)	≥ 6800 kgf
3.	Random Force Rating (rms.)	≥ 6800 kgf
4.	Shock force	≥ 14000 kgf
5.	Displacement (continuous)	≥ 75 mm (peak to peak, sine)
6.	Velocity of bare table	≥ 1.75 m/sec. peak (sine) ≥ 2 m/sec. peak (shock)
7.	Static Payload support	≥ 800 kg
8.	Max. runtime	24 hours continuous at 80% efficiency
9.	Frequency range	Range Min: ≤ 5 Hz Range Max: ≥ 2500 Hz
10.	Sine acceleration (peak) Rated	≥ 75 g
11.	Random acceleration (rms) Rated	≥ 75 grms
12.	Type of Cooling	Air-cooled
13.	Total Armature moving mass	≤ 80 kg
14.	Total Armature Diameter	≤ 500 mm
15.	Fundamental Armature Resonance Frequency	> 1600 Hz
16.	Armature Power Requirements (based on current drawn to run shaker at full capacity in sine rating)	≥ 80 kVA
17.	Suspension Cross Axial Stiffness	≥ 15 kN/mm
18.	Suspension Rotational Stiffness	≥ 150 kNm/rad
19.	Stray Magnetic Field	≤ 1.5 mT

S.No.	Parameters	SERC Requirements
20.	Armature Inserts	Metric coarse threaded, M8 or M10 or M12 type with center, 3",6",12", PCDs. Inserts should be equally spaced.
21.	Auto centering of armature, over travel interlock and geared shaker rotation	Auto centering of the armature for the rated static load should be provided; Armature over travel interlock should trip the power amplifier; Easy rotation of the shaker to 90 deg using manual effort rotation or better.
22.	Armature Suspension	Rolling strut assembly or copper beryllium or carbon-carbon flexures or better.
23.	Air Isolation Trunnion and armature guidance	Required and to be supplied by the bidder
24.	Shaker Cooling unit	The shaker should be provided with air blower with silencer of suitable capacity. The acoustic noise during the cooling unit operation should not exceed 120 dBA at a distance of 1 meter.
SLIP TABLE		
25.	Type	<ul style="list-style-type: none"> Common base type: Shaker trunnion and guiding system and slip table, mounted on a common steel structure providing permanent alignment with shaker and slip table Combo Base Isolation: The shaker unit along with common base should be isolated from floor by the use of air mounts of appropriate capacity. Oil film guided type or equivalent Slip plate supported by granite base with oil film and hydrostatic journal bearings or equivalent.
26.	Slip Table Dimension & Material	Minimum 1500mm (L) x 1500mm (W) x 50mm (Thk) Material: Magnesium or equivalent
27.	Slip table mass	<600kg
28.	No of hydrostatic bearings	Minimum 4
29.	Surface Finish	Roughness average ≤ 0.5 micron
30.	Pitch	350 kN-m or better
31.	Yaw	80 kN-m or better
32.	Roll	280 kN-m or better
33.	Flatness	≤ 0.2 mm per meter
34.	Maximum Stroke	Minimum 75 mm
35.	Maximum load on the table	≥ 10000 kg
36.	Useful frequency range of shaker combined with slip table	Range Min: ≤ 5 Hz Range Max: ≥ 2000 Hz
37.	Bare Table resonance	≥ 700 Hz (nominal)
38.	Mounting hole pattern	To be provided. Should be with standard type and grid hole pattern with SS inserts.
39.	Driver Bar	<ul style="list-style-type: none"> Tension bolt type All welded construction
40.	Thermal barrier	Thermal barrier for the slip table is required

S.No.	Parameters	SERC Requirements
		and to be supplied by the bidder. Thermal barrier material should withstand -80 deg C to +200 deg C. Thermal barrier mass should be ≤ 400 kg
HYDRAULIC POWER SUPPLY		
41.	Hydraulic Power Pack (Reputed Make)	Suitable for the bearing slip table.
42.	Sound Pressure level of Hydraulic Power Pack	≤ 100 dB A at a distance of 1m from the outer periphery of the HPP.
43.	Hydraulic Power Supply	Suitable for the slip table operating at 380-480V AC, 50Hz, 3 Phase
44.	Motor	Fully enclosed, fan-cooled Minimum 1 kW; 50 Hz
45.	Pressure pump	Type Gear; Operating pressure ≥ 150 bar Delivery rate 50 Hz: ≥ 2 liters/min @ 150 bar
46.	Filtration	≤ 15 microns
47.	Oil tank capacity	≥ 30 liters
HEAD EXPANDER		
48.	Type	Table with additional frame for extra load support
49.	Head expander table dimensions	$\geq 1500\text{mm} \times 1500\text{mm}$ with suitable thickness
50.	Head Expander table material	Magnesium alloy or equivalent with standard type and grid hole pattern with SS inserts
51.	Head Expander table mass	$\leq 400\text{kg}$
52.	Useful frequency range	5Hz to 2000Hz or better
53.	Top face flatness tolerance	≤ 0.2 mm/m
54.	Thermal barrier	Thermal barrier for the head expander is required and to be supplied by the bidder. Material should withstand -80 deg C to +200 deg C
AMPLIFIER		
55.	Type of Amplifier	<ul style="list-style-type: none"> • IGBT or S-MOSFET based switching amplifier of Class D • Modular in construction and scalable architecture
56.	Amplifier Capacity	a) Total capacity shall be suitable to run the shaker at the maximum rated capacity for sine and shock. b) Number of power modules to be specified.
57.	Full Power Bandwidth	Range Min: ≤ 20 Hz Range Max : ≥ 2000 Hz
58.	Frequency response	± 1.5 dB 20 Hz to 2500 Hz or better
59.	Power Range	Minimum 80 kVA. Should be compatible with shaker for sine and shock rating
60.	Rated Output Voltage	100 Vrms Should be compatible with shaker
61.	Input Sensitivity	1 Vrms input for 100Vrms output. Compatible with all reputed make

S.No.	Parameters	SERC Requirements
		controllers.
62.	Amplifier Efficiency	> 90%
63.	Signal to Noise Ratio	>70 dB
64.	Input Impedance	≥ 10 kΩ
65.	Switching Frequency	>60 kHz
66.	Modulation range	DC to 10 kHz
67.	Total Harmonic Distortion	<1 % when measured with matched resistive load at rated output
68.	Length of the cable between power amplifier and shaker	Minimum 10 meters
69.	Electrical wiring & Mains power	All tropicalized wiring suitable for 415VAC ±10%, 50Hz. 3Phase. Lower tapings for operation at 380VAC to be provided.
70.	Power amplifier acoustic noise level	≤ 80dBA at 1 meter distance from the amplifier.
71.	Protection	<p>Amplifier should have all standard safety interlocks and monitoring.</p> <p>a) Interlocks</p> <ol style="list-style-type: none"> 1) Amplifier Cooling 2) Vibrator Cooling 3) Vibrator Over travel 4) Field Failure 5) Module Over Current 6) Cabinet door open <p>b) Metering</p> <ol style="list-style-type: none"> 1) Amplifier Output Voltage 2) Amplifier Output Current 3) Field Voltage & Current <p>c) Indication System level</p> <ol style="list-style-type: none"> 1) Output over current. 2) Output over voltage. 3) Output short circuit. 4) Output DC fault. 5) Aux power supplies ON 6) Amplifier cooling failure 7) Amplifier over temperature 8) Vibrator cooling 9) Vibrator over travel 10) Vibrator cooling failure 11) Vibrator over temperature 12) Field failure 13) Supply low / high voltage 14) Cabinet door open 15) Emergency stop
72.	Power module	The power module should have independent cooling unit and RFI Filters.
COOLING SYSTEM		
73.	Type of Cooling	Forced air cooling blower with silencer.

S.No.	Parameters	SERC Requirements
74.	Capacity of the blower	Suitable to the shaker to remove the heat generated efficiently.
DIGITAL VIBRATION CONTROLLER		
75.	No of input & output channels	Min. 8 channels with possibility for future expansion. All simultaneous input. Min 2 output channels.
76.	Resolution for Input channels	Min 24 bit ADC (individual ADC for each input channel)
77.	Input Voltage range	± 10 V (p-p), with input impedance >500 k Ω
78.	Control signal checks	Input over load, open loop, loss of control signal etc.
79.	Input Sensitivity	Programmable: 10-1000mV/g
80.	Input Signal Type/Coupling	AC/DC/IEPE/ICP/ICP+TEDS/GND/Float
81.	TEDS Standards	IEEE 1451.4.2001 or latest version
82.	ICP Power Supply	1mA to 18mA
83.	Input Connector Type	BNC
84.	Signal to noise ratio (Input)	Minimum 100 dB
85.	Cross channel talk (Input)	< -100 dB
86.	Harmonic distortion (Input)	Less than 105 dB
87.	Frequency Range	Min DC to 4 kHz or better
88.	Output Channel Resolution	Minimum 24 bit Digital to Analog converter (DAC)
89.	Output Voltage Range	± 10 V (p-p)
90.	Output impedance	$<60\Omega$
91.	Harmonic distortion (output)	< -95 dB
92.	Continuous time domain data recording for Sine, Random, Classical shock & replaying Recorded time data should be exportable.	Required in software/ hardware and to be supplied by the bidder
93.	Vibration Controller Software	Professional type, latest version compatible with latest version of leading OS. License type: Perpetual validity.
94.	Vibration Controller Signal Types	<p>The controller should have following signals.</p> <ul style="list-style-type: none"> • Sine vibration • Random Vibration • Sine on Random (SoR) • Random on Random (RoR) • Sine and Random on Random (SRoR) • Classical Shock • Resonance Search, Track & Dwell • Field Data Replication • Shock Response Spectrum • Transient Time History (TTH) • Sine Tracking, Analysis and Generation • Self-Calibration Software
95.	Controller and control software version & year of launch.	The controller has to be latest model/ version.

Technical Specifications for Environmental/Climatic Chamber

S.No.	Parameters	SERC Requirements
GENERAL SPECIFICATIONS		
96.	Environmental/ Climatic chamber integrated with electrodynamic shaker	Required. It is the responsibility of the bidder to integrate climatic chamber with the electrodynamic shaker system, along with other components. Required interfacing elements such as Temperature membrane cloth barrier has to be listed and supplied.
97.	Parameters	Temperature, Humidity
98.	Test Space Dimensions & Volume	Dimension: Minimum 2000mm x 2000mm and the dimensions should be compatible with slip table and head expander. Volume: Min 4500 Liters
99.	Temperature Range	-70 to 180 deg C or better
100.	Temperature Fluctuation	$\leq \pm 1$ deg C
101.	Temperature Gradient	≤ 2 deg C
102.	Rate of change of heating	5 deg C per minute Compliance to IEC 60068-3-5 (or equivalent Indian Standard) without load
103.	Rate of change of cooling	5 deg C per minute Compliance to IEC 60068-3-5 (or equivalent Indian Standard) without load
104.	Humidity Range	10% to 95% RH or better
105.	Humidity fluctuation	1% to 3% RH or better
Test Space Details		
106.	Test Space	<ul style="list-style-type: none"> Pre-polished stainless-steel or equivalent TIG welded seams to ensure vapor tight enclosure. Double continuous seal rings of silicone rubber shall be mounted on a thermal breaker strip as the gasket to ensure complete sealing
107.	Insulation	Low 'k' factor, high density and non-hygroscopic nature. Asbestos free mineral fiber insulation.
108.	Thickness of insulated material	Minimum 75 mm
109.	Thickness of Inner & outer stainless-steel sheet	Minimum 1.2 mm
110.	Test Space Conditioning	<ul style="list-style-type: none"> The air circulation within the chamber shall be as close to laminar ensuring uniform airflow all across the workspace. The conditioning plenum shall be covered with a removable sheet providing easy access for maintenance
Heating & Cooling System		
111.	Heating System	<ul style="list-style-type: none"> Stainless steel sheathed air heaters to achieve the desired positive set temperature. The heaters shall be placed in the conditioning plenum such that there is no direct radiation from the heaters onto the test specimen. Heater outputs shall be controlled for superior stability and control in temperature using suitable relays and thyristors.

S.No.	Parameters	SERC Requirements
112.	Refrigeration System	<ul style="list-style-type: none"> • Anti-corrosive components should be used. • The compressor shall be mounted on anti-vibration pads. • Oil return system for protection against oil migration from the compressor, with sight glass to monitor oil level • The heat exchanger coils with Inner grooved copper tubes, finned for maximum heat transfer • The cooling in the chamber shall be accomplished by a cascade system (low stage, high stage). • All the refrigeration components shall be fixed in a separate compartment. The whole area shall be given adequate ventilation to avoid excess heat build-up inside the compartment.
113.	Type of Refrigerant	CFC free; Eco Friendly (Suitable refrigerant type to be mentioned, for high and low stage, in case of cascade refrigeration system)
114.	Compressor type	<ul style="list-style-type: none"> • Low Noise Type Suitable reciprocating low-temperature application compressors, preferably suction gas cooled, capable of operating in the entire temperature envelope. • Compressor should be with suitable oil type (like POE or equivalent) compatible with eco-friendly refrigerants.
115.	Condenser type	<ul style="list-style-type: none"> • Water cooled • Preferably stainless brazed plate heat exchanger construction with suitable working pressure for waterside and refrigerant side • All the accessories such as Chiller, pipelines or pump that are required for operating the condenser/chamber in the specified working range should be listed and supplied by the bidder
Humidity System		
116.	Humidification	<ul style="list-style-type: none"> • A low-pressure droplet free vapor boiler using direct vaporization system or equivalent. Reservoir shall be provided at side of chamber with PU tube quick connector & water level is automatically controlled through water-in solenoid valve.
117.	Dehumidification	<ul style="list-style-type: none"> • Refrigeration based de- humidification coils. • The desired level of lower humidity shall be achieved by maintaining the precise dew point temperature. • The output shall automatically be activated based on the set point as well as in ramp up mode after a low-temperature cycle.
118.	Climatic Range	Should cover +10 deg C to +85 deg C
119.	DM water tank with water level indicator	Required capacity need to be supplied
Instrumentation, Controller and Display Unit		
120.	Sensors	All required sensors for measurement and control of temperature, RH etc., should be of reputable make (like Vaisala or equivalent). Mention details
121.	Multichannel Temperature/Humidity data logging system	Required and to be supplied by the bidder. With minimum 9 channels.
122.	Remote access/control of the controller from the software for temperature/humidity inputs and changes	Required and to be supplied by the bidder.

S.No.	Parameters	SERC Requirements
123.	Display Unit	<ul style="list-style-type: none"> • Min 7" • WVGA 800 x 480 LCD 6.1 Display Type or better • Minimum 16M color touch screen type
124.	Instrumentation & Control	<ul style="list-style-type: none"> • Flame retardant cables shall be used for main and control unit, complying with International or equivalent Indian Standard. • USB provision for fast downloads, Data logging information, • Internal memory for data logging (> 50 GB) • Real Time trend graph to be viewed on the screen (temperature, Humidity versus time) • IP65 protected touch panel/touchscreen • PLC based system or equivalent of reputed make • High-end multi-loop PID controller for simultaneous control of temperature and humidity (like eurotherm or equivalent) • User friendly test programming and test sequence • Instant program profile preview in graphical format • Internal Fault alerts to be displayed on the monitor with HELP menu • Fault diagnostics with history • Low water indication for humidity system on the monitor • Power Resumption Modes: In case of a power failure, option of conditional restart based on temperature/ time or continuous • Chamber-shaker interface circuits and interlocks for combined operation.
125.	Test Profiles	<ul style="list-style-type: none"> • Temperature cycling: Possible to set different temperature profile/cycle. • Humidity Testing: Possible to set different humidity profile/cycle.
126.	Test Standards	<ul style="list-style-type: none"> • All relevant latest international standards like MIL, JSS, RTCA related to environmental testing and vibration testing. Example MIL-STD- 810F, MIL-STD-2164, JSS 55555, JSS 6625, RTCA-DO-160E etc., All equivalent Indian Standards as applicable.
Overall Features		
127.	Viewing Window	<ul style="list-style-type: none"> • A multi pane insulated window for inspection should be provided with minimum dimensions of 400mmx400mm • Halogen (or equivalent) lighting shall be provided to view the specimen under test.
128.	Front Door	<ul style="list-style-type: none"> • The door lock should be pull-action type latch clamp or equivalent. • The door shall be fitted with a limit switch and when ajar shall indicate "door open" in the controller and also be interlocked with the air circulation. • The door shall be fitted with heaters to avoid condensation during low temperature cycles
129.	Entry Ports / Port Holes	<ul style="list-style-type: none"> • 2 Nos with suitable sealing gasket/silicones plugs • 1 Nos on LHS, Min Diameter: 50 mm. • 1 Nos on RHS, Min Diameter: 100 mm.

S.No.	Parameters	SERC Requirements
130.	External Surface Finish	All exposed parts shall be painted with corrosion-resistant paint
131.	Conditioning Space	<ul style="list-style-type: none"> The conditioning space shall be isolated from the test space using a suitable ducting sheet, with easy removal for maintenance. All allied components such as the air circulation fan, heaters, evaporator, dehumidification and thermostat should be positioned within this space. There shall be no direct contact to any of these components from the test space
132.	Mounting	<ul style="list-style-type: none"> Chamber with conditioning units should be mounted on the rails, capable of manual or motorized movement in the horizontal space. Suitable installation for rails on the test floor should be done by the bidder. When not in use, the chamber with conditioning space should be movable to a safer distance (minimum 1m clear distance from slip table), away from the shaker/slip table area so as to enable the independent functionality of shaker/slip table.
133.	Trolley or guideways to the Environmental/ Climatic chamber, to move from head expander to slip table. Rigid stand with height adjustable feature/ provision, so that Environmental/ Climatic chamber can be mounted on head expander and on slip table.	<ul style="list-style-type: none"> Chamber / test space unit should have motorized movement for integration with armature/ slip table. Required and to be supplied by the bidder. Temperature membrane cloth barrier or equivalent should be provided for Armature/Head Expander integration and Slip Table integration bottom panel
134.	Overall Dimensions	<ul style="list-style-type: none"> Overall dimensions of the Environmental/ Climatic chamber unit, with its weight must be provided Required railing length and area for movement of overall chamber unit must be marked and provided.
135.	Input Power Supply	<ul style="list-style-type: none"> 415V \pm 10%, 3 Phase, 50 Hz
136.	Noise level	< 90 dB
137.	Safety and Maintenance Features	All necessary safeties for electrical, vacuum, hydraulic systems (if any) are to be incorporated to ensure protection to both system & operator against malfunction. The system must be designed for easy maintenance and accessibility to electrical & other components.
138.	Provision for independent operation of Environmental/ Climatic chamber	<ul style="list-style-type: none"> Bottom closure plate with dead load capacity of 200 kg (minimum) must be supplied for independent operation of the Environmental/ Climatic chamber Necessary accessories for independent operation shall be listed and supplied Minimum 4 numbers of racks with provision for height adjustment Each rack should have a bearing capacity of Minimum 100kgs

S.No.	Parameters	SERC Requirements
139.	Accessories & others	<ul style="list-style-type: none"> Adjustable and removable shelves O & M (Operation & Maintenance) manual. Detailed Service manual. Any special tools required for routine/ preventive & Breakdown maintenance. All Relevant Software with manuals for control, operation and maintenance. Necessary cables and connectors for interfacing with PC. Chamber calibration certificate and detailed procedure for recommended routine calibration. It is the responsibility of the supplier/ bidder/OEM to include all the essential accessories required for proper functioning of the Environmental/ Climatic chamber at CSIR-SERC. List of accessories to be given.
140.	Water lines, tubing, erection of lines, refrigeration lines/ tubing/ erection, electrical cable/cabling, erection of lines. Refrigeration tanks, any storage tanks. Trolley/Racks, Desiccant humidifier	Supply and installation in scope of the bidder.

Other Requirements

S.No	Parameters	SERC Requirements
	Computer Specifications	
141.	Preferred Make	Reputed Make
142.	Processor	Intel Core i910900X3.7GHz 2933MHz 10C165WCPU or better
143.	RAM	32GB nECC, DDR42933MHz memory support to 256GB; Total 8 DIMM Slots or better
144.	Hard Disk	1TBM.22280 PCIe NVMe TLC Solid State Drive &1TB SATA7200RPM HDD. Option for future expansion of additional up to 4SATA/SSD Hard drives or better
145.	Graphics Card	NVIDIA Quadro P2200 5 GB GDDRS dedicated or RadeonProW5500 or better
146.	Keyboard and Mouse	Minimum USB Keyboard and USB Optical Scroll Mouse of reputed make
147.	Audio	High-Definition Integrated Audio with internal Speaker
148.	Operating System	Windows Professional- latest version with MS Office preinstalled (Perpetual license validity). Bidders should ensure all the software are compatible with the controller provided
149.	Warranty for Desktop	1 year Minimum from the date of commission and installation of the whole system
150.	Display	Minimum 27 inch FHD Monitor IPS with LED backlight of reputed make
	Others	
151.	List of deliverables	List of deliverables to meet the functional requirements
152.	Utility requirements	Bidder should provide details of the utilities required for operation of the shaker system & Environmental/ Climatic chamber like power requirements, compressed air requirements, space requirements, overall dimension

S.No	Parameters	SERC Requirements												
153.	Documentation (Two sets of Hard Copies in English). Backup copies of all software's and O.S should be supplied in CDROM / pen drive.	<ul style="list-style-type: none"> • Operation Manual • Service Manual • Electrical wiring and mechanical schematics, dimensional drawings • Parts list: System specifications including subsystems, subsystems data sheets, interface requirements, calibration requirements and procedures. • Factory acceptance test results. 												
154.	Installation and commissioning	The bidder or their representative should take full responsibility for unloading, unpacking, installation, commissioning, carrying out site acceptance tests and handing over the system to CSIR-SERC. All components not explicitly listed but required for installation must be listed and included in the quotation, failing which they will be considered as included and must be supplied at no additional cost.												
155.	Integration of Electrodynamic shaker controller and the Environmental/ Climatic Chamber	The bidder or their representative should take full responsibility of integrating electrodynamic shaker controller with the Environmental/ Climatic chamber at CSIR-SERC. All the components not listed but required during the installation must be quoted.												
156.	Training at CSIR-SERC	Bidder should provide mandatory in-person training and demonstration on operation and routine maintenance of the system for Minimum 1 week to CSIR-SERC staff (Min. 15 people) as part of installation and commissioning.												
157.	Warranty for Electrodynamic shaker System, controller, Environmental/ Climatic chamber and their sub systems, accessories including its third party items/products.	One-year comprehensive on-site warranty for the complete system including all the equipment, sub systems etc. from the date of installation and acceptance of the system. All spare parts required for the trouble-free operation of the complete system during standard warranty period, needs to be supplied by the bidder, without extra cost. Fault should be resolved on-site within 2 working days of fault reporting.												
158.	Requirement of AMC for the period of 3 years after the expiry of warranty period.	AMC is also required for the maintenance of the complete system including hardware, software, third party items, components etc. after the expiry of warranty period.												
Note: The bidder should necessarily quote separately for the AMC as detailed below: But, CSIR-SERC will avail the service towards AMC at its discretion. The quoted charges towards AMC will be considered for the evaluation of the bids.														
<table border="1"> <thead> <tr> <th>Details of Years after the warranty period</th><th>Charges towards AMC</th><th>Remarks</th></tr> </thead> <tbody> <tr> <td>1st year</td><td></td><td></td></tr> <tr> <td>2nd year</td><td></td><td></td></tr> <tr> <td>3rd year</td><td></td><td></td></tr> </tbody> </table>			Details of Years after the warranty period	Charges towards AMC	Remarks	1 st year			2 nd year			3 rd year		
Details of Years after the warranty period	Charges towards AMC	Remarks												
1 st year														
2 nd year														
3 rd year														
159.	Spare parts and service support	The quoted system should have a minimum product life cycle of 15 years. The OEM has to inform the CSIR-SERC, one year before discontinuing the model/product. The OEM has to provide spare parts and service support for minimum 10 years from the date of discontinuing the model/system.												

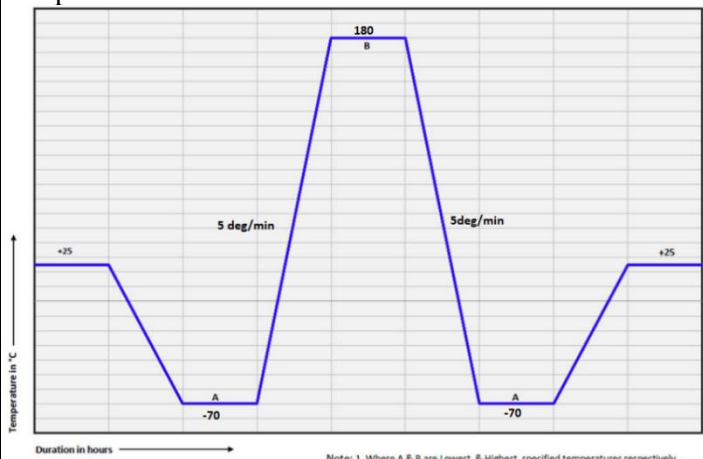
S.No	Parameters	SERC Requirements
160.	Testing and Acceptance at CSIR-SERC	Bidder shall conduct acceptance testing of the shaker and chamber system after installation at CSIR-SERC as per the criteria given in Annexure-A.
161.	Schematic drawing	Schematic diagram of quoted shaker and environmental/ climatic chamber assembly with insert configuration shall be provided along with the quote.
162.	Supplied software and hardware	All the listed software and hardware items that bidder quotes should be a proven catalogue product
163.	OEM authorization certificate	If the bidder is not OEM, the OEM authorization certificate has to be submitted along with bidding documents.
164.	Compliance Statement	The bidder should meet all the technical specifications to qualify the bid. The bidder has to furnish the values/units/parameters against each CSIR-SERC requirement in the compliance sheet. Offer without this information will be rejected without any further reference. Merely stating, “comply” does not constitute sufficient information. Exact numerical values are to be specified wherever applicable. Specified technical data should be supported by product catalogues, manuals, test procedures, and test plots etc, along with page number reference to the specified values. In case of insufficient technical data, the quote is liable to be rejected without further intimation. The bidder has to sign and stamp (company seal) on all the pages of compliance sheet.
165.	List of Installations	The bidder should submit a list of these installations giving details of commissioning & contact details along with the quote. Offer without this information is liable to be rejected without any further reference.

ANNEXURE-A: Criteria for testing and acceptance at CSIR-SERC

SI. No.	Parameters	SERC Requirements
	BARE	
1.	Resonance test (Pre-signature)	<p>1g Constant control.</p> <p>Frequency 5 Hz to 2500 Hz at 1 Oct/min. Control at center of armature.</p> <p>Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions</p> <p>Plot response accelerations for all three axes at locations.</p> <p>Plot Drive, O/P current, and O/P voltage.</p>
2.	Operation at Maximum rated parameter	<p>Max displacement, Max Velocity and Max Acceleration With frequency 5 Hz to 2500 Hz at sweep rate of 1 Oct/min, Multi point maximal Control at the armature top, Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions</p> <p>Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage. Envelope plot given below.</p> <div style="text-align: center;"> <p>Vibration Nomogram</p> </div>
3.	Resonance test (Post signature)	<p>1g Constant control.</p> <p>Frequency 5 Hz to 2500 Hz at 1 Oct/min. Control at center of armature.</p> <p>Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions</p> <p>Plot response accelerations for all three axes at locations.</p> <p>Plot Drive, O/P current, and O/P voltage.</p>
4.	Diaphragming and Cross axis response test	<p>5g Constant control from 5 to 2500 Hz with required slopes for Displacement and velocity, with sweep rate of 1 Oct/min.</p> <p>Control at center of armature.</p> <p>Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions</p> <p>Plot response accelerations for all three axes at locations.</p> <p>Plot Drive, O/P current, and O/P voltage.</p>
5.	Noise measurement on armature top	<p>With amplifier Set to 100% gain and zero input signal</p> <p>Measure accelerometer output at the armature top for 5 Hz to 20kHz analysis range. (Expected level < 0.2g)</p>

Sl. No.	Parameters	SERC Requirements
6.	Low g sine test	Constant input acceleration level of 0.3g Frequency 5 Hz to 2500 Hz at 1 Oct/min. Control at center of armature. Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
7.	Random rating test	(20-100Hz:6dB/Oct, 100-2500Hz: flat PSD to obtain the max rms acceleration) Multi point maximal Control at armature top Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
8.	Low g -rms random test	Flat PSD from 20 Hz to 2500 Hz 0.3grms test level. Control at center of armature. Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
9.	Shock Test	50 g, 10 ms half sine with 10% pre & post pulse control at armature center Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage
10.	Resonance test (Post signature)	1g Constant control. Frequency 5 Hz to 2500 Hz at 1 Oct/min. Control at center of armature. Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
11.	Wave form distortion tests	With input of 1g between 5 Hz to 100 Hz The THD should be ≤10% between 5Hz – 100Hz THD computation should be carried as per ISO
LOAD TEST (With payload mass 2 times weight of armature, to be arranged by Bidder)		
12.	Resonance test (Pre signature)	1g Constant control. Frequency 5 Hz to 2000 Hz at 1 Oct/min. Control at center of armature. Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
13.	Sine test	Max displacement, max velocity and max acceleration to achieve max sine force rating of the shaker. Multi point maximal Control Measurement at four points in outer most PCD/grid point 90 ⁰ apart along mutually perpendicular directions Frequency 5 Hz to 2000 Hz at 1 Oct/ min. Plot Drive, O/P current, and O/P voltage. Check waveform distortion of accelerometer output and Amplifier output using Digital data acquisition system. Acceleration limited to maximum force rating of shaker.
14.	Random test	20-100Hz: 6dB/Oct, 100-2000Hz: flat PSD for full random force rating. Multi-point maximal Control Measurement at four points in outer most PCD/grid point 90 ⁰ apart along

SI. No.	Parameters	SERC Requirements
		mutually perpendicular directions Plot acceleration, Drive, O/P current and O/P voltage.
15.	Endurance test	Shaker should run continuously for 1 hour with maximum displacement, maximum velocity, Acceleration limited to maximum force rating of shaker. Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions Multi point maximal Control. Plot acceleration, Drive, O/P current and O/P voltage.
16.	Resonance test (Post signature)	1g Constant control. Frequency 5 Hz to 2000 Hz at 1 Oct/min. Control at center of armature. Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
SLIP TABLE		
17.	Resonance test (Pre signature)	1g Constant control. Frequency 5 Hz to 2000 Hz at 1 Oct/min. Control at slip table end along shaker axis Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
18.	Operation at Maximum rated parameter	Max displacement, Max Velocity and Max Acceleration with frequency 5 Hz to 2000 Hz at sweep rate of 1 Oct/min. Control at slip table end along shaker axis Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
19.	Cross-axis response test	5g Constant control from 5 to 2000 Hz with required slopes for Displacement and velocity Control at slip table end along shaker axis. Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions Plot response accelerations for all three axes at locations.
20.	Resonance test (Post signature)	1g Constant control. Frequency 5 Hz to 2000 Hz at 1 Oct/min. Control at slip table end along shaker axis. Measurement at four points in outer most PCD/grid point 90° apart along mutually perpendicular directions Plot response accelerations for all three axes at locations. Plot Drive, O/P current, and O/P voltage.
POWER AMPLIFIER		
21.	Noise measurement	Bare table With amplifier Set to 100% gain and zero input signal Measurement of output voltage and current with input shorted and amplifier set to 100% gain
22.	Wave form distortion tests	Test-A With an acceleration of 1g on armature bare table top between 5 Hz to 100Hz record output voltage and current wave forms. Test-B Record output voltage and current waveforms for <ul style="list-style-type: none"> Maximum displacement sine dwell

SI. No.	Parameters	SERC Requirements
		<ul style="list-style-type: none"> Maximum velocity sine dwell Maximum acceleration sine dwell
23.	Shaker system interlocks	Over travel limit ; Cooling unit flow switch; Temperature switch; Field power supply; Abort switches
ENVIRONMENTAL/ CLIMATIC CHAMBER		
24.	Tolerance	Check has to be done to know whether the Environmental/ Climatic chamber achieves and maintains the required condition within specified tolerance limits
25.	Humidity and temp. measurement	-70°C to +180°C & 10% to 95% RH
26.	Typical load test	Calibration of the chamber with a typical load
27.	Repeatability	Demonstrate repeatability of conditions (temperature and humidity) in the chamber during the test
28.	Test profile	<p>Replicate acceptance test profile for high and low-temperature test as given below; Replicate profile for combined temperature and Humidity test as per the specifications</p>  <p>Notes:</p> <ol style="list-style-type: none"> Where A & B are Lowest & Highest specified temperatures respectively. Ramp rates will be as mentioned in Scope of Supply. Dwell or soak time is limited to 1 hr. Number of cycles are limited to 2.

4.3 **Scope of Supply**

Supply, Installation, Commissioning, Integration, Training and Documentation of Electrodynamic Shaker System with Climatic Chamber

4.4 **Inspection & Tests**

4.4.1 **General**

01. The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and related Services as are specified here.
02. The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination.
03. Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
04. Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
05. The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
06. The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
07. With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent, if any, shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after customs clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/ Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.

08. Before the goods and equipments are taken over by the Purchaser, the Supplier shall supply operation and maintenance Manuals together with Drawings of the goods and equipments built. These shall be in such details as will enable the Purchase to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
09. The Manuals and Drawings shall be in the ruling language (English) and in such form and numbers as stated in the Contract.
10. Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purposes of taking over until such Manuals and Drawing have been supplied to the Purchaser.
11. On successful completion of acceptability test, receipt of deliverables, etc., and after the Purchaser is satisfied with the working of the equipment, the acceptance certificate signed by the Supplier and the representative of the Purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the equipment.

ACCEPTANCE TERMS

12. Specifications should be strictly adhered to without compromise. At the time of supply, all the parts supplied should be the latest one i.e. should there be a new and improved version of the part(s) developed after the quote was furnished the improved versions should only be supplied and without any additional cost to the buyer. Parts that have become obsolete in the rest of the world (USA, Europe, Japan) should not be supplied here. Proper documents should be furnished to support this.
13. A simple step-by-step operating procedure (max 2 pages) which will be kept near the equipment indicating the precautions for dos and donts for safe and correct use of the entire equipment including software should be provided to help extend the life of the system.
14. With respect to specific maintenance and handling procedures including during operation as well as idling periods should be provided.
15. The service manual is to be provided.

4.4.2 Pre-despatch Inspection by CSIR-SERC

Not Applicable

4.4.3 Manufacturer's Inspection Certificate

After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser reserves the options to be present at the supplier's premises during such inspection and testing.

4.4.4 Third Party Inspection

Not Applicable

4.4.5 Acceptance Test

The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at Purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur.

The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified. In the event of the ordered item failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which, the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

Successful conduct and conclusion of the acceptance test for the installed goods and equipments shall also be the responsibility and at the cost of the Supplier.

4.5 Training

Bidder should provide mandatory in-person training and demonstration on operation and routine maintenance of the system for at least 1 week to CSIR-SERC staff (Min. 15 people) as part of installation and commissioning.

4.6 Standards

Not Applicable

4.7 Warranty

One-year comprehensive on-site warranty for the complete system including all the equipment, sub systems etc. from the date of installation and acceptance of the system. All spare parts required for the trouble-free

operation of the complete system during standard warranty period, needs to be supplied by the bidder, without extra cost. Fault should be resolved on-site within 2 working days of fault reporting.

4.8 **Annual Maintenance Contract (AMC)**

The supplier has to quote non-comprehensive AMC for 3 years for the maintenance of the complete system including hardware, software, third party items, components etc. after the expiry of warranty period detailing the number of breakdown and preventive maintenance visit, exclusions if any and other terms and conditions. But, CSIR-SERC will avail the service towards AMC at its discretion. The quoted charges towards AMC will be considered for the evaluation of the bids.

4.9 **Incidental Services**

Not Applicable

CHAPTER 5

PRICE SCHEDULE FORMS

Kindly follow instructions hereunder to fill Bill of Quantities (BoQ). Any discrepancy in following instructions would lead to rejection of the bid.

Instructions:-

- On Opening the BOQ (Bill of Quantity) “Please Enable Macros to View BoQ Information”. Please go to **enable editing** just below the task bar.
- As macros have to be enabled please click on **enable content**.

BoQ1

Kindly change the currency as per your requirement from the drop-down list of the column L - **Quoted currency in INR / (USD, EURO, JPY, CHF) currency**. Bidders are requested to fill columns marked in blue only i.e i) **Item Code / Make (Column C)** , ii) **Item Cost (Basic Price (BP)) in Quoted Currency (Column M)**, iii) **Discount as Lump sum on BP in Quoted Currency (Column O)**, iv) **Packing + Handling + Doc + Inland Freight as lump sum in the quoted currency (Column S)**, v) **Insurance + Freight as Lump sum in Quoted Currency (Column U)**, vi) **Installation and commissioning charges as Lump sum in Quoted Currency (Column V)** vii) **Agency Commission (AC) on Total Ex-Works for Indian Agents of Foreign firms, if any in quoted currency (Column Y)**

Please note that agency commission is to be filled if applicable for only foreign procurements and the % filled would be deducted from the Ex-Works value and paid in Indian currency. The agency commission is not being used for any calculation in the BoQ Sheet while preparing the comparative.

For bidders quoting in foreign currency Customs duty @ 5.5% would be loaded with 2% towards transportation and customs clearance etc., to arrive at landing cost at CSIR-SERC (Please refer to Instructions to Bidders – Point 1.31.1 – Evaluation and Comparison of Bids)

Note: The bidder may fill in the appropriate Price Schedule Form and enclose with the bidding documents as per Clause 1.10 and 1.18.3 of the bidding documents.

CHAPTER 6

CONTRACT FORM

Contract No. _____ Date: _____

THIS CONTRACT AGREEMENT is made

the *[insert: number]* day of *[insert: month]*, *[insert: year]*.

BETWEEN

- (1) The Director, CSIR-Structural Engineering Research Centre, Taramani, Chennai – 600113, a constituent Laboratory of Council of Scientific and Industrial Research registered under the Societies Registration Act 1860 of the Government of India having its registered office at 2, Rafi Marg, New Delhi-110001, India represented by Controller of Stores and Purchase, CSIR-SERC, Taramani, Chennai, INDIA, (hereinafter called “the Purchaser”), and
- (2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called “the Supplier”).

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in the Contract currency(ies)]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

01. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

02. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

- (a) This Contract Agreement
- (b) Special Conditions of Contract
- (c) General Conditions of Contract

- (d) Technical Requirements (including Schedule of Requirements and Technical Specifications)
 - (e) The Supplier's Bid and original Price Schedules
 - (f) The Purchaser's Notification of Award
 - (g) *[Add here any other document(s)]*
03. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
04. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
05. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Union of India on the day, month and year indicated above.

For and on behalf of the Council of Scientific & Industrial Research

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

CHAPTER 7

OTHER FORMS TO BE ENCLOSED WITH TECHNICAL BID

Table of Contents

SL. NO.	NAME	ANNEXURE
1	Bidder Information Form (to be enclosed with the technical bid)	I
2	Declaration by the Bidder for Code of Integrity & conflict of interest (to be enclosed with the technical bid)	II
3	Manufacturers' Authorization Form (to be enclosed with the technical bid)	III
4	Bid Security Form (to be enclosed with the technical bid)	IV
5	Bid Securing Declaration (to be enclosed with the technical bid)	V
6	Performance statement Form (to be enclosed with the technical bid)	VI
7	Technical Compliance Statement Form/Deviation Statement Form (to be enclosed with the technical bid)	VII
8	Pre-installation requirement (to be enclosed with the technical bid)	VIII
9	Service support details (to be enclosed with the technical bid)	IX
10	Bid Form (to be enclosed with the price bid)	X
11	Certificate of Local Content (to be enclosed with the technical bid)	XI
12	Certificate of Price break up of Local Content (to be enclosed with the price bid)	XII
13	Performance Security Form	XIII
14	Acceptance Certificate Form	XIV
15	Integrity Pact - to be executed on Company's Letter head duly stamped and signed (to be enclosed with the technical bid)	XV
16	Self-certification with regard to the bidder land border with India (to be enclosed with the technical bid)	XVI
17	Terms & Conditions	XVII
18	Tender Acceptance Letter	XVIII
19	Bank details of the Bidder/Supplier	XIX
20	CSIR-SERC Online Bank Details	XX

ANNEXURE I

BIDDER INFORMATION FORM

- (a) *[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm]*

Date: *[insert date (as day, month and year) of Bid Submission]*

Tender No.: *[insert number from Invitation for bids]*

01.	Bidder's Legal Name <i>[insert Bidder's legal name]</i>
02.	In case of JV, legal name of each party: <i>[insert legal name of each party in JV]</i>
03.	Bidder's actual or intended Country of Registration: <i>[insert actual or intended Country of Registration]</i>
04.	Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
05.	Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration]</i>
06.	Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
07.	Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> Articles of Incorporation or Registration of firm named in 1, above.

Signature of Bidder _____

Name _____

Business Address _____

ANNEXURE – II

Format for declaration by the Bidder for Code of Integrity & conflict of interest
(On the Letter Head of the Bidder)

Ref.No: _____

Date: _____

To,

(Name & address of the Purchaser)

Sir,

With reference to your Tender No. _____ dated _____ I/We hereby declare that we shall abide by the Code of Integrity for Public Procurement as mentioned under Para 1.3.0 of ITB of your Tender document and have no conflict of interest.

The details of any previous transgressions of the code of integrity with any entity in any country during the last three years or of being debarred by any other Procuring Entity are as under:

- a.
- b.
- c.

We undertake that we shall be liable for any punitive action in case of transgression/ contravention of this code.

Thanking you,

Yours sincerely,

Signature
(Name of the Authorized
Signatory
Company)

ANNEXURE III

MANUFACTURERS' AUTHORIZATION FORM

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.]

Date: *[insert date (as day, month and year) of Bid Submission]*

Tender No.: *[insert number from Invitation For Bids]*

To: *[insert complete name and address of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 2.21 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

ANNEXURE IV
BID SECURITY FORM

Whereas _____ (hereinafter called the tenderer")
has submitted their offer dated _____ for the supply of _____ (hereinafter called the tenderer")

Against the purchaser's tender enquiry

No. _____

KNOW ALL MEN by these presents that WE _____ of _____ having our registered office at _____ are bound unto _____ (hereinafter called the "Purchaser")

In the sum of _____

For which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS OF THIS OBLIGATION ARE:

- (1) If the tenderer withdraws or amends or modifies or impairs or derogates from the Tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
- (3) If the tenderer fails to furnish the Performance Security for the due Performance of the contract.
- (4) Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)

Name and designation of the officer

Seal, name & address of the Bank and address of the Branch

Note: Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

ANNEXURE V

BID-SECURING DECLARATION FORM

Date: _____

Ref No. _____

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown) in the capacity of (insert legal capacity of person signing the Bid Securing Declaration).

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of : (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

ANNEXURE VI

PERFORMANCE STATEMENT FORM

(For a period of last 3 years)

Name of the Firm.....

Order Placed by (full address of Purchaser)	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of completion of deliver as per contract	Date of actual completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipmen t been installed satisfacto ry? (Attach a certificate from the purchaser / Consignee)	Contact person along with Tel No., FAX No. and e-mail address

Signature and Seal of the manufacturer/Bidder

Place :

Date :

ANNEXURE - VII

TECHNICAL COMPLIANCE STATEMENT FORM/DEVIATION STATEMENT FORM

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
1	Shaker Type	Electro Dynamic			
2	Sine Force Rating (peak)	≥ 6800 kgf			
3	Random Force Rating (rms.)	≥ 6800 kgf			
4	Shock force	≥ 14000 kgf			
5	Displacement (continuous)	≥ 75 mm (peak to peak, sine)			
6	Velocity of bare table	≥ 1.75 m/sec. peak (sine) ≥ 2 m/sec. peak (shock)			
7	Static Payload support	≥ 800 kg			
8	Max. runtime	24 hours continuous at 80% efficiency			
9	Frequency range	Range Min: ≤ 5 Hz Range Max: ≥ 2500 Hz			
10	Sine acceleration (peak) Rated	≥ 75 g			
11	Random acceleration (rms) Rated	≥ 75 grms			
12	Type of Cooling	Air-cooled			
13	Total Armature moving mass	≤ 80 kg			
14	Total Armature Diameter	≤ 500 mm			
15	Fundamental Armature Resonance Frequency	> 1600 Hz			
16	Armature Power Requirements (based on current drawn to run shaker at full capacity in sine rating)	≥ 80 kVA			
17	Suspension Cross Axial Stiffness	≥ 15 kN/mm			
18	Suspension Rotational Stiffness	≥ 150 kNm/rad			
19	Stray Magnetic Field	≤ 1.5 mT			
20	Armature Inserts	Metric coarse threaded, M8 or M10 or M12 type with center, 3", 6", 12", PCDs. Inserts should be equally spaced.			
21	Auto centering of armature, over travel interlock and geared shaker rotation	Auto centering of the armature for the rated static load should be provided; Armature over travel interlock should trip the power amplifier; Easy rotation of the shaker to 90 deg using manual effort rotation or better.			
22	Armature Suspension	Rolling strut assembly or copper beryllium or carbon-carbon flexures or better.			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
23	Air Isolation Trunnion and armature guidance	Required and to be supplied by the bidder			
24	Shaker Cooling unit	The shaker should be provided with air blower with silencer of suitable capacity. The acoustic noise during the cooling unit operation should not exceed 120 dBA at a distance of 1 meter.			
SLIP TABLE					
25	Type	<ul style="list-style-type: none"> Common base type: Shaker trunnion and guiding system and slip table, mounted on a common steel structure providing permanent alignment with shaker and slip table Combo Base Isolation: The shaker unit along with common base should be isolated from floor by the use of air mounts of appropriate capacity. Oil film guided type or equivalent Slip plate supported by granite base with oil film and hydrostatic journal bearings or equivalent. 			
26	Slip Table Dimension & Material	Minimum 1500mm (L) x 1500mm (W) x 50mm (Thk) Material: Magnesium or equivalent			
27	Slip table mass	<600kg			
28	No of hydrostatic bearings	Minimum 4			
29	Surface Finish	Roughness average ≤ 0.5 micron			
30	Pitch	350 -m or better			
31	Yaw	80 N-m or better			
32	Roll	280 -m or better			
33	Flatness	≤ 0.2 mm per meter			
34	Maximum Stroke	Minimum 75 mm			
35	Maximum load on the table	≥ 10000 kg			
36	Useful frequency range of shaker combined with slip table	Range Min: ≤ 5 Hz Range Max: ≥ 2000 Hz			
37	Bare Table resonance	≥ 700 Hz (nominal)			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
38	Mounting hole pattern	To be provided. Should be with standard type and grid hole pattern with SS inserts.			
39	Driver Bar	<ul style="list-style-type: none"> • Tension bolt type • All welded construction 			
40	Thermal barrier	Thermal barrier for the slip table is required and to be supplied by the bidder. Thermal barrier material should withstand -80 deg C to +200 deg C. Thermal barrier mass should be ≤ 400 kg			
HYDRAULIC POWER SUPPLY					
41	Hydraulic Power Pack (Reputed Make)	Suitable for the bearing slip table.			
42	Sound Pressure level of Hydraulic Power Pack	≤ 100 dB A at a distance of 1m from the outer periphery of the HPP.			
43	Hydraulic Power Supply	Suitable for the slip table operating at 380-480V AC, 50Hz, 3 Phase			
44	Motor	Fully enclosed, fan-cooled Minimum 1 kW; 50 Hz			
45	Pressure pump	Type Gear; Operating pressure ≥ 150 bar Delivery rate 50 Hz: ≥ 2 liters/min @ 150 bar			
46	Filtration	≤ 15 microns			
47	Oil tank capacity	≥ 30 liters			
HEAD EXPANDER					
48	Type	Table with additional frame for extra load support			
49	Head expander table dimensions	$\geq 1500\text{mm} \times 1500\text{mm}$ with suitable thickness			
50	Head Expander table material	Magnesium alloy or equivalent with standard type and grid hole pattern with SS inserts			
51	Head Expander table mass	$\leq 400\text{kg}$			
52	Useful frequency range	5Hz to 2000Hz or better			
53	Top face flatness tolerance	≤ 0.2 mm/m			
54	Thermal barrier	Thermal barrier for the head expander is required and to be supplied by the bidder. Material should withstand -80 deg C to +200 deg C			
AMPLIFIER					
55	Type of Amplifier	<ul style="list-style-type: none"> • IGBT or S- 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		MOSFET based switching amplifier of Class D • Modular in construction and scalable architecture			
56	Amplifier Capacity	a) Total capacity shall be suitable to run the shaker at the maximum rated capacity for sine and shock. b) Number of power modules to be specified.			
57	Full Power Bandwidth	Range Min: ≤ 20 Hz Range Max : ≥ 2000 Hz			
58	Frequency response	± 1.5 dB 20 Hz to 2500 Hz or better			
59	Power Range	Minimum 80 kVA. Should be compatible with shaker for sine and shock rating			
60	Rated Output Voltage	100 Vrms Should be compatible with shaker			
61	Input Sensitivity	1 Vrms input for 100Vrms output. Compatible with all reputed make controllers.			
62	Amplifier Efficiency	$> 90\%$			
63	Signal to Noise Ratio	> 70 dB			
64	Input Impedance	≥ 10 k Ω			
65	Switching Frequency	> 60 kHz			
66	Modulation range	DC to 10 kHz			
67	Total Harmonic Distortion	$< 1\%$ when measured with matched resistive load at rated output			
68	Length of the cable between power amplifier and shaker	Minimum 10 meters			
69	Electrical wiring & Mains power	All tropicalized wiring suitable for 415VAC $\pm 10\%$, 50Hz. 3Phase. Lower tapings for operation at 380VAC to be provided.			
70	Power amplifier acoustic noise level	≤ 80 dBA at 1 meter distance from the amplifier.			
71	Protection	Amplifier should have all standard safety interlocks and monitoring. d) Interlocks 7) Amplifier Cooling 8) Vibrator Cooling			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		9) Vibrator Over travel 10) Field Failure 11) Module Over Current 12) Cabinet door open e) Metering 4) Amplifier Output Voltage 5) Amplifier Output Current 6) Field Voltage & Current f) Indication System level 16) Output over current. 17) Output over voltage. 18) Output short circuit. 19) Output DC fault. 20) Aux power supplies ON 21) Amplifier cooling failure 22) Amplifier over temperature 23) Vibrator cooling 24) Vibrator over travel 25) Vibrator cooling failure 26) Vibrator over temperature 27) Field failure 28) Supply low / high voltage 29) Cabinet door open 30) Emergency stop			
72	Power module	The power module should have independent cooling unit and RFI Filters.			
COOLING SYSTEM					
73	Type of Cooling	Forced air cooling blower with silencer.			
74	Capacity of the blower	Suitable to the shaker to remove the heat generated efficiently.			
DIGITAL VIBRATION CONTROLLER					
75	No of input & output channels	Min. 8 channels with possibility for future expansion. All simultaneous input. Min 2 output channels.			
76	Resolution for Input channels	Min 24 bit ADC (individual ADC for each input channel)			
77	Input Voltage range	± 10 V (p-p), with input impedance >500 k Ω			
78	Control signal checks	Input over load, open loop, loss of control signal etc.			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
79	Input Sensitivity	Programmable: 10-1000mV/g			
80	Input Signal Type/Coupling	AC/DC/IEPE/ICP/ICP+TEDS/GND/Float			
81	TEDS Standards	IEEE 1451.4.2001 or latest version			
82	ICP Power Supply	1mA to 18mA			
83	Input Connector Type	BNC			
84	Signal to noise ratio (Input)	Minimum 100 dB			
85	Cross channel talk (Input)	< -100dB			
86	Harmonic distortion (Input)	Less than 105 dB			
87	Frequency Range	Min DC to 4 kHz or better			
88	Output Channel Resolution	Minimum 24 bit Digital to Analog converter (DAC)			
89	Output Voltage Range	± 10 V (p-p)			
90	Output impedance	<60Ω			
91	Harmonic distortion (output)	< -95 dB			
92	Continuous time domain data recording for Sine, Random, Classical shock & replaying Recorded time data should be exportable.	Required in software/ hardware and to be supplied by the bidder			
93	Vibration Controller Software	Professional type, latest version compatible with latest version of leading OS. License type: Perpetual validity.			
94	Vibration Controller Signal Types	<p>The controller should have following signals.</p> <ul style="list-style-type: none"> • Sine vibration • Random Vibration • Sine on Random (SoR) • Random on Random (RoR) • Sine and Random on Random (SRoR) • Classical Shock • Resonance Search, Track & Dwell • Field Data Replication • Shock Response Spectrum • Transient Time History (TTH) • Sine Tracking, Analysis and Generation • Self-Calibration Software 			
95	Controller and control software version & year of launch.	The controller has to be latest model/ version.			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
GENERAL SPECIFICATIONS FOR ENVIRONMENTAL/CLIMATIC CHAMBER					
96	Environmental/ Climatic chamber integrated with electrodynamic shaker	Required. It is the responsibility of the bidder to integrate climatic chamber with the electrodynamic shaker system, along with other components. Required interfacing elements such as Temperature membrane cloth barrier has to be listed and supplied.			
97	Parameters	Temperature, Humidity			
98	Test Space Dimensions & Volume	Dimension: Minimum 2000mm x 2000mm and the dimensions should be compatible with slip table and head expander. Volume: Min 4500 Liters			
99	Temperature Range	-70 to 180 deg C or better			
100	Temperature Fluctuation	$\leq \pm 1$ deg C			
101	Temperature Gradient	≤ 2 deg C			
102	Rate of change of heating	5 deg C per minute Compliance to IEC 60068-3-5 (or equivalent Indian Standard) without load			
103	Rate of change of cooling	5 deg C per minute Compliance to IEC 60068-3-5 (or equivalent Indian Standard) without load			
104	Humidity Range	10% to 95% RH or better			
105	Humidity fluctuation	1% to 3% RH or better			
Test Space Details					
106	Test Space	<ul style="list-style-type: none"> Pre-polished stainless-steel or equivalent TIG welded seams to ensure vapor tight enclosure. Double continuous seal rings of silicone rubber shall be mounted on a thermal breaker strip as the gasket to ensure complete sealing 			
107	Insulation	Low 'k' factor, high density and non-hygroscopic nature. Asbestos free mineral fiber insulation.			
108	Thickness of insulated material	Minimum 75 mm			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
109	Thickness of Inner & outer stainless-steel sheet	Minimum 1.2 mm			
110	Test Space Conditioning	<ul style="list-style-type: none"> The air circulation within the chamber shall be as close to laminar ensuring uniform airflow all across the workspace. The conditioning plenum shall be covered with a removable sheet providing easy access for maintenance 			
Heating & Cooling System					
111	Heating System	<ul style="list-style-type: none"> Stainless steel sheathed air heaters to achieve the desired positive set temperature. The heaters shall be placed in the conditioning plenum such that there is no direct radiation from the heaters onto the test specimen. Heater outputs shall be controlled for superior stability and control in temperature using suitable relays and thyristors. 			
112	Refrigeration System	<ul style="list-style-type: none"> Anti-corrosive components should be used. The compressor shall be mounted on anti-vibration pads. Oil return system for protection against oil migration from the compressor, with sight glass to monitor oil level The heat exchanger coils with Inner grooved copper tubes, finned for maximum heat transfer The cooling in the chamber shall be accomplished by a cascade system (low 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		stage, high stage). <ul style="list-style-type: none"> All the refrigeration components shall be fixed in a separate compartment. The whole area shall be given adequate ventilation to avoid excess heat build-up inside the compartment. 			
113	Type of Refrigerant	CFC free; Eco Friendly (Suitable refrigerant type to be mentioned, for high and low stage, in case of cascade refrigeration system)			
114	Compressor type	<ul style="list-style-type: none"> Low Noise Type Suitable reciprocating low-temperature application compressors, preferably suction gas cooled, capable of operating in the entire temperature envelope. Compressor should be with suitable oil type (like POE or equivalent) compatible with eco-friendly refrigerants. 			
115	Condenser type	<ul style="list-style-type: none"> Water cooled Preferably stainless brazed plate heat exchanger construction with suitable working pressure for waterside and refrigerant side All the accessories such as Chiller, pipelines or pump that are required for operating the condenser/chamber in the specified working range should be listed and supplied by the bidder			
Humidity System					
116	Humidification	<ul style="list-style-type: none"> A low-pressure droplet free vapor boiler using direct vaporization system or equivalent. Reservoir shall be provided at side of chamber with PU tube quick connector & water level is automatically controlled through water- 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		in solenoid valve.			
117	Dehumidification	<ul style="list-style-type: none"> Refrigeration based de- humidification coils. The desired level of lower humidity shall be achieved by maintaining the precise dew point temperature. The output shall automatically be activated based on the set point as well as in ramp up mode after a low-temperature cycle. 			
118	Climatic Range	Should cover +10 deg C to +85 deg C			
119	DM water tank with water level indicator	Required capacity need to be supplied			
Instrumentation, Controller and Display Unit					
120	Sensors	All required sensors for measurement and control of temperature, RH etc., should be of reputable make (like Vaisala or equivalent). Mention details			
121	Multichannel Temperature/Humidity data logging system	Required and to be supplied by the bidder. With minimum 9 channels.			
122	Remote access/control of the controller from the software for temperature/humidity inputs and changes	Required and to be supplied by the bidder.			
123	Display Unit	<ul style="list-style-type: none"> Min 7" WVGA 800 x 480 LCD 6.1 Display Type or better Minimum 16M color touch screen type			
124	Instrumentation & Control	<ul style="list-style-type: none"> Flame retardant cables shall be used for main and control unit, complying with International or equivalent Indian Standard. USB provision for fast downloads, Data logging information, Internal memory for data logging (> 50 GB) Real Time trend 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		<p>graph to be viewed on the screen (temperature, Humidity versus time)</p> <ul style="list-style-type: none"> • IP65 protected touch panel/touchscreen • PLC based system or equivalent of reputed make • High-end multi-loop PID controller for simultaneous control of temperature and humidity (like eurotherm or equivalent) • User friendly test programming and test sequence • Instant program profile preview in graphical format • Internal Fault alerts to be displayed on the monitor with HELP menu • Fault diagnostics with history • Low water indication for humidity system on the monitor • Power Resumption Modes: In case of a power failure, option of conditional restart based on temperature/ time or continuous <p>Chamber-shaker interface circuits and interlocks for combined operation.</p>			
125	Test Profiles	<ul style="list-style-type: none"> • Temperature cycling: Possible to set different temperature profile/cycle. • Humidity Testing: Possible to set different humidity profile/cycle. 			
126	Test Standards	<ul style="list-style-type: none"> • All relevant latest international standards like MIL, JSS, RTCA related to environmental testing and vibration testing. Example MIL-STD- 810F, MIL-STD- 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		2164, JSS 55555, JSS 6625, RTCA-DO-160E etc., All equivalent Indian Standards as applicable.			
	Overall Features				
127	Viewing Window	<ul style="list-style-type: none"> A multi pane insulated window for inspection should be provided with minimum dimensions of 400mmx400mm Halogen (or equivalent) lighting shall be provided to view the specimen under test. 			
128	Front Door	<ul style="list-style-type: none"> The door lock should be pull-action type latch clamp or equivalent. The door shall be fitted with a limit switch and when ajar shall indicate "door open" in the controller and also be interlocked with the air circulation. The door shall be fitted with heaters to avoid condensation during low temperature cycles 			
129	Entry Ports / Port Holes	<ul style="list-style-type: none"> 2 Nos with suitable sealing gasket/silicones plugs 1 Nos on LHS, Min Diameter: 50 mm. 1 Nos on RHS, Min Diameter: 100 mm. 			
130	External Surface Finish	All exposed parts shall be painted with corrosion-resistant paint			
131	Conditioning Space	<ul style="list-style-type: none"> The conditioning space shall be isolated from the test space using a suitable ducting sheet, with easy removal for maintenance. All allied components such as the air circulation fan, heaters, evaporator, dehumidification and thermostat should be positioned within this space. There shall be no 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		direct contact to any of these components from the test space			
132	Mounting	<ul style="list-style-type: none"> Chamber with conditioning units should be mounted on the rails, capable of manual or motorized movement in the horizontal space. Suitable installation for rails on the test floor should be done by the bidder. When not in use, the chamber with conditioning space should be movable to a safer distance (minimum 1m clear distance from slip table), away from the shaker/slip table area so as to enable the independent functionality of shaker/slip table. 			
133	Trolley or guideways to the Environmental/ Climatic chamber, to move from head expander to slip table. Rigid stand with height adjustable feature/ provision, so that Environmental/ Climatic chamber can be mounted on head expander and on slip table.	<ul style="list-style-type: none"> Chamber / test space unit should have motorized movement for integration with armature/ slip table. Required and to be supplied by the bidder. Temperature membrane cloth barrier or equivalent should be provided for Armature/Head Expander integration and Slip Table integration bottom panel 			
134	Overall Dimensions	<ul style="list-style-type: none"> Overall dimensions of the Environmental/ Climatic chamber unit, with its weight must be provided Required railing length and area for movement of overall chamber unit must be marked and provided. 			
135	Input Power Supply	<ul style="list-style-type: none"> 415V \pm 10%, 3 Phase, 50 Hz 			
136	Noise level	< 90 dB			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
137	Safety and Maintenance Features	All necessary safeties for electrical, vacuum, hydraulic systems (if any) are to be incorporated to ensure protection to both system & operator against malfunction. The system must be designed for easy maintenance and accessibility to electrical & other components.			
138	Provision for independent operation of Environmental/ Climatic chamber	<ul style="list-style-type: none"> Bottom closure plate with dead load capacity of 200 kg (minimum) must be supplied for independent operation of the Environmental/ Climatic chamber Necessary accessories for independent operation shall be listed and supplied Minimum 4 numbers of racks with provision for height adjustment Each rack should have a bearing capacity of Minimum 100kgs 			
139	Accessories & others	<ul style="list-style-type: none"> Adjustable and removable shelves O & M (Operation & Maintenance) manual. Detailed Service manual. Any special tools required for routine/ preventive & Breakdown maintenance. All Relevant Software with manuals for control, operation and maintenance. Necessary cables and connectors for interfacing with PC. Chamber calibration certificate and detailed procedure for recommended routine calibration. It is the responsibility of the supplier/ bidder/OEM to include all the essential 			

S.No.	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		accessories required for proper functioning of the Environmental/ Climatic chamber at CSIR-SERC. List of accessories to be given.			
140	Water lines, tubing, erection of lines, refrigeration lines/ tubing/ erection, electrical cable/cabling, erection of lines. Refrigeration tanks, any storage tanks. Trolley/Racks, Desiccant humidifier	Supply and installation in scope of the bidder.			

Other Requirements

S.No	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
	Computer Specifications				
141	Preferred Make	Reputed Make			
142	Processor	Intel Core i910900X3.7GHz 2933MHz 10C165WCPU or better			
143	RAM	32GB nECC, DDR42933MHz memory support to 256GB; Total 8 DIMM Slots or better			
144	Hard Disk	1TBM.22280 PCIe NVMe TLC Solid State Drive & 1TB SATA7200RPM HDD. Option for future expansion of additional up to 4SATA/SSD Hard drives or better			
145	Graphics Card	NVIDIA Quadro P2200 5 GB GDDRS dedicated or RadeonProW5500 or better			
146	Keyboard and Mouse	Minimum USB Keyboard and USB Optical Scroll Mouse of reputed make			
147	Audio	High-Definition Integrated Audio with internal Speaker			
148	Operating System	Windows Professional-latest version with MS Office preinstalled (Perpetual license validity). Bidders should ensure all the software are compatible with the controller provided			
149	Warranty for Desktop	1 year Minimum from the			

S.No	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		date of commission and installation of the whole system			
150	Display	Minimum 27 inch FHD Monitor IPS with LED backlight of reputed make			
	Others				
151	List of deliverables	List of deliverables to meet the functional requirements			
152	Utility requirements	Bidder should provide details of the utilities required for operation of the shaker system & Environmental/ Climatic chamber like power requirements, compressed air requirements, space requirements, overall dimension			
153	Documentation (Two sets of Hard Copies in English). Backup copies of all software's and O.S should be supplied in CDROM / pen drive.	<ul style="list-style-type: none"> • Operation Manual • Service Manual • Electrical wiring and mechanical schematics, dimensional drawings • Parts list: System specifications including subsystems, subsystems data sheets, interface requirements, calibration requirements and procedures. • Factory acceptance test results. 			
154	Installation and commissioning	The bidder or their representative should take full responsibility for unloading, unpacking, installation, commissioning, carrying out site acceptance tests and handing over the system to CSIR-SERC. All components not explicitly listed but required for installation must be listed and included in the quotation, failing which they will be considered as included and must be supplied at no additional cost.			
155	Integration of	The bidder or their			

S.No	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
	Electrodynamic shaker controller and the Environmental/ Climatic Chamber	representative should take full responsibility of integrating electrodynamic shaker controller with the Environmental/ Climatic chamber at CSIR-SERC. All the components not listed but required during the installation must be quoted.			
156	Training at CSIR-SERC	Bidder should provide mandatory in-person training and demonstration on operation and routine maintenance of the system for Minimum 1 week to CSIR-SERC staff (Min. 15 people) as part of installation and commissioning.			
157	Warranty for Electrodynamic shaker System, controller, Environmental/ Climatic chamber and their sub systems, accessories including its third party items/products.	One-year comprehensive on-site warranty for the complete system including all the equipment, sub systems etc. from the date of installation and acceptance of the system. All spare parts required for the trouble-free operation of the complete system during standard warranty period, needs to be supplied by the bidder, without extra cost. Fault should be resolved on-site within 2 working days of fault reporting.			
158	Requirement of AMC for the period of 3 years after the expiry of warranty period.	AMC is also required for the maintenance of the complete system including hardware, software, third party items, components etc. after the expiry of warranty period.			
Note: The bidder should necessarily quote separately for the AMC as detailed below: But, CSIR-SERC will avail the service towards AMC at its discretion. The quoted charges towards AMC will be considered for the evaluation of the bids.					
Details of Years after the warranty period		Charges towards AMC		Remarks	
1 st year					
2 nd year					
3 rd year					

S.No	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
159	Spare parts and service support	The quoted system should have a minimum product life cycle of 15 years. The OEM has to inform the CSIR-SERC, one year before discontinuing the model/product. The OEM has to provide spare parts and service support for minimum 10 years from the date of discontinuing the model/system.			
160	Testing and Acceptance at CSIR-SERC	Bidder shall conduct acceptance testing of the shaker and chamber system after installation at CSIR-SERC as per the criteria given in Annexure-A.			
161	Schematic drawing	Schematic diagram of quoted shaker and environmental/ climatic chamber assembly with insert configuration shall be provided along with the quote.			
162	Supplied software and hardware	All the listed software and hardware items that bidder quotes should be a proven catalogue product			
163	OEM authorization certificate	If the bidder is not OEM, the OEM authorization certificate has to be submitted along with bidding documents.			
164	Compliance Statement	The bidder should meet all the technical specifications to qualify the bid. The bidder has to furnish the values/units/parameters against each CSIR-SERC requirement in the compliance sheet. Offer without this information will be rejected without any further reference. Merely stating, “comply” does not constitute sufficient information. Exact numerical values are to be specified wherever applicable.			

S.No	Parameters	SERC Requirements	Offered Specification	Compliance (Yes/No)	Reference in the technical document
		Specified technical data should be supported by product catalogues, manuals, test procedures, and test plots etc, along with page number reference to the specified values. In case of insufficient technical data, the quote is liable to be rejected without further intimation. The bidder has to sign and stamp (company seal) on all the pages of compliance sheet.			
165	List of Installations	The bidder should submit a list of these installations giving details of commissioning & contact details along with the quote. Offer without this information is liable to be rejected without any further reference.			

Place:

Date:

**Signature and seal of the
Manufacturer/Bidder**

ANNEXURE - VIII

PRE-INSTALLATION REQUIREMENT

Name of Firm.....

File No.....

Sl. No.	Name of Requirement	Supplier Response
01.	Nature of Flooring	
02.	Room Size / Space	
03.	Air-conditioning Yes / No	
04.	Water Yes / No	
05.	Industrial Gases with Purity	
06.	Power Single Phase / Three Phase 230V / 440 V	
07.	Stabilized Power Supply Yes / No If Yes rating	
08.	UPS online / offline, rating, backup	
09.	Drainage / Treatment of Waste	
10.	Protective Garments / Clothing	
11.	Fume Hood / Exhaust for Gases	
12.	Chemicals / Standards	
13.	Distilled Water / Chilled Water	
14.	Any furniture like lab table etc.	
15.	Any other	

ANNEXURE - IX

SERVICE SUPPORT DETAIL FORM

Sl. No.	Nature of training imparted	List of similar type of equipments serviced in the past 3 years	Address, Telephone Nos. , Fax Nos and e-mail address

Signature and Seal of the manufacturer/Bidder.....

Place :

Date :

ANNEXURE - X

Bid Form

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*

Tender No.: *[insert number from Invitation for Bids]*

To: Director, CSIR – SERC, Taramani, Chennai - 600020

We, the undersigned, declare that:

(a)	We have examined and have no reservations to the Bidding Documents, including Addenda No.: <i>[insert the number and issuing date of each Addenda]</i>
(b)	We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services <i>[insert a brief description of the Goods and Related Services]</i>
(c)	The total price of our Bid, excluding any discounts offered in item (d) below, is: <i>[insert the total bid price in words and figures, indicating the various amounts and the respective currencies]</i>
(d)	The discounts offered and the methodologies for their application are: Discounts. If our bid is accepted, the following discounts shall apply. <i>[Specify in detail each discount offered and the specific item of the Schedule of Requirements to which it applies.]</i>
(e)	Our bid shall be valid for the period of time specified in ITB Clause 1.17.1, from the date fixed for the bid submission due date in accordance with ITB Clause 1.19 and it shall remain binding upon us and may be accepted at any time before the expiration of that period
(f)	If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 1.41 and GCC Clause 2.13 for the due performance of the Contract and also submit order acceptance within 14 days from the date of contract in accordance with ITB Clause 1.42 and GCC Clause 2.43;
(g)	The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: <i>[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]</i>

Name of Recipient

Address

Reason

Amount

(If none has been paid or is to be paid, indicate "none.")

(h)	We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
(i)	We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed : *[insert signature of person whose name and capacity are shown]*

In the capacity of *[insert legal capacity of person signing the Bid Submission Form]*

Name : *[insert complete name of person signing the Bid Submission Form]*

Duly authorized to sign the bid for and on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

ANNEXURE-XI

Tender No.:

Certificate of Local Content

We M/s. _____ **(Name of Bidder)** hereby certify that we meet the minimum Local content for the Goods and services offered vide our offer/bid No. _____ dated _____ as specified below:

➤ Class-I Local Supplier with local content of 50% and above (Percentage:

OR

➤ Class-II Local Supplier with local content of 20% and above but less than 50% (Percentage:)

(Tick appropriate category of Local Supplier)

We are not claiming the services such as transportation, insurance, installation, commissioning, training, after sales service (warranty or AMC/CMC support), consultancy and custom clearance including custom duty as local value addition.

We are aware that the false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules (Govt of India) for which we or our successors can be debarred for up to two years as per Rule 151 (iii) of the General Finance Rules along with such other actions as may be permissible under law.

Signed : **[insert signature of person whose name and capacity are shown]**

In the capacity of **[insert legal capacity of person signing the Bid Submission Form]**

Name : **[insert complete name of person signing the Bid Submission Form]**

Duly authorized to sign the bid for and on behalf of: **[insert complete name of Bidder]**

Dated on _____ day of _____, _____ **[insert date of signing]**

[In case of the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (In the case of companies) or from a practicing cost accountant or practicing chartered accountant (In respect of suppliers other than companies) giving the percentage of local content.]

ANNEXURE-XII

Tender No.:

Certificate of Price break up of Local Content (to be enclosed along with Price Bid)

We M/s. _____ **(Name of Bidder)** hereby certify that we meet the minimum Local content for the Goods and services offered vide our offer/bid No. _____ dated _____ as specified below:

➤ Class-I Local Supplier with local content of 50% and above

OR

➤ Class-II Local Supplier with local content of 20% and above but less than 50%

(Tick appropriate category of Local Supplier)

Minimum Local content is _____ % as per Price break up given below:

Component of Cost		Imported Product		Domestic value addition to product	
		In Foreign Currency US% or specify	In Rupees Exchanged Rate 1 US\$ - Rs.	In Rupees	Location of value addition
Goods					
i.	Material				
ii.	Equipment				
iii.					
	Total Quoted Price = [X + Y]				

$$\% \text{ Local Content} = (Y/(X+Y)) * 100$$

We are not claiming the services such as transportation, insurance, installation, commissioning, training, after sales service (warranty or AMC/CMC support), consultancy and custom clearance including custom duty as Local value addition.

We are aware that the false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules (Govt of India) for which we or our successors can be debarred for up to two years as per Rule 151 (iii) of the General Finance Rules along with such other actions as may be permissible under law.

Signed : **[insert signature of person whose name and capacity are shown]**

In the capacity of **[insert legal capacity of person signing the Bid Submission Form]**

Name : **[insert complete name of person signing the Bid Submission Form]**

Duly authorized to sign the bid for and on behalf of: **[insert complete name of Bidder]**

Dated on _____ day of _____,

ANNEXURE XIII

PERFORMANCE SECURITY FORM

MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY

To,

.....

WHEREAS

(name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no. datedto supply (description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of (amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the day of, 20.....

(Signature of the authorized officer of the Bank)

.....

Name and designation of the officer

.....

Seal, name & address of the Bank and address of the Branch

Note: Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

ANNEXURE - XIV

ACCEPTANCE CERTIFICATE FORM

No.

Dated

M/s. _____

Sub: Certificate of commissioning of equipment (Computer/Server, etc.)

01. This is to certify that the equipment as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para 2). The same has been installed and commissioned.
- (a) Contract No. _____ Date _____
- (b) Description of the equipment _____
- (c) Name of the consignee _____
- (d) Scheduled date of delivery of the consignment to the Lab./Instts. _____
- (e) Actual date of receipt of consignment by the Lab./Instts. _____
- (f) Scheduled date for completion of installation/commissioning _____
- (g) Training Started Date
- (h) Training Completed Date
- (i) Names of People Trained
- (j) Actual date of completion of installation/commissioning _____
- (k) Penalty for late delivery (at Lab./Instts. level) Rs. _____
- (l) Penalty for late installation (at Lab./Instts. level Rs. _____

Details of accessories/items not yet supplied and recoveries to be made on that account:

<u>Sl. No.</u>	<u>Description</u>	<u>Amount to be recovered</u>
----------------	--------------------	-------------------------------

02.	The acceptance test has been done to our entire satisfaction. The supplier has fulfilled his contractual obligations satisfactorily	
-----	---	--

(or)

The supplier has failed to fulfill his contractual obligations with regard to the following:

(a)

(b)

(c)

(d)

The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated at Sr. No. 3.

For Supplier

For Purchaser

Signature

Signature.....

Name

Name.....

Designation

Designation.....

Name of the firm.....

Name of the
Lab./Instt.

Date

Date.....

ANNEXURE - XV

Format of Integrity Pact

Between

Council of Scientific & Industrial Research (CSIR) a Society registered under the Indian Societies Act 1860 represented by _____ hereinafter referred to as “The Principal”.

Andherein referred to as “The Bidder/ Contractor.”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s forThe Principal 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).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Principal, personally or through family members, will 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 Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal 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 Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary action.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

- (1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

- (a) The Bidder(s)/Contractor(s) will not, directly or through any other Person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- (b) The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, Certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- (c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- (d) 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)/Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" is annexed and marked as Annexure.
- (e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

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 his reliability or credibility in question, the Principal 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 dealings". Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annex - "B".

Section 4 – Compensation for Damages

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

- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal 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 declares that no previous transgressions occurred in the last 3 Years with any other Company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealings.”

Section 6 – Equal treatment of all Bidders / Contractors/ Sub-contractors

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all Subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidders / Contractors/ Subcontractors

- (1) If the Principal obtains knowledge of conduct of a bidder, Contractor or Subcontractor or of an employee or a representative or an associate of a bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 - Independent External Monitors

- (1) The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the JS (A), CSIR.
- (3) The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor 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 is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Subcontractor(s) with confidentiality.

- (4) The Principal 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 Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (5) As soon as the Monitor notice, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (6) The Monitor will submit a written report to the JS(A), CSIR within 8 to 10 weeks from the date of reference or intimation to him by the Principal and should the occasion arise, submit proposals for correcting problematic situations.
- (7) Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors on the CSIR.
- (8) If the Monitor has reported to the JS(A),CSIR, a substantiated suspicion of an offence under relevant IPC/PC Act, and the JS(A), CSIR has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (9) The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by JS(A), CSIR.

Section 10 – Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and Jurisdiction is the Registered Office of the Principal, i.e. New Delhi
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & On behalf of the Principal)
(Office Seal)

(For & On behalf of Bidder/Contractor)
(Office Seal)

Place.....

Place.....

Date.....

Date.....

Witness 1:(Name & Address): _____

Witness 2:.(Name & Address): _____

ANNEXURE -XVI

SELF CERTIFICATION WITH REGARD TO THE BIDDER LAND BORDER WITH INDIA

With reference to Clause No. 1.1.9 of this tender and GoI Ministry of Finance Order No.: F. No. 6/18/2019-PPD dated 23rd July, 2020 on “Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs)” & OM No. F. No. 18/37/2020-PPD dated 8th February, 2021 and as amended from time to time on the date of issue of Tender:

It is certified that

- We are not a bidder of a country which shares a land border with India.

OR

- We are a bidder of a country which shares a land border with India, however, we are eligible to bid in any procurement whether of goods or services as we are registered with the Competent Authority as specified in Ministry of Finance (GoI) Order No. 6/18/2019 – PPD dated 23rd July 2020. Copy of valid registration is attached.

Tick as applicable

Place: Date:

Authorised Signatory Name:
Company Seal

ANNEXURE - XVII

Terms & Conditions		
S.No.	Description	Values
1.	Approximate weight of the Consignment	
2.	Approximate dimensions of the consignment	
3.	Order to be placed [Full Name, Full address, Tel #, Fax #, Email Id, Contact Person]	
4.	HSN No./ SAC no.	
5.	Country of Origin	
6.	Delivery Term [FOR]	CSIR – Structural Engineering Research Centre, CSIR Campus, Taramani, Chennai – 600 113 (Tamil Nadu) INDIA
7.	Delivery of the Item as per Chapter-4/BoQ [In weeks / Days / Months] from the date of PO [Mention the appropriate term]	
8.	Installation & Commissioning from the date of delivery of item	
9.	Training from the date of Installation & Commissioning of item	
10.	Statutory Levies [GST/IGST or any other taxes, duties]% of tax to be mentioned	
11.	Bidder GST No.	
12.	Warranty	
13.	Other Terms & Conditions	

ANNEXURE - XVIII

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

Date:

To,
The Director,
CSIR-SERC, Chennai – 600113

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/ organization too has 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/banned/suspended by any CSIR Labs or its constituent units/Govt. Department/Public sector undertaking.
6. I / We do hereby declare that our Firm has is not a consortium.
7. I / We do hereby declare that the quoted prices are the minimum and we have not quoted the same item on lesser rates than those being offered to CSIR-SERC to any other customer nor they will do so till the validity of offer or execution of the purchase order, whichever is later.
8. I / We do hereby declare that as per the Order No. P45021/2/2017-PP(BE-II) dated: 16thSep 2020 issued by DPIIT, Ministry of Commerce and Industries, Govt. of India and subsequent amendments issued thereon from time to time. We are _____ (Class-I or Class – II) and the Local Content _____(%).
9. Goods and/or services quoted by us are manufactured within India (or) we fulfill the conditions for eligibility criteria as applicable for Land Border Share and has provided certificate as per appropriate Annexure [Strike out which is not applicable] as per Order No. F.No.6/18/2019-PPD dated 23.07.2020 [Public Procurement No.1] and subsequent orders on the subject issued by Department of Expenditure, Ministry of India, Govt. of India.
10. I / We do hereby declare that the we will submit the necessary Performance Security Form in the event of award of Contract/PO to our firm.
11. 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/ organization 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)

Annexure – XIX

BANK DETAILS OF BIDDER / SUPPLIER

1	खाताधारककानाम/ Name of account holder	
2	पता /Address	
3	ईमेलपता / e-mail address	
4	दूरभाषसंख्या/मोबाईलनंबर /Phone No./Mobile No.	
5	फेक्ससंख्या / Fax No.	
6	स्थायीखातानंबर /PAN No	
7	बैंकखाताकाविवरण /Particulars of Bank Account	
	(क) बैंककानाम / A. Name of the Bank	
	(ख). शाखाकानाम / B. Name of the Branch	
	(ग). शाखाकोडनंबर / C. Branch Code	
	(घ). पता /D. Address:	
	(च). दूरभाषसंख्या / E. Telephone No.	
	(छ). खातासंख्या /F. Account No.	
	(ज). प्रकार /G. Type of Account	
	(झ). आईएफएससीकोड (आर.टी.जी.एस/एन.ई.एफ.टी) H. IFSC Code (RTGS / NEFT)	
	IBAN No. & Swift Code.	
	(ट). एम.आई.सी.आर. कोड /I. MICR code	

We/ I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, I/ we would not hold SERC responsible.

Signature of the Account holder

बैंकप्रमाणपत्र

यह सत्यापित किया जाता है कि मेसर्स _____ का खाता संख्या _____
हमारे बैंक/शाखा में है और ऊपर दिए गए विवरण हमारे अभिलेखन/रिकार्ड के अनुसार सत्य है।
दिनांक: / /
स्थान: _____ प्राधिकृत अधिकारी का हस्ताक्षर एवं बैंक का मुहर

Bank Certificate

It is certified that M/S _____ has an Account No _____ with our Bank and it is confirmed that the details given above are correct as per our record.

Date: / /

Place:

with seal

Signature of the Authorized Official of Bank



ANNEXURE - XX

ISO 9001 Organisation
सी.एस.आई.आर-संरचनात्मक अभियांत्रिकी अनुसंधान केन्द्र
CSIR-STRUCTURAL ENGINEERING RESEARCH CENTRE
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद Council of Scientific and Industrial Research)
सी.एस.आई.आर परिसर CSIR CAMPUS, तरमणि TARAMANI, चेन्नै CHENNAI - 600 113. भारत INDIA
दूरभाष Tel: 044-22549108/09, 22541238 फैक्स Fax: 044-22542211 ई-मेल E-mail: puroff@serc.res.in

Electronic Fund Transfer Account Details CSIR-SERC, Chennai

01.	Name of the Account Holder	Director CSIR SERC
02.	Address	CSIR Road, CSIR Campus, Taramani, Chennai – 600 113
03.	E-Mail address	finoff@serc.res.in
04.	Phone Number/Mobile Number	044-22549105/06/07
05.	(1) Permanent Account Number (PAN) (2) GSTIN	AAATC2716R 33AAATC2716R3ZK
06.	Particulars of Bank Account	
	(i) Name of the Bank	State Bank of India
	(ii) Name of the Branch	Taramani Branch
	(iii) Branch Code	010673
	(iv) Address	State Bank of India, CSIR Campus, Taramani Branch, Chennai 600 113.
	(v) S B I Telephone Number	044-22544519 / 22541848
	(vi) Account Number	30225927924
	(vii) Type of Account	Saving Bank Account
	(viii) IFSC Code (RTGS/NEFT)	SBIN0010673
	(ix) MICR Code	600002130