

**Punjab Engineering College, Chandigarh
(Deemed to be University)**

**Punjab Engineering College, Chandigarh
(Deemed to be University)
Sector -12; Chandigarh- 160012**

BID REFERENCE NO:

**NATIONAL COMPETITIVE BIDDING
FOR
PROCUREMENT OF EQUIPMENT**

UNDER

**MHRD funded Project,
National Initiative for Design Innovation Centre**

NATIONAL COMPETITIVE BIDDING FOR
THE SUPPLY OF Lab Scale Electrically Heated Sintering Furnace

BID REFERENCE :

DATE OF COMMENCEMENT OF : **DATE 21.12.2017**
SALE OF BIDDING DOCUMENT **TIME: 10:00 Hrs**

LAST DATE FOR SALE OF : **DATE 21.01.2018**
BIDDING DOCUMENT **TIME: 15:00 Hrs**

LAST DATE AND TIME FOR : **DATE 22.01.2018**
RECEIPT OF BIDS **TIME: 15:00 Hrs**

TIME AND DATE OF OPENING : **DATE 23.01.2018**
OF TECHNICAL BIDS **TIME: 15:30 Hrs**

TIME AND DATE OF OPENING : **Date and time will be intimated to qualifiers of technical bids**
OF FINANCIAL BIDS

PLACE OF OPENING OF BIDS : **Seminar Hall**
Materials & Metallurgical Engineering Dept
Punjab Engineering College (Deemed to be University)
Sector-12, Chandigarh, 160012

ADDRESS FOR COMMUNICATION : **Dr. JD Sharma, PI**
C/o - Materials & Metallurgical Engineering Dept
Punjab Engineering College (Deemed to be University)
Sector-12, Chandigarh, 160012

SECTION I: INVITATION FOR BIDS (IFB)

NATIONAL COMPETITIVE BIDDING FOR
THE SUPPLY OF Lab Scale Electrically Heated Sintering Furnace

SECTION I. INVITATION FOR BIDS (IFB)

Date : 21.12.2017

1. The purchase is being undertaken through an MHRD funded Project.
2. The **Director, Punjab Engineering College, Chandigarh** now invites sealed bids from eligible bidders for supply of **Lab Scale Electrically Heated Sintering Furnace**

Sr. No	Item Name	Quantity
1	Lab Scale Electrically Heated Sintering Furnace	1

3. Interested eligible Bidders may obtain further information from **Materials & Metallurgical Engineering Dept., Punjab Engineering College (Deemed to be University), Chandigarh, 160012** and inspect the bidding documents at the office of the India.
4. A complete set of bidding documents may be procured online free of cost by any interested eligible bidder.
5. The provisions in the Instructions to Bidders and in the General Conditions of contract (GCC) are based on the provisions of the World Bank Standard Bidding Document - Procurement of Goods.

6.

(a) Price of bidding document (non-refundable) : -

(b) Postal charges, inland : -

(c) Postal charges, overseas : -

(d) Date of commencement of Sale of bidding document : date **21.12.2017**
time: **10:00 hrs**

(e) Last date for sale of Bidding document : date **21.01.2018**
time: **15:00 hrs**

(f) Last date and time for Receipt of bids : date **22.01.2018**
time: **15:00 hrs**

(g) Time and date of opening of technical bids : date **23.01.2018**
time: **15:30 hrs**

Time and date of opening of financial bids : date and time will be intimated to qualifiers of technical bids

(h) Place of opening of bids : **Seminar Hall**
Materials & Metallurgical Engineering Dept
Punjab Engineering College (Deemed to be University)
Sector-12, Chandigarh, 160012

(i) Address for communication : **Dr. JD Sharma, PI**
C/o - Materials & Metallurgical Engineering Dept
Punjab Engineering College (Deemed to be University)
Sector-12, Chandigarh

7. All bids must be accompanied by a bid security as specified in the bid document and must be delivered to the above office at the date and time indicated above.
8. Bids will be opened in the presence of Bidders' representatives who choose to attend on the specified date and time.
9. In the event of the date specified for bid receipt and opening being declared as a closed holiday for purchaser's office, the due date for submission of bids and opening of bids will be the following working day at the appointed times.

SECTION II: INSTRUCTIONS TO BIDDER

SECTION II: INSTRUCTIONS TO BIDDERS

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A. Introduction

1. Source of Funds

The purchase is being undertaken through an MHRD funded Project.

2. Eligible Bidders

- 2.1 This Invitation for Bids is open to all suppliers from eligible source countries as defined in *Guidelines: Procurement under IDA Credits*, May 2004, revised October 2006 hereinafter referred as the *IDA Guidelines for Procurement*, except as provided hereinafter.
- 2.2 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.
- 2.3 Government-owned enterprises in the Purchaser's country may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Purchaser.
- 2.4 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Bank in accordance with ITB Clause 36.1.

3. Eligible Goods and Services

- 3.1 All goods and ancillary services to be supplied under the Contract shall have their origin in eligible source countries, defined in the *IDA Guidelines for Procurement* and all expenditures made under the Contract will be limited to such goods and services.
- 3.2 For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced or from which the ancillary services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 3.3 The origin of goods and services is distinct from the nationality of the Bidder.

4. Cost of Bidding

- 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and **Director Punjab Engineering College (Deemed to be University), Chandigarh** hereinafter referred to as "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

5. Content of Bidding Documents

5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:

- (a) Instruction to Bidders (ITB);
- (b) General Conditions of Contract (GCC);
- (c) Special Conditions of Contract (SCC);
- (d) Schedule of Requirements;
- (e) Technical Specifications;
- (f) Bid Form and Price Schedules;
- (g) Bid Security Form;
- (h) Contract Form;
- (i) Performance Security Form;
- (j) Performance Statement Form;
- (k) Manufacturer's Authorization Form;
- (l) Bank Guarantee for Advance Payment Form; and
- (m) Equipment and Quality Control Form.

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.

6. Clarification of Bidding Documents

6.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Purchaser in writing or by telex or cable or fax at the Purchaser's mailing address indicated in the Invitation for Bids. The Purchaser will respond in writing to any request for clarification of the bidding documents which it receives no later than 15 days prior to the deadline for submission of bids prescribed by the Purchaser. Written copies of the Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders which have received the bidding documents.

7. Amendment of Bidding Documents

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.

7.2 All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by cable or by fax, and will be binding on them.

7.3 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.

C. Preparation of Bids

8. Language of Bid

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. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the translation shall govern.

9. Documents Constituting the Bid

9.1 Two Bids system will be followed. Technical Bid and Financial Bid should be submitted in separate sealed envelopes. Both envelopes should be sealed in bigger envelopes clearly marked the name of equipment and last date of opening the bid. The bid prepared by the Bidder shall comprise the following components:

- (a) a Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11 and 12;
- (b) Documentary evidence established in accordance with ITB Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
- (c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents; and
- (d) Bid security furnished in accordance with ITB Clause 15.
- (e) Any other relevant document that the bidder deems fit to support the bid or to satisfy the conditional clauses of the tender.

10. Bid Form

10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, and their country of origin, quantity and prices.

11. Bid Prices

11.1 The Bidder shall indicate on the Price Schedule the unit prices and total bid prices of the goods it proposes to supply under the Contract. To this end, the Bidders are allowed the option to submit the bids for any one or more schedules specified in the 'Schedule of Requirements' and to offer discounts for combined schedules. However, Bidders shall quote for the complete requirement of goods and services specified under each schedule on a single responsibility basis, failing which such bids will not be taken into account for evaluation and will not be considered for award.

11.2 Prices indicated on the Price Schedule shall be entered separately in the following manner:

- (i) The price of the goods, quoted (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable:
 - a. on components and raw material used in the manufacture or assembly of goods quoted ex-works or ex-factory; or
 - b. on the previously imported goods of foreign origin quoted ex-showroom, ex-warehouse or off-the-shelf.
- (ii) Any Indian duties, sales and other taxes which will be payable on the goods if this Contract is awarded;
- (iii) The price for inland transportation, insurance and other local costs incidental to delivery of the goods to their final destination; and

(iv) The price of other incidental services listed in Clause 8 of the Special Conditions of Contract.

11.3 The Bidder's separation of the price components in accordance with ITB Clause 11.2 above will be solely for the purpose of facilitating the comparison of bids by the Purchaser and will not in any way limit the Purchaser's right to contract on any of the terms offered.

11.4 Fixed Price. Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 24.

Note: The rate quoted by the bidder/ vendor/ authorised vendor of principals shall include all cost on account of design, material, labour, loading, packing, transportation, unloading at PEC, fixing/installation, commissioning, training and nothing what so ever shall be paid extra on any account.

12. Bid Currencies

12.1 Prices shall be quoted in Indian Rupees/ Foreign Currency.

13. Documents Establishing Bidder's Eligibility and Qualifications

13.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.

13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Purchaser's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 2.

13.3 The documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the Purchaser's satisfaction:

(a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized (as per authorization form in Section XII) by the goods' Manufacturer or producer to supply the goods in India.

[Note: Supplies for any particular item in each schedule of the bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturers for the same item of the schedule in the bid will be treated as non-responsive.]

(b) that the Bidder has the financial, technical, and production capability necessary to perform the Contract and meets the criteria outlined in the Qualification requirements specified in Section VI-A. To this end, all bids submitted shall include the following information:

(i) The legal status, place of registration and principal place of business of the company or firm or partnership, etc.;

(ii) Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past three years and details of current contracts in hand and other commitments (suggested proforma given in Section XI);

13.4 that the bidder should have a minimum turnover 5 times the quoted price of product in past 3 years.

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

14.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding documents of all goods and services which the Bidder proposes to supply under the contract.

14.2 The documentary evidence of the goods and services eligibility shall consist of a statement in the Price Schedule 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.

- 14.3 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 for a period of two years, following commencement of the use of the goods by the Purchaser; 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.
- 14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers 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.

15. Bid Security

- 15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount as specified in Section-V - Schedule of Requirements.
- 15.2 The bid security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.
- 15.3 The bid security shall be denominated in Indian Rupees and shall:
- (a) at the bidder's option, be in the form of either a certified check, letter of credit, a demand draft, or a bank guarantee from a nationalized/Scheduled Bank located in India or by a reputable banking institution selected by the bidder and located abroad in any eligible country;
 - (b) be substantially in accordance with one of the form of bid security included in Section VIII or other form approved by the Purchaser prior to bid submission;
 - (c) be payable promptly upon written demand by the Purchaser in case any of the conditions listed in ITB Clause 15.7 are invoked;
 - (d) be submitted in its original form; copies will not be accepted; and
 - (e) Remain valid for a period of 90 days beyond the original validity period of bids, or beyond any period of extension subsequently requested under ITB Clause 16.2.
- 15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 above will be rejected by the Purchaser as non-responsive, pursuant to ITB Clause 24.
- 15.5 Unsuccessful bidder's bid securities will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the Purchaser, pursuant to ITB Clause 16.
- 15.6 The successful Bidder's bid security will be discharged upon the Bidder signing the Contract, pursuant to ITB Clause 34, and furnishing the performance security, pursuant to ITB Clause 35.
- 15.7 The bid security may be forfeited:
- (a) if a Bidder (i) withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or (ii) does not accept the correction of errors pursuant to ITB Clause 24.2; or
 - (b) in case of a successful Bidder, if the Bidder fails:

- (i) to sign the Contract in accordance with ITB Clause 34; or
- (ii) to furnish performance security in accordance with ITB Clause 35.

16. Period of Validity of Bids

- 16.1 Bids shall remain valid for **180** days after the deadline for submission of bids prescribed by the Purchaser, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 16.2 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 or telex or fax). The bid security provided under ITB Clause 15 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, except as provided in ITB Clause 16.3 hereinafter.
- 16.3 In the case of fixed prices contracts, in the event that the Purchaser requests and the Bidder agrees to an extension of the validity period, the contract price, if the Bidder is selected for award shall be the bid price corrected as follows :

The price shall be increased by the **factor (B =10 % per Annum)** for each week or part of a week that has elapsed from the expiration of the initial bid validity to the date of notification of award to the successful Bidder.

- 16.4 Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

17. Format and Signing of Bid

- 17.1 The Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate. In the event of any discrepancy between them, the original shall govern.
- 17.2 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. The latter authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamend printed literature, shall be initialed by the person or persons signing the bid.
- 17.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the persons or persons signing the bid.
- 17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

18. Sealing and Marking of Bids

18.1 The Bidders shall seal the original and each copy of the bid in separate inner envelopes, duly marking the envelopes as "original" and "copy". He shall then place all the inner envelopes in an outer envelope.

18.2 **The inner and outer envelopes shall:**

(a) be addressed to the Purchaser at the following address:

**HEAD
Materials & Metallurgical Engineering Department
C/o Director,
Punjab Engineering College (Deemed to be University)
Sector-12, Chandigarh
for purchase of Lab Scale Electrically Heated Sintering Furnace**

and a statement "**Do not open before 15:30 Hrs on 23.01.2018.**"

18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late".

18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Purchaser will assume no responsibility for the bid's misplacement or premature opening.

18.5 Telex, cable or facsimile bids will be rejected.

19. Deadline for Submission of Bids

19.1 Bids must be received by the Purchaser at the address specified under ITB Clause 18.2 (a) no later than the time and date specified in the Invitation for Bids (Section I). In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received upto the appointed time on the next working day.

19.2 The Purchaser may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with ITB Clause 7, 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.

20. Late Bids

20.1 Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser, pursuant to ITB Clause 19, will be rejected and/or returned unopened to the Bidder.

21. Modification and Withdrawal of Bids

21.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.

21.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 18. A withdrawal notice may also be sent by telex or cable or fax but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.

21.3 No bid may be modified subsequent to the deadline for submission of bids.

21.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the bid form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to ITB Clause 15.7.

E. Bid Opening and Evaluation of Bids

22. Opening of Bids by the Purchaser

- 22.1 The Purchaser will open all technical bids, in the presence of Bidders' representatives who choose to attend, at 15:30Hrs on 23.01.2018 and in the following location:

**Seminar Hall
Materials & Metallurgical Engineering Dept
Punjab Engineering College (Deemed to be University)
Sector-12, Chandigarh, 160012**

The Bidders' representatives who are present shall sign a register evidencing their attendance. 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.

- 22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder pursuant to ITB Clause 20.
- 22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.
- 22.4 The Purchaser will prepare minutes of the bid opening.

23. Clarification of Bids

- 23.1 During evaluation of 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.

24. Preliminary Examination

- 24.1 The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bids from Agents, without proper authorization from the manufacturer as per Section XII, shall be treated as non-responsive.
- 24.1.1 Where the Bidder has quoted for more than one schedule, if the bid security furnished is inadequate for all the schedules, the Purchaser shall take the price bid into account only to the extent the bid is secured. For this purpose, the extent to which the bid is secured shall be determined by evaluating the requirement of bid security to be furnished for the schedule included in the bid (offer) in the serial order of the Schedule of Requirements of the Bidding document.
- 24.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the supplier does not accept the correction of errors, its bid will be rejected and its bid security may be forfeited.
- 24.3 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any Bidder.
- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 26, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive

bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 7), Warranty (GCC Clause 15), Force Majeure (GCC Clause 25), Limitation of liability (GCC Clause 29), Applicable law (GCC Clause 31), and Taxes & Duties (GCC Clause 33) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

24.5 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 non-conformity.

25. Deleted

26. Evaluation and Comparison of Bids

26.1 To compare the financial bids the conversion rate for the bids quoted in foreign currency will be evaluated as per the rate of conversion on the date of opening of financial bids. The Purchaser will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24 for each schedule separately. No bid will be considered if the complete requirements covered in the schedule is not included in the bid. However, as stated in Para 11, Bidders are allowed the option to bid for any one or more schedules and to offer discounts for combined schedules. These discounts will be taken into account in the evaluation of the bids so as to determine the bid or combination of bids offering the lowest evaluated cost for the Purchaser in deciding award(s) for each schedule.

26.2 The Purchaser's evaluation of a bid will exclude and not take into account:

- (a) in the case of goods manufactured in India or goods of foreign origin already located in India, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
- (b) any allowance for price adjustment during the period of execution of the Contract, if provided in the bid.

26.3 The Purchaser's evaluation of a bid will take into account, in addition to the bid price (Ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods, and Excise duty on the finished goods, if payable) and price of incidental services, the following factors, in the manner and to the extent indicated in ITB Clause 26.5 and in the Technical Specifications:

- (a) Cost of inland transportation, insurance and other costs within India incidental to the delivery of the goods to their final destination;
- (b) Delivery schedule offered in the bid;
- (c) Deviations in payment schedule from that specified in the Special Conditions of Contract;
- (d) The cost of components, mandatory spare parts and service;
- (e) The availability in India of spare parts and after-sales services for the goods / equipment offered in the bid;
- (f) The projected operating and maintenance costs during the life of the equipment; and
- (g) The performance and productivity of the equipment offered.

26.4 Pursuant to ITB Clause 26.4, one or more of the following evaluation methods will be applied:

- (a) *Inland Transportation, Insurance and Incidentals:*
 - (i) Inland transportation, insurance and other incidentals for delivery of goods to the final destination as stated in ITB Clause 11.2 (iii).
The above costs will be added to the bid price.

(b) *Delivery Schedule:*

- (i) The Purchaser requires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements. The estimated time of arrival of the goods at the project site should be calculated for each bid after allowing for reasonable transportation time. Treating the date as per schedule of requirements as the base, a delivery "adjustment" will be calculated for other bids at 2% of the ex-factory price including excise duty for each month of delay beyond the base and this will be added to the bid price for evaluation. No credit will be given to earlier deliveries and bids offering delivery beyond stipulated delivery period (specified in terms and conditions of Tender) will be treated as unresponsive.

(c) *Spare Parts and After Sales Service Facilities in India:*

The cost to the Purchaser of establishing the minimum service facilities and parts inventories, as outlined elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.

27. Deleted.

28. Contacting the Purchaser

- 28.1 Subject to ITB Clause 23, 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. If the bidder wishes to bring additional information to the notice of the purchaser, it should do so in writing.
- 28.2 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.

E. Award of Contract

29. Post qualification

- 29.1 In the absence of prequalification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid meets the criteria specified in ITB Clause 13.3 (b) and is qualified to perform the contract satisfactorily.
- 29.2 The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13, as well as such other information as the Purchaser deems necessary and appropriate.
- 29.3 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, in which event the Purchaser will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform the contract satisfactorily.

30. Award Criteria

- 30.1 Subject to ITB Clause 32, the Purchaser will award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

31. Purchaser's right to vary Quantities at Time of Award

- 31.1 The Purchaser reserves the right at the time of Contract award to increase or decrease by up to 15 percent of the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

32. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids

- 32.1 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 contract award, without thereby incurring any liability to the affected Bidder or bidders.

33. Notification of Award

- 33.1 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/telex or fax, to be confirmed in writing by registered letter, that its bid has been accepted.
- 33.2 The notification of award will constitute the formation of the Contract.
- 33.3 Upon the successful Bidder's furnishing of performance security pursuant to ITB Clause 35, the Purchaser will promptly notify the name of the winning bidder to each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
- 33.4 If, after notification of award, a Bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Purchaser. The Purchaser will promptly respond in writing to the unsuccessful Bidder.

34. Signing of Contract

- 34.1 At the same time as the Purchaser notifies the successful bidder that its bid has been accepted, the Purchaser will send the bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 34.2 Within 21 days of receipt of the Contract Form, the successful bidder shall sign and date the Contract and return it to the Purchaser.

35. Performance Security

- 35.1 Within 21 days of 10% of the Bid amount receipt of notification of award from the Purchaser, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents or in another form acceptable to the Purchaser.
- 35.2 Failure of the successful bidder to comply with the requirement of ITB Clause 34.2 or ITB Clause 35.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Purchaser may make the award to the next lowest evaluated bidder or call for new bids.

36 Corrupt or Fraudulent Practices

36.1 It is the Bank's policy that Borrowers (including beneficiaries of Bank loans), as well as Bidders, Suppliers, and Contractors, and their agents (whether declared or not), personnel, subcontractors, sub-consultants, service providers and suppliers under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts¹. In pursuance of this policy, the Bank:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

- (i) "corrupt practice"² means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
- (ii) "fraudulent practice"³ means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- (iii) "collusive practice"⁴ means a scheme or arrangement between two or more Bidders, with or without the knowledge of the borrower, designed to establish bid prices at artificial, non competitive levels; and
- (iv) "coercive practice"⁵ means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- (v) "Obstructive practice" is
- (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or 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
- (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under sub – clause 36.1 (e) below.

¹ In this context, any action taken by a bidder, supplier, contractor, or any of its personnel, agents, subcontractors, sub-consultants, service providers, suppliers and/or their employees to influence the procurement process or contract execution for undue advantage is improper.

² "Another party" refers to a public official acting in relation to the procurement process or contract execution. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ "Party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

⁴ "Parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non- competitive levels.

⁵ "Party" refers to a participant in the procurement process or contract execution.

- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur;
- (d) will sanction a firm or an individual, at any time, in accordance with prevailing Bank's sanctions procedures⁶, including by publically declaring such firm or individual ineligible, either indefinitely or for a stated period of time, (i) to be awarded a Bank-financed contract; and (ii) to be a nominated⁷ subcontractor, consultant, manufacturer or supplier, or service provider of and otherwise eligible firm being awarded a Bank-financed contract; and
- (e) will have the right to require that a provision be included in Bidding Documents and in contracts financed by a Bank loan, requiring Bidders, Suppliers, and Contractors and their sub-contractors to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.

36.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 24.1 (c) of the General Conditions of Contract.

⁶ A firm or an individual may be declared ineligible to be awarded a Bank-financed contract upon completion of the Bank's sanctions proceedings as per its sanctions procedures, including inter alia: (i) temporary suspension in connection with an ongoing sanctions proceeding; (ii) cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks; and (iii) the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption.

⁷ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which either has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that are accounted for in the evaluation of the bidder's pre-qualification application or the bid; or (ii) appointed by the Borrower.

SECTION III: GENERAL CONDITIONS OF CONTRACT

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General Conditions of Contract

1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;
- (c) "The Goods" means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the Contract;
- (d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract;
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Purchaser" means the organization purchasing the Goods, as named in SCC.
- (h) "The Purchaser's country" is the country named in SCC.
- (i) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
- (j) "The World Bank" means the International Bank for Reconstruction and Development (IBRD) or the international Development Association (IDA).
- (k) "The Project Site", where applicable, means the place or places named in SCC.
- (l) "Day" means calendar day.

2. Application

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

3. Country of Origin

3.1 All Goods and Services supplied under the Contract shall have their origin in the member countries and territories eligible under the rules of the World Bank as further elaborated in SCC.

3.2 For purposes of this Clause "origin" means the place where the Goods are mined, grown or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.

4. Standards

4.1 The Goods supplied 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.

5. Use of Contract Documents and Information

- 5.1 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 there with, 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.
- 5.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.
- 5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 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.

6. Patent Rights

- 6.1 The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

7. Performance Security

- 7.1 Within 21 days of receipt of the notification of contract award, the Supplier shall furnish performance security in the amount specified in SCC.
- 7.2 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.
- 7.3 The Performance Security shall be denominated in Indian Rupees and shall be in one of the following forms:
 - (a) A Bank guarantee or irrevocable Letter of Credit, issued by a nationalized/scheduled bank located in India or a bank located abroad acceptable to the Purchaser, in the form provided in the bidding documents or another form acceptable to the Purchaser; or
 - (b) A cashier's check, certified check, or demand draft.
- 7.4 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC.

8. Inspections and Tests

- 8.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. SCC and the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.
- 8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.
- 8.3 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.

8.4 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site 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.

8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

9. Packing

9.1 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.

9.2 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.

10. Delivery and Documents

10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in the Notification of Award. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

11. Insurance

11.1 The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

12. Transportation

12.1 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within India defined as Project site, transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

13. Incidental Services

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) performance or supervision of the on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

14. Spare Parts

- 14.1 As specified in the SCC, the Supplier may 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.

15. Warranty

- 15.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and those they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for 36 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 Contract, or for 36 months after the date of shipment from the place of loading whichever period concludes earlier, unless specified otherwise in the SCC.
- 15.3 The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Purchaser other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from ex-works or ex-factory or ex-showroom to the final destination.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the Purchaser may proceed to take 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.

16. Payment

- 16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in the SCC.
- 16.2 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 GCC Clause 10, and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the Purchaser but in no case later than 120 days after submission of the invoice or claim by the Supplier.
- 16.4 Payment shall be made in Indian Rupees/ Foreign Currencies in case of the parent manufacturer is Indian company/foreigner manufacturer. The conversion rate applicable will be as on the date of opening the financial bid.
- 16.5 In case, the item(s) is/are to be imported for supply, 80% of the payment in the form of letter of credit and remaining 20% on commissioning and successful running/ operation. The Institute's Banker is Punjab National Bank, Sector-12, Chandigarh. The demurrage levied, if any by the Airport authorities will be borne by the firm.

17. Prices

17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in SCC or in the Purchaser's request for bid validity extension, as the case may be.

18. Change Orders

18.1 The Purchaser may at any time, by written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipping or packing;
- (c) the place of delivery; and/or
- (d) the Services to be provided by the Supplier.

18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Purchaser's change order.

19. Contract Amendments

19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

20. Assignment

20.1 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.

21. Subcontracts

21.1 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 his original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2 Subcontracts must comply with the provisions of GCC Clause 3.

22. Delays in the Supplier's Performance

22.1 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 in the Schedule of Requirements.

22.2 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.

22.3 Except as provided under GCC Clause 25, 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 GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

23. Liquidated Damages

23.1 Subject to GCC Clause 25, 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 liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services 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 24.

24. Termination for Default

24.1 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 22; 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 fraud and corruption, as defined in GCC Clause 34, in competing for or in executing the Contract.

24.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Purchaser may procure, upon such terms and in such 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 for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22, 23, 24, 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.

25.2 For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. 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.

26. Termination for Insolvency

26.1 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.

27. Termination for Convenience

27.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. 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.

27.2 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.

28. Settlement of Disputes

28.1 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.

28.2 If, after thirty (30) 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.

28.2.1 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.

28.2.2 Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

28.3 Notwithstanding any reference to arbitration herein,

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

29. Limitation of Liability

29.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6,

- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

30. Governing Language

30.1 The contract shall be written in English language. Subject to GCC Clause 30, English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

31. Applicable Law

31.1 The Contract shall be interpreted in accordance with the laws of the Union of India.

32. Notices

32.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by cable, telex or facsimile and confirmed in writing to the other Party's address specified in SCC.

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

33. Taxes and Duties

33.1 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser.

34. Fraud and Corruption

34.1 It is the Bank's policy that Borrowers (including beneficiaries of Bank loans), as well as Bidders, Suppliers, and Contractors, and their agents (whether declared or not), personnel, subcontractors, sub-consultants, service providers and suppliers under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts⁸. In pursuance of this policy, the Bank:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice"⁹ means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;

(ii) "fraudulent practice"¹⁰ means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;

(iii) "collusive practice"¹¹ means a scheme or arrangement between two or more Bidders, with or without the knowledge of the borrower, designed to establish bid prices at artificial, non competitive levels; and

(iv) "coercive practice"¹² means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

(v) "Obstructive practice" is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or 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

(bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under sub – clause 34.1 (e) below.

(b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

(c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur;

⁸ In this context, any action taken by a bidder, supplier, contractor, or any of its personnel, agents, subcontractors, sub-consultants, service providers, suppliers and/or their employees to influence the procurement process or contract execution for undue advantage is improper.

⁹ "Another party" refers to a public official acting in relation to the procurement process or contract execution. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

¹⁰ "Party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

¹¹ "Parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non- competitive levels.

¹² "Party" refers to a participant in the procurement process or contract execution.

- (d) will sanction a firm or an individual, at any time, in accordance with prevailing Bank's sanctions procedures¹³, including by publically declaring such firm or individual ineligible, either indefinitely or for a stated period of time, (i) to be awarded a Bank-financed contract; and (ii) to be a nominated¹⁴ subcontractor, consultant, manufacturer or supplier, or service provider of and otherwise eligible firm being awarded a Bank-financed contract; and
- (e) will have the right to require that a provision be included in Bidding Documents and in contracts financed by a Bank loan, requiring Bidders, Suppliers, and Contractors and their sub-contractors to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.

34.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 24.1 (c) of the General Conditions of Contract.

¹³ A firm or an individual may be declared ineligible to be awarded a Bank-financed contract upon completion of the Bank's sanctions proceedings as per its sanctions procedures, including inter alia: (i) temporary suspension in connection with an ongoing sanctions proceeding; (ii) cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks; and (iii) the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption.

¹⁴ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which either has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that are accounted for in the evaluation of the bidder's pre-qualification application or the bid; or (ii) appointed by the Borrower.

SECTION IV: SPECIAL CONDITIONS OF CONTRACT

SECTION IV: SPECIAL CONDITIONS OF CONTRACT

TABLE OF CLAUSES

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Special Conditions of Contract

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions is indicated in parentheses.

1. Definitions (GCC Clause 1)

- (a) The Purchaser is **Punjab Engineering College (Deemed to be University), Sector-12, Chandigarh.**
- (b) The Supplier is :

2. Country of Origin (GCC Clause 3)

All countries and territories as indicated in Section XIV of the bidding documents, "Eligibility for the Provisions of Goods, Works, and Services in Bank-Financed Procurement".

3. Performance Security (GCC Clause 7)

- 3.1 Within 21 days after the Supplier's receipt of Notification of Award, the Supplier shall furnish Performance Security to the Purchaser for an amount of 5% of the contract value, valid upto 60 days after the date of completion of performance obligations including warranty obligations.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months and the Performance Bank Guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.

- 3.2 Substitute Clause 7.3 (b) of the GCC by the following:

A cashier's cheque or banker's certified cheque or crossed demand draft or pay order drawn in favour of **Director, Punjab Engineering College (Deemed to be University), Chandigarh [Purchaser]**.

- 3.3 Substitute Clause 7.4 of the GCC by the following:

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 the warranty obligation, under the contract.

- 3.4 Add as Clause 7.5 to the GCC the following:

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 60 days after the completion of performance obligations including warranty obligations.

4. Inspection and Tests (GCC Clause 8)

The following inspection procedures and tests are required by the Purchaser:

(i) The inspection of the Goods shall be carried out to check whether the Goods are in conformity with the technical specifications attached to the contract and shall be in line with the inspection/test procedures laid down in the Technical Specifications and the General Conditions of contract. Following broad test procedure will generally be followed for inspection and testing of machine.

- The supplier will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report and manufacturer's warranty certificate.
- The purchase will test the equipment after completion of the installation and commissioning at the site of the installation.
- For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment.
- Complete items/ accessories as specified in Section V should be supplied, installed and commissioned properly by the supplier prior to commencement of performance test.

(ii) The acceptance test will be conducted by the purchaser/their consultant or any other person nominated by the purchaser, at its option. There shall not be any additional charges for carrying out acceptance tests. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified.

(iii) In the event of the equipments failing to pass the acceptance test, a period not exceeding four weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.

5. **Packing (GCC Clause 9)**

Add as Clause 9.3 of the GCC the following:

Packing Instructions: The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

i) Project ii) Contract No. iii) Country of Origin of Goods iv) Supplier's Name, and v) Packing list reference number.

6. **Delivery and Documents (GCC Clause 10)**

Upon delivery of the Goods, the supplier shall notify the purchaser and the insurance company by cable/telex/fax the full details of the shipment including contract number, railway receipt number and date, description of goods, quantity, name of the consignee etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- (i) 4 Copies of the Supplier invoice showing contract number, goods' description, quantity, and unit price, total amount;
- (ii) Railway receipt/acknowledgment of receipt of goods from the consignee(s);
- (iii) 4 Copies of packing list identifying the contents of each package;
- (iv) Insurance Certificate;
- (v) Manufacturer's/Supplier's warranty certificate;
- (vi) Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and
- (vii) Certificate of Origin.

The above documents shall be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

7. **Insurance (GCC Clause 11)**

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes.

8. **Incidental Services (GCC Clause 13)**

The following services covered under Clause 13 shall be furnished and the cost shall be included in the contract price:

- a. Performance of the onsite assembly, loading/unloading at site commissioning and start-up of the equipment including all electrical accessories, coolants, oils etc. whatsoever may be.
- b. Furnishing the detailed operation and maintenance manuals for each items of the supply at each location.
- c. Training the purchaser personnel at the supplier's office or other facility, in the installation and operation of the equipment.

- d. Maintenance and repair of the equipment at each location during the warranty period including supply of all spares. This shall not relieve the supplier of any warranty obligation under this contract.
- e. Maintenance and/or repairs of the supplied goods for a period of three years after the end of warranty period. The bidder should indicate the spares and their costs, if any, which are not indicated in the maintenance contracts.

9. Spare Parts (GCC Clause 14)

Add as Clause 14.2 to the GCC the following:

Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.

10. Warranty (GCC Clause 15)

- (i) G.C.C. Clause 15.2:

In partial modification of the provisions, the warranty period shall behours of operation or **12** months from date of acceptance of Goods or.... months from the dates of Shipment, whichever occurs earlier. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

- (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4 ;

- (ii) Substitute Clause 15.4 of the GCC by the following:

“Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever, shall lie on the Purchaser for the replaced parts/goods thereafter.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months.”

- (iii) GCC Clauses 15.4 and 15.5:

The period for correction of defects in the warranty period is 20 days.

11. Payment

Payments shall be made promptly by the Purchaser but in no case later than 120 days after submission of the invoice or claim by the Supplier.

Payment shall be made in Indian Rupees/ Foreign Currencies in case of the parent manufacturer is Indian company/foreigner manufacturer. The conversion rate applicable will be as on the date of opening the financial bid.

In case, the item(s) is/are to be imported for supply, 80% of the payment in the form of letter of credit and remaining 20% on commissioning and successful running/ operation. The Institute's Banker is Punjab National Bank, Sector-12, Chandigarh. The demurrage levied, if any by the Airport authorities will be borne by the firm.

12. Prices (GCC Clause 17)

17.1 Prices payable to the supplier as stated in the contract shall be firm during the performance of the contract.

13. Sub-contracts (GCC Clause 21)

Add at the end of GCC sub-clause 21.1 the following:

Sub-contract shall be only for bought-out items and sub-assemblies

14. Liquidated Damages (GCC Clause 23)

14.1 For delays:

GCC Clause 23.1 -- The applicable rate is 0.07% per week and the maximum deduction is 10% of the contract price.

15. Settlement of Disputes (Clause 28)

The dispute settlement mechanism to be applied pursuant to GCC Clause 28.2.2 shall be as follows:

- (a) In case of Dispute or difference arising between the Purchaser and a domestic/foreign supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Indian Council of Arbitration.
- (b) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Indian Council of Arbitration both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the Indian Council of Arbitration making such an appointment shall be furnished to each of the parties.
- (c) Arbitration proceedings shall be held at **Chandigarh** India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (d) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.
- (e) Where the value of the contract is Rs. 10 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority namely the Indian Council of Arbitration.

16. Notices (Clause 32)

For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.

Purchaser: **Head**
 Materials & Metallurgical Engineering Department
 C/o Director
 Punjab Engineering College (Deemed to be University)
 Sector-12, Chandigarh, 160012

Supplier: (To be filled in at the time of Contract signature)

.....
.....
.....
.....

17. Supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:

- Quantity offered for inspection and date;
- Quantity accepted/rejected by inspecting agency and date;
- Quantity dispatched/delivered to consignees and date;
- Quantity where incidental services have been satisfactorily completed with date;
- Quantity where rectification/repair/replacement effected/completed on receipt of any communication from; Consignee/Purchaser with date
- Date of completion of entire Contract including incidental services, if any; and
- Date of receipt of entire payments under the Contract

(In case of stage-wise inspection, details required may also be specified).

SECTION V: SCHEDULE OF REQUIREMENTS

SCHEDULE OF REQUIREMENTS

Brief Description	Unit Price	Quantity	Delivery Schedule	Bid Security In Rupees
Lab Scale Electrically Heated Sintering Furnace	65,00,000/-	1	90 days	1,30,000/-

SECTION VI: TECHNICAL SPECIFICATIONS

SECTION VI - TECHNICAL SPECIFICATIONS

Specifications of Lab Scale Electrically Heated High Temperature Vacuum Furnace

Outer dimensions	Not more than approx. 1300 x 1200 x 2800 mm (W x D x H)
Test space dimensions	Not less than 170 x 240 x 200 mm (w x d x h)
Volume	Not less than 8 litres
Max. charge weight	5 kg
Process gas	1 non-flammable gas (Argon/ inert gas)
Gas flow rate	50 – 500 l/h , controlled by flow meters
Heating power	Not more than 25 kW
Heating zones	1
Heated sides	2 (left & right)
Temperature control	By pyrometer
Over-temperature thermocouple	Type K
Tmax, process gas	2200°C
Tmax, vacuum	2200°C
Heating speed	600 K/h between room temperature and 2200°C in empty furnace
Vacuum	2 stage rotary vane vacuum pump
Final vacuum	< 5 x 10 ⁻¹ mbar in cold, clean, dry and empty furnace
Leakage rate	< 5 x 10 ⁻³ mbar x l/s
Connecting power	Not more than 30 kW
Voltage	415V 3/PE 50Hz
Process gas supply	pressure 6-8 bar
Auxiliary gas	air, supply pressure 6-8 bar
Cooling water	max. 2.5 m ³ /h, supply pressure 3 bar
Heating	Heating elements made of graphite
Insulation	Insulation by radiator boards made of graphite felt Supporting structure made of high-temperature resistant steel. Bottom plate with spacers made of CFC

Design

The furnace is to be designed as a universal R&D furnace for various applications. The furnace housing should accommodate an ergonomic arrangement of the components to allow maximum functionality. **The switchgear including transformers, cooling water and vacuum components with pump equipment and valves etc. should be all inbuilt.**

Loading of the furnace and operation of the switchgear takes place on the front side. Process gas and cooling water gauges are to be operated from one side.

The use of automatic valves for process gas and exhaust air management and the PLC control system should allow the entire heat treatment process to be run fully automatically. The entry of all process data (temperatures, ramps, gas supply and vacuum) should be easily controllable from the control panel. System status with all process related data to be clearly shown on a process control diagram on the main LCD screen.

Process Outline

For the heat treatment cycle a pre-program will be done automatically with a final leak test. The chamber will be evacuated and afterwards flushed with protective gas. After the heat treatment cycle is finished a post-program will be started automatically. First the chamber will be filled-up with protective gas, than the chamber will be evacuated and afterwards filled up again with protective gas for a safe opening of the door.

Process chamber

Stainless steel chamber made of SS304 . The inner surface is glass bead blasted for a clear finish.

Double walled chamber construction for optimal all side water cooling.

Over temperature control by bimetallic switch.

The leakage rate of the chamber is lower than 5 x 10⁻³ mbar x l/s (determined by pressure rise test)

The chamber is to be equipped with an overpressure valve and a burst disc. In case of a very sudden pressure rise, such as a water leakage, the burst disc is automatically cut to release the pressure and protect the chamber / furnace. Right hinged swinging door with vertical grip and manual locking screws to be provided.

Door with double walled door construction for optimal water cooling.

Temperature control by a bimetallic switch.

Sealing between process chamber and door via silicon tube which is inserted in a groove in the door

Automatic door lock ; Electro-pneumatic door lock. Opening of the door lock is only possible below permissible door opening

Temperature through the PLC control.

Vacuum System

2-stage rotary vane pump for heat treatment in vacuum or for pre-evacuation before heat treatment with protective gas atmosphere

Supplied with exhaust filter, Electronic vacuum pressure measuring device. The measured value is displayed on the graphical LCD interface of the furnace.

Pumping speed 16 m³/h

Improved final vacuum in the cold, empty, clean and dry furnace: < 5 x 10⁻¹ mbar in graphite furnace

Vacuum pump to be suitable for processes with non-corrosive exhaust gases.

Gas System

Segment wise program controlled gas supply for gas

The gas flow rate is adjusted manually by a needle valve & the flow rate is to be measured by an area flow meter.

Gas Supply bypass to quickly fill furnace chamber after evacuation (only non-flammable gases)

Electro-magnetic valves to be installed in the process gas path and in the bypass

All Piping and connections made of stainless steel

Automatically operated bellow-type valve for the gas outlet

Slight overpressure is to be achieved in the furnace chamber by valve in the exhaust gas Path

Water cooling of the chamber

Water cooling with individual supplies for vacuum chamber and the power supply for optimal cooling and minimized water consumption.

All cooling water circuits are to be equipped with flow and temperature indicators.

Bimetallic switches at all the chamber walls to monitor a possible over-temperature.

Flow rate monitoring in the cooling water outflow with an automatic shutdown of the furnace if the flow rate falls below allowable minimum.

An optional air water heat exchanger for a closed cooling water circuit as well as an emergency water supply are to be quoted.

Safety devices and features

Burst disc for pressure 350 mbar above ambient pressure

Over pressure protection valve (100 mbar)

Over temperature limiter

Bimetallic temperature switches at the water cooled chamber walls

Charge thermocouple

Charge thermocouple for measuring the temperature near the charge.

Charge control

Control of furnace temp. driven by the charge thermocouple

Installation with gas tight throughput through the rear or side wall of the vacuum chamber

The measured value is displayed on the graphical user interface of the furnace.

Controls, switchgear and process documentation

An Industrial PLC process controls system of reputed make like Siemens / Allen Bradley / Eurotherm need be installed to provide convenient operation of all functions for different processes, with flexible options for adaption to customized functions.

- LCD Graphic Display and Operation
- Convenient illustration and operation of all furnace functions via a 12 inch color display with touch functionality
- Clear visualization of the process via graphical charts or flow diagrams
- Easy and individual entry of process parameters

- Manual operation of furnace functions
- Operation hours counter
- Graphical display of set point and actual values for the current process

Controller Programs

Temperature programs and their switchable functions entry in a table

10 programs / 20 segments, delayed start time in real time

Switchable functions (depending on furnace equipment):

6 segmental switchable digital functions (e. g. relays for flaps, gas systems, controlled cooling etc.)

4 segmental adjustable analog functions

Entry of ramps and dwell times up to 23 h 59 min per segment. Longer dwell times can be reached by linking several segments.

Electrical Switchgear

Switchgear integrated in furnace housing.

Main switch type P with red grip, yellow locking wreath and lockable with 3 padlocks.

Uninterruptible power supply (UPS) for process control (24 V, approx. 2 hours) to bridge power blackouts.

Temperature limiter for thermal protection class 2 in accordance with EN 60518-2 to protect furnace, It should be fully independent from the main controller.

Acoustic signal in case of an alarm

Stack light mounted at the front of the furnace for status visibility

Potential free contact for centralized alarm provided for customer use

Electronic power switching of the heating system by thyristors operating in phase angle control mode

Ammeters for line entry

Door contact switch

Switch gear ventilation by fan and thermostat

EMC-compatible design

Environmental conditions in installation room +5°C up to +40°C

Installation & Commissioning

Function test of all mechanical and electrical parts of the described modules as well as PLC and the test run of the furnace along with training for operating and maintenance personnel of PEC is to be included / quoted.

Warranty

Machine should come with a 2 year extended warranty from date of expiry of the 1 year warranty from date of installation. The response time of the repair is 10 day (max). Idle time beyond 10 days leads to the extension of the warranty with same conditions beyond the time of 3 years.

Essential Accessories to be quoted along with the equipment price:

a) Water/air heat exchanger for cooling water

- Closed cooling water circuit to cool furnace chamber walls and power feed through.
- Incl. tank, ventilator and water circulation pump
- Power supply of heat exchanger to be through switchgear of the furnace.
- Hoses for cooling water feed and return between furnace and heat exchanger.
- Indoor installation
- Fail safe emergency water feed with electromagnetic valves in cooling water feed and return allow cooling water supply in case of power blackout or malfunctioning of the heat exchanger. The valves open automatically in case of power loss. Additional electromagnetic valves close the connection to the heat exchanger.

b) Air Compressor for auxillary Gas Supply to furnace. Oil for Compressor

SECTION VI-A : QUALIFICATION CRITERIA

(Referred to in Clause 13.3(b) of ITB)

1. (a) The bidder should be a manufacturer who must have manufactures, tested and supplied the equipment (s) similar to the type specified in the 'schedule of requirements' up to at least 80% of the quantity required in any one of the last 3 years. The equipments offered for supply must be of the most recent series models incorporating the latest improvements in design. Further, bidder should be in continuous business of manufacturing products similar to that specified in the schedule of requirements during the last three years prior to bid opening.

(b) Bids of bidders quoting as authorized representatives of equipment manufacturer, meeting with the above requirement in full can be considered provided.
 - (i) The manufacturer furnishes authorization in the prescribed format assuring full guarantee and warranty obligations as per GCC and SCC; and
 - (ii) The bidder, as authorized representative, has supplied, installed and commissioned satisfactorily at least 80% of the quantity similar to the type specified in the Schedule of Requirements in any one of the last three years which must be in satisfactory operation for at least 6 months on the date of bid opening and must be providing annual maintenance services for the above equipments in the country for over one year.
2. The bidder should furnish the information of past three years supplies and satisfactory performances for both (a) and (b) above, in Performa under Section XI.
3. All bids submitted shall also include the following information
 - (i) Copies of Original documents defining the constitution or legal status, place of registration and principle place of business of the company or firm or partnership, etc.
 - (ii) The bidder should furnish a brief write – up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required systems and equipments within the specified time of completion after meeting all their current commitments
 - (iii) The bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the Purchaser or his representative for inspection.
 - (iv) Details of Service Centers and information on service support facilities that would be provided after the warranty period.
 - (v) copy of balance sheets (duly attested & signed by authorized signatory of the company) or proof of financial turnover duly certified/verified by chartered accountant for the last three financial years.
 - (vi) Minimum financial turnover Rs. 100 lakh at least in one of the last three years excluding current financial year.

Notwithstanding anything stated above, the purchaser reserves the right to asses that the Bidder has the financial, technical, and production capability necessary to perform the Contract should circumstances warrant such as assessment.

SECTION VII: BID FORM AND PRICE SCHEDULE

SECTION VII: BID FORM

Date:.....
Credit/Loan No:.....
IFB No:.....

TO: (Name and address of purchaser)

Gentlemen and/or Ladies:

Having examined the Bidding Documents including Addenda Nos..... [Insert numbers], the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver..... (Description of Goods and Services) in conformity with the said bidding documents for the sum of..... (Total bid amount in words and figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this bid for the Bid validity period specified in Clause 16.1 of the Bid Data Sheet and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Amount Rupees
Name and Purpose of Commission
Address of agent or gratuity

(if none, state "none").

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.

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

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

We understand that you are not bound to accept the lowest or any bid you may receive.

We clarify/confirm that we comply with the eligibility requirements as per ITB Clause 2 of the bidding documents.

Dated this day of 19.....

(Signature)

(In the capacity of)

Duly authorized to sign Bid for and on behalf of _____

PRICE SCHEDULE

SECTION VIII: BID SECURITY FORM

SECTION VIII: BID SECURITY FORM

Whereas¹ (*hereinafter called "the Bidder"*) has submitted its bid dated..... (*Date of submission of bid*) for the supply of..... (*Name and/or description of the goods*) (Hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE..... (*Name of bank*) of..... (*Name of country*), having our registered office at..... (*Address of bank*) (Hereinafter called "the Bank"), are bound unto..... (*Name of Purchaser*) (Hereinafter called "the Purchaser") in the sum of _____ for which payment well 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 Bidder
 - (a) withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
 - (b) does not accept the correction of errors in accordance with the ITB; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:
 - (a) fails or refuses to execute the Contract Form if required; or
 - (b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;

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 of the two conditions, specifying the occurred condition or conditions.

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

.....
(Signature of the Bank)

¹ *Name of Bidder*

SECTION IX: CONTRACT FORM

SECTION IX: CONTRACT FORM

THIS AGREEMENT made theday of....., 20 between..... (*Name of purchaser*) of..... (*Country of Purchaser*) (Hereinafter called "the Purchaser") of the one part and..... (*Name of Supplier*) of..... (*City and Country of Supplier*) (Hereinafter called "the Supplier") of the other part:

WHEREAS the Purchaser is desirous that certain Goods and ancillary services viz. (*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..... (*Contract Price in Words and Figures*) (Hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Bid Form and the Price Schedule submitted by the Bidder;
 - (b) The Schedule of Requirements;
 - (c) The Technical Specifications;
 - (d) The General Conditions of Contract;
 - (e) The Special Conditions of Contract; and
 - (f) The Purchaser's Notification of Award.
3. 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.
4. 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.

Brief particulars of the goods and services which shall be supplied/provided by the Supplier are as under:

SL NO.	BRIEF DELIVERY TERMS NO. DESCRIPTION OF GOODS & SERVICES	QUANTITY TO BE SUPPLIED	UNIT PRICE	TOTAL PRICE
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TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the
said..... (For the Purchaser)
in the presence of:.....

Signed, Sealed and Delivered by the
said..... (For the Supplier)
in the presence of:.....

SECTION X: PERFORMANCE SECURITY FORM

SECTION X. PERFORMANCE SECURITY FORM

To: (Name of Purchaser)

WHEREAS..... (Name of Supplier)

Hereinafter called "the Supplier" has undertaken, in pursuance of Contract (Notification of Award) No..... dated, 20... to supply..... (Description of Goods and Services) hereinafter 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 recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

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 limit 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.

This guarantee is valid until theday of.....20.....

Signature and Seal of Guarantors

.....
.....
.....
Date.....20.....

Address:

.....
.....

SECTION XI: PERFORMANCE STATEMENT

Please attach "Performa for Performance Statement"

SECTION XI

[Please see clause 13.3 (b) (ii) of instruction to Bidders

Performa for Performance Statement (for a period of last three years)

Bid No. _____ Date of Opening _____ Time _____ Hours

Name of the Firm _____

Order placed by (full address of purchaser)	Order No. & Date	Description and quantity of ordered Equipment	Value of the order	Date of delivery		Remarks indicating reasons for the late delivery	Has the equipment been satisfactorily functioning? Attach a certificate from Purchase/Consignee	Remarks
				As per Contact	Actual			

Signature & Seal of the Bidder

Total bid price (in figures) without taxes: Rs: _____

Total bid price (in words) without taxes: Rs: _____

Total bid price (in figures) with taxes: Rs: _____

Total bid price (in words) with taxes: Rs: _____

SECTION XII

(Please see Clause 13.3(a) of Instructions to Bidders)

MANUFACTURERS' AUTHORIZATION FORM*

No. _____ Dated

To

Dear Sir:

IFB No.

We _____ who are established and reputable manufacturers of _____
(name and description of goods offered) having factories at _____ (address of
factory) do hereby authorize M/s _____ (Name and address of Agent) to submit a bid, and sign the
contract with you for the goods manufactured by us against the above IFB.

No company or firm or individual other than M/s _____ are authorized to bid, and conclude the
contract for the above goods manufactured by us, against this specific IFB. *(This Para should be deleted in simple
items where manufacturers sell the product through different stockists.)*

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract and
Clause 10 of the Special Conditions of Contract for the goods and services offered for supply by the above firm
against this IFB.

Yours faithfully,

(Name)

(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person
competent and having the power of attorney to legally bind the manufacturer. It should be included by the
Bidder in its bid.

* Modify this format suitably in case where manufacturer's warranty and guarantee are not applicable for the items
for which bids are invited.

SECTION XIII

SAMPLE FORM

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ *(name of Purchaser)*
_____ *(address of Purchaser)*
_____ *(name of Contract)*

Gentlemen:

In accordance with the provisions of the Special Conditions of Contract which amends Clause 16 of the General Conditions of Contract _____ *(name and address of Supplier)* (hereinafter called "the supplier") shall deposit with _____ *(name of Purchaser)* a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of *(amount of guarantee)** _____ *(in words)*.

We, the _____ *(bank or financial institution)*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ *(name of Purchaser)* on his first demand without whatsoever right of objection on our part and without his first claim to the Supplier, in the amount not exceeding _____ *(Amount of guarantee)** _____ *(in words)*.

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 _____ *(Name of Purchaser)* 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 remain valid and in full effect from the date of the advance payment received by the Supplier under the contract until _____

Yours truly,
Signature and seal :
Name of bank :
Financial institution :
Address :
Date :

* An amount is to be inserted by the bank representing the amount of the Advance Payment.

SECTION XIV

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement.

As of March 2000¹

For the information of Borrowers and Bidders, and with reference to paragraph 1.6, footnote 9, of the *Guidelines: Procurement under IBRD Loans and IDA Credits*, dated January 1995 (revised January and August 1996 and September 1997, and January 1999), set forth below is a list of countries from which Bidders, Goods and Services are not eligible to participate in procurement financed by the World Bank or IDA².

- Andorra
- Cuba
- Democratic People's Republic of Korea (North Korea)
- Liechtenstein
- Monaco
- Nauru
- Tuvalu

In addition, Bidders, Goods and Services from other countries or territories may be declared ineligible by a provision in the Bidding Documents if the borrower's country has excluded them by a law, an official regulation, or an act of compliance meeting the requirements of paragraph 1.8 (a) of the *Guidelines: Procurement under IBRD Loans and IDA Credits*.

The Loan/Credit Agreement also prohibits a withdrawal from the Loan / Credit Account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. At the present time, this prohibition applies to no country.

Notes:

1. The most current listing of eligible countries can be viewed on the Public Information Center's Web page at: <http://www.worldbank.org/html/pic/PROCURE.html>. A list of firms debarred from participating in World Bank projects is available at: <http://www.worldbank.org/html/opr/procure/debarr.html>.
2. Any questions regarding this list should be addressed to the Senior Manager, Procurement Policy and Services Group, Operational Core Services Network, The World Bank

