



TENDER DOCUMENT

FOR

SOLUTIONIZING FURNACE

**COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
NATIONAL AEROSPACE LABORATORIES (NAL)
C-CADD, C-CMMACS CAMPUS, BELUR
BANGALORE- 560037
KARNATAKA - INDIA**



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Invitation for Bids / Notice Inviting Tender

National Aerospace Laboratories (NAL), Bangalore is one of the premier laboratories under Council of Scientific and Industrial Research an autonomous body under Department of Scientific and Industrial Research (Government of India). The Director, NAL would like to procure the following equipment(s) / item(s) for its day-to-day research. The Technical specifications are given in **Chapter 4** appended herewith.

| Sr. No. | Tender No. | Brief Description of items | Quantity | Single / Two Bid | Bid Security (EMD) (in Indian Rupees) |
|---------|------------------|----------------------------|---------------------------|------------------|--|
| 1 | CAD/Pur/2K11/089 | Solutionizing Furnace | As mentioned in Chapter 4 | Two | 1,50,000 (Rupees One Lakh Fifty Thousand Only) |

1. The address for submission of bids and for obtaining further information:
Stores & Purchase Officer,
Purchase Section
Council of Scientific & Industrial Research
National Aerospace Laboratories
C-CADD, C-CMMACS Campus, Belur, Bangalore – 560037
Karnataka-India
2. The bidding documents can be downloaded directly from our website www.nal.res.in free of cost.
3. A **Pre-bid Conference** will be held on **11-01-2012** at **1130 hours (IST)** in **C-CADD Purchase Committee Room, C-CMMACS Campus, Belur, Bangalore – 560037**. All prospective bidders are requested to kindly submit their queries to the address indicated above so as to reach the Stores & Purchase Officer latest by **10-01-2012**.
4. The bids must reach this office on or before **02-02-2012** up to **1600 hours (IST)** and shall be opened on **03-02-2012** at **1030 hours (IST)**.
5. The Director, Council of Scientific & Industrial Research, National Aerospace Laboratories (NAL), Bangalore reserves the right to accept any or all tenders either in part or in full or to split the order without assigning any reasons there for.

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LIST OF SHORT FORMS AND FULL FORMS

| SHORT FORM | FULL FORM |
|------------|--|
| BG | BANK GUARANTEE |
| BS | BID SECURITY |
| CIF | COST INSURANCE FREIGHT |
| CIP | COST INSURANCE PRICE |
| CSIR | COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH |
| CVC | CHIEF VIGILANCE COMMISSIONER |
| DGS&D | DIRECTOR GENERAL OF SUPPLIES & DISPOSAL |
| EMD | EARNEST MONEY DEPOSIT |
| ESIC | EMPLOYEES STATE INSURANCE CORPORATION |
| FCA | FREE CARRIAGE ALONG SIDE |
| FOB | FREE ON BOARD |
| FS | FULL SCALE |
| GCC | GENERAL CONDITIONS OF CONTRACT |
| GOI | GOVERNMENT OF INDIA |
| ICC | INTERNATIONAL CHAMBERS OF COMMERCE |
| IEMs | INDEPENDENT EXTERNAL MONITORS |
| IOP | INTENSIVE OPERATION PERIOD |
| IP | INTEGRITY PACT |
| IPC | INDIAN PENAL CODE |
| IST | INDIAN STANDARD TIME |
| IT | INCOME TAX |
| ITB | INSTRUCTION TO BIDDER |
| JS (A) | JOINT SECRETARY (ADMINISTRATION) |
| LC | LETTER OF CREDIT |
| NAL | NATIONAL AEROSPACE LABORATORIES |
| NIT | NOTICE INVITING TENDER |
| NSIC | NATIONAL SMALL INDUSTRIES CORPORATION |
| PS | PERFORMANCE SECURITY |
| SCC | SPECIAL CONDITIONS OF CONTRACT |
| UNCITRAL | UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE |

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A. Introduction

Instructions to bidder are broad guidelines to be followed while formulating the bid and its submission to the Purchaser. It also describes the methodology for opening and evaluation of bids and consequent award of contract.

1.1 Eligible Bidders

1.1.1. This Invitation for Bids is open to all suppliers.

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

1.2 Cost of Bidding

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

1.3 Fraud and corruption

1.3.1. The purchaser requires that the bidders, suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

| Sr. No. | Term | Meaning |
|---------|---------------------|--|
| (a) | Corrupt practice | 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. |
| (b) | Fraudulent practice | a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract. |
| (c) | Collusive practice | means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, noncompetitive levels. |
| (d) | Coercive practice | 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. |

1.3.2. The purchaser 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.

B. The Bidding Documents

1.4 Cost of Bidding Documents

1.4.1. Interested eligible bidders may purchase the bidding documents on payment of the cost of bidding documents as indicated in the invitation for bids / NIT or alternatively, the bidding documents can be downloaded from our Website as indicated in the invitation for Bids / NIT free of cost.

1.5 Content of Bidding Documents

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

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

1.6 Clarification of bidding documents

- 1.6.1. A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC), latest by the date specified in the Invitation for Bids / NIT which would be deliberated as per **ITB Clause 1.42.0** of Instructions to the Bidders. No request for clarification or query shall be normally entertained after the pre-bid conference. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under Clause relating to amendment of Bidding Documents and Clause relating to Deadline for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the Purchaser for the benefit of the other prospective bidders.

1.7 Amendment of Bidding Documents

- 1.7.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment as enumerated in **ITB Clause 1.42.0** of Instructions to the Bidders. The same would also be hosted on the website of the Purchase and all prospective bidders are expected to surf the website before submitting their bids to take cognizance of the amendments.
- 1.7.2 In order to allow prospective bidders reasonable time in which to take the amendment to account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids and host the changes on the website of the Purchaser.

C. Preparation of bids

1.8 Language of Bid

- 1.8.1. The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical. However, if GOI makes it mandatory under Rajbhasha Abhniyam, in that case views of Rajbhasha unit of CSIR may be sought.
- 1.8.2. The Supplier shall bear all costs of translation, if any, to the English language and bear all risks of the accuracy of such translation, for documents provided by the Supplier.

1.9 Documents Comprising the Bid

- 1.9.1. The bid prepared by the Bidder shall include:

| | |
|-----|---|
| (a) | Bidder Information Form |
| (b) | Bid security as specified in the Invitation to Bids |
| (c) | Service support details form |
| (d) | Deviation Statement Form |
| (e) | Performance Statement Form |
| (f) | Manufacturer's Authorization Form |
| (g) | Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted |
| (h) | Bid form |
| (i) | Documents establishing goods eligibility and conformity to bidding documents |
| (j) | Applicable Price Schedule Form |
| (k) | DGS&D Registration certificate in case the items under procurement falls under the restricted category of the current export-import policy of the Government of India |
| (l) | Schedule of requirements |

1.10 Bid form and price schedule

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

1.11 **Bid Prices**

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

1.11.2. Prices indicated on the price-schedule form shall be entered separately in the following manner:

(a) **For Goods manufactured within India**

| | |
|------|---|
| i) | The price of the goods quoted Ex-works including taxes already paid. |
| ii) | VAT and other taxes like excise duty etc. which will be payable on the goods if the contract is awarded. |
| iii) | The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form. |
| iv) | The installation, commissioning and training charges including any incidental services, if any. |

(b) **For Goods manufactured abroad**

| | |
|------|--|
| i) | The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form. |
| ii) | The charges for insurance and transportation of the goods to the port / place of destination. |
| iii) | The agency commission charges payable to Indian agent in Indian rupees, if any. |
| iv) | The installation, commissioning and training charges including any incidental services, if any |

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

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

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

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

1.11.7. The purchases made by the purchaser for scientific purpose are exempt from excise duty and Custom Duty is leviable at a concessional rate.

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

1.12 **Bid Currencies**

1.12.1. Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely Convertible foreign currency in case of offers received for supply from foreign countries.

1.13 **Documents Establishing Bidder's Eligibility and qualifications**

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

1.13.2. The documentary evidence of the bidders qualification to perform the contract if the bid is accepted shall establish to the purchasers satisfaction that:

| | |
|-----|---|
| (a) | The bidder meets the qualification criteria listed in bidding documents, if any. |
| (b) | Bidder who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and / or supply the goods. |
| (c) | In case a bidder not doing business within India, it shall furnish the certificate to the effect |

| | |
|--|--|
| | that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period. |
|--|--|

1.13.3. Conditional tenders shall not be accepted.

1.14 Documents Establishing Goods' Eligibility and Conformity to Bidding Documents

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

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

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

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

1.15 Bid Security (BS) / Earnest Money Deposit (EMD)

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

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

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

| | |
|-----|---|
| (a) | A Bank Guarantee (BG) issued by a Nationalized / Scheduled bank / Foreign Bank operating in India in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalised / Scheduled Indian bank; OR |
| (b) | Fixed Deposit receipt pledged in favor of Purchaser. OR |
| (c) | A Banker's cheque or demand draft in favour of the Purchaser issued by any Nationalised / Scheduled Indian bank. |

1.15.4. The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the **ITB clause 1.15.11** are invoked.

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

- 1.15.6. While Bid security / (EMD) is a requirement, the Director of the Laboratory / Institute may grant exemption of Bid security to some specific parties having sound credentials and are of national / international repute.
- 1.15.7. The bid security of unsuccessful bidder will be discharged / returned as promptly as possible positively within a period of 30 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.
- 1.15.8. The successful Bidder's bid security will be discharged upon the Bidder furnishing the performance security, without any interest. Alternatively, the BS could also be adjusted against Performance Security, if it is paid through Demand Draft / Banker's Cheque.
- 1.15.9. The firms registered with DGS&D, NSIC, Government Public Undertakings, and Central Autonomous Bodies and with the CSIR Laboratories / Institutes, if any, are exempted from payment of BS provided such registration includes the item they are offering which are manufactured by them and not for selling products manufactured by other companies.
- 1.15.10. In case a bidder intimates at the time of tender opening in writing that the bid security is kept inside the financial bid, then in such cases, the technical bid of the party would be accepted provisionally till opening of the financial bids with which the party has attached the bid security.
- 1.15.11. The bid security may be forfeited:

| | |
|-----|--|
| (a) | If a Bidder withdraws or amends or modifies or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; OR |
| (b) | In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 15 days of the order or fails to sign the contract and / or fails to furnish Performance Security within 21 days from the date of contract / order. |

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

1.16 Period of Validity of Bids

- 1.16.1. Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 1.16.2. 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, telex, fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.
- 1.16.3. Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

1.17 Format and Signing of Bid

- 1.17.1. The bids may be submitted as single bid or two-bid as specified in the Invitation for Bids.
- 1.17.2. In case the bids are invited on single bid basis, then 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.
- 1.17.3. In case the bids are invited on two-bid system, the Bidder shall submit the bids in two separate parts. One part shall contain Technical bid comprising all documents listed under clause relating to Documents Comprising the Bid excepting bid form and price schedule forms. The second part shall contain the priced-bid comprising bid form and price schedule forms. The Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate.

- 1.17.4. The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 1.17.5. Any interlineations, erasures or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

D. Submission and sealing of Bids

1.18 Submission, Sealing and Marking of Bids

- 1.18.1. The bidders may submit their duly sealed bids generally by post or by hand.
- 1.18.2. In the case of bids invited on single bid basis, the Bidders shall seal the original and each copy of the bid in separate inner envelopes, duly marking the envelopes as "original" and "copy". The envelopes shall then be sealed in an outer envelope.
- 1.18.3. In the case of bids invited on two bid basis, the Bidder shall seal the un-priced commercial and technical bid comprising the documents as listed in **ITB Clause 1.9.1 excepting for h & j** and the priced bid in two separate envelopes duly marked as "Technical bid" and "Priced bid". Both the envelopes shall then be sealed in one outer envelope.
- 1.18.4. (a) The inner and outer envelopes shall be addressed to the Purchaser indicated in the Special Conditions of Contract (SCC).
- (b) The name and address of the bidder, Tender No., due date and a warning "Do not open before _____" to be completed with the time and date as specified in the invitation for bids.
- 1.18.5. If the outer envelope is not sealed and marked as required above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening of the submitted bid. In such cases, bids received in open condition within the due date and time will be accepted at the risk of the bidder if the same is presented to the Stores & Purchase Officer before expiry of the due date and time of opening of the bids.
- 1.18.6. Firms submitting bids in a single envelope against the requirement of two-bid system would be considered for further evaluation at the risk & responsibility of the bidder. However, the opened priced bid would be sealed immediately by the Tender opening Committee without disclosing the price.

1.19 Due date for Submission of Bids

- 1.19.1. Bids must be received by the Purchaser at the address specified in SCC not later than the time and date specified in NIT. In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received up to the appointed time on the next working day.
- 1.19.2. The Purchaser may, at its discretion, extend the due date for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the due date will thereafter be subject to the due date as extended.

1.20 Late Bids

- 1.20.1. Any bid received by the Purchaser after the due date for submission of bids prescribed by the Purchaser will be rejected.
- 1.20.2. Such tenders shall be marked as late and not considered for further evaluation. They shall not be opened at all and be returned to the bidders in their original envelope without opening.

1.21 Withdrawal, substitution and Modification of Bids

- 1.21.1. A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice in accordance with **ITB Clause 1.18** duly signed by an authorized representative, and shall include a copy of the authorization in accordance with **ITB Clause 1.17.4** (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

| | |
|-----|--|
| (a) | Submitted in accordance with ITB Clauses 1.17 and 1.18 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION"; and |
| (b) | Received by the Purchaser prior to the due date prescribed for submission of bids, in accordance with ITB Clause 1.19 . |

- 1.21.2. Bids requested to be withdrawn in accordance with **ITB Clause 1.21.1** shall be returned unopened to the Bidders. No bid may be withdrawn, substituted, or modified in the interval between the due date for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof.

E. Opening and Evaluation of Bids

1.22 Opening of Bids by the Purchaser

- 1.22.1. The Purchaser will open all bids one at a time in the presence of bidders' authorized representatives who choose to attend, as per the schedule given in invitation for bids. The Bidders' representatives who are present shall sign the quotation opening sheet 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. In case of two-bid, the financial bid shall be opened only after technical evaluation.
- 1.22.2. First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further.
- 1.22.3. 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 bid(s). The contents of the bid forms and price schedule form would however be announced only at the time of opening of Priced-bids in the case of two-bid system.
- 1.22.4. Bids that are received late shall not be considered further for evaluation, irrespective of the circumstances.
- 1.22.5. Bidders interested in participating in the bid opening process, should depute their representatives along with an authority letter to be submitted to the purchaser at the time of bid opening.

1.23 Confidentiality

- 1.23.1. Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 1.23.2. Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.

1.24 Clarification of Bids

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

1.25 Preliminary Examination

1.25.1. The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in **ITB Clause 1.9** have been provided, and to determine the completeness of each document submitted.

1.25.2. The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.

- (a) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the tender enquiry document. The tenders, who do not meet the basic requirements, are to be treated as non-responsive and ignored. The following are some of the important points, for which a tender may be declared as non-responsive and to be ignored, during the initial scrutiny:

| | |
|-------|---|
| i) | The Bid is unsigned |
| ii) | The Bidder is not eligible |
| iii) | The Bid validity is shorter than the required period |
| iv) | The Bidder has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer |
| v) | Bidder has not agreed to give the required performance security |
| vi) | The goods quoted are sub-standard, not meeting the required specification, etc. |
| vii) | Against the schedule of Requirement (incorporated in the tender enquiry), the bidder has not quoted for the entire requirement as specified in that schedule. |
| viii) | The bidder has not agreed to some essential condition(s) incorporated in the tender enquiry. |

- (b) Bid Form and Price Schedule Form, in accordance with **ITB Clause 1.10**. In case of two-bid system these forms shall be examined after opening of the price bids of the technically qualified bidders.

1.26 Responsiveness of Bids

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

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

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

1.26.3. If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

1.27 Non-Conformity, Error and Omission

1.27.1. Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

1.27.2. Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

1.27.3. Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

| | |
|-----|---|
| (a) | if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected; |
| (b) | if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and |
| (c) | if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above. |

1.27.4. Provided that a bid is substantially responsive, the purchaser may request that a bidder may confirm the correctness of arithmetic errors as done by the purchaser within a target date. In case, no reply is received then the bid submitted shall be ignored and its Bid Security may be forfeited.

1.28 Examination of Terms & Conditions, Technical Evaluation

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

1.28.2. The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with **ITB Clause 1.14**, to confirm that all requirements specified in Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation.

1.28.3. If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with **ITB Clause 1.26**, it shall reject the Bid.

1.2.9 Conversion to Single Currency

1.29.1. To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India as notified in the Newspapers on the date of bid opening in the case of single bid and the rates prevalent on the date of opening of the Priced bids in the case of two-bid. For this purpose, exchange rate notified in www.xe.com or www.rbi.org or any other website could also be used by the purchaser.

1.30 Evaluation and comparison of bids

1.30.1. The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.

1.30.2. To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology shall be permitted.

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

(a) **For Goods manufactured within India**

| | |
|------|---|
| i) | The price of the goods quoted Ex-works including taxes already paid. |
| ii) | VAT and other taxes like excise duty etc. which will be payable on the goods if the contract is awarded. |
| iii) | The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form. |
| iv) | The installation, commissioning and training charges including any incidental services, if any. |

(b) **For Goods manufactured abroad**

| | |
|------|--|
| i) | The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form. |
| ii) | The charges for insurance and transportation of the goods to the port / place of destination. |
| iii) | The agency commission charges payable to Indian agent in Indian rupees, if any. |
| iv) | The installation, commissioning and training charges including any incidental services, if any |

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

(a) Towards customs duty and other statutory levies—as per applicable rates.

(b) Towards custom clearance, inland transportation etc.- 2% of the CIF / CIP value.

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

1.30.5. In case of Purchase of many items against one tender, which are not inter- dependent or, where compatibility is not a problem, normally the comparison would be made on ex-works, (in case of indigenous items) and on FOB / FCA (in the case of imports) prices quoted by the firms for identifying the lowest quoting firm for each item.

1.30.6. Orders for imported stores need not necessarily be on FOB / FCA basis rather it can be on the basis of any of the Incoterm specified in International Chambers of Commerce (ICC) Incoterms 2000 as may be amended from time to time by the ICC or any other designated authority and favorable to CSIR Laboratories / Institutes or Headquarters.

1.30.7. Wherever the price quoted on FOB / FCA and CIF / CIP basis are the same, the Contract would be made on CIF / CIP basis only.

1.30.8. The GCC and the SCC shall specify the mode of transport i.e. whether by air / ocean / road / rail.

1.31 **Comparison of Bids**

1.31.1. The Purchaser shall compare all substantially responsive bids to determine the lowest valued bid, in accordance with **ITB Clause 1.30**.

1.32 **Contacting the Purchaser**

1.32.1. Subject to **ITB Clause 1.24**, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.

1.32.2. Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

1.33 **Post qualification**

1.33.1. In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in **ITB Clause 1.13**.

1.33.2. The determination will take into account the eligibility criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.

1.33.3. An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.

F. Award of contract

1.34 Negotiations

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

1.35 Award Criteria

- 1.35.1. Subject to **ITB Clause 1.37**, the Purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily. The details of the award would be hosted on the website of the Purchaser.

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

- 1.36.1. The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. Further, at the discretion of the purchaser, the quantities in the contract may be enhanced by 30% within the delivery period.

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

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

1.38 Notification of Award

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

1.39 Signing of Contract

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

1.40 Order Acceptance

- 1.40.1. The successful bidder should submit Order acceptance within 15 days from the date of issue, failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited pursuant to **ITB Clause 1.15.11**.
- 1.40.2. The order acceptance must be received within 15 days. However, the Purchaser has the powers to extend the time frame for submission of order acceptance and submission of Performance Security (PS). Even after extension of time, if the order acceptance / PS are not received, the contract shall be cancelled and limited tenders irrespective of the value shall be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable, provided there is no change in specifications. In such cases the defaulting firm shall not be considered again for re-tendering in the particular case.

1.41 **Performance Security**

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

| | |
|-----|--|
| (a) | A Bank guarantee or stand-by Letter of Credit issued by a Nationalized / Scheduled bank located in India or a Foreign Bank with preferably its operating branch in India in the form provided in the bidding documents. OR |
| (b) | A Banker's cheque or Account Payee demand draft in favour of the purchaser OR |
| (c) | A Fixed Deposit Receipt pledged in favour of the Purchaser. |

- 1.41.6. The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.
- 1.41.7. In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- 1.41.8. Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, and then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

1.42 **Pre-bid Conference**

- 1.42.1. A Pre-bid Conference shall be held as indicated in invitation to bid. All prospective bidders are requested to kindly attend the Pre-bid Conference. In order to facilitate NAL for proper conduct of the Pre-bid Conference, all prospective bidders are requested to kindly submit their queries (with envelope bearing Tender No. and Date on top and marked "Queries for Pre-bid Conference") so as to reach NAL as indicated in invitation to bid. NAL shall answer the queries during the pre-bid conference, which would become a part of the proceedings of the Pre-bid Conference, and all the participating bidders shall sign the same. These proceedings will become a part of clarifications / amendments to the bidding documents and would become binding on all the prospective bidders. These proceedings would also be hosted on NAL website www.cmmacs.res.in for the benefit of all the prospective bidders. Before formulating and submitting their bids, all prospective bidders are advised to surf through the NAL website after the Pre-bid Conference, in order to enable them take cognizance of the changes made in the bidding document.

CHAPTER 2

CONDITIONS OF CONTRACT

A. GENERAL CONDITIONS OF CONTRACT

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Note: The General Conditions of Contract shall form the part of purchase order / contract.

A. GENERAL CONDITIONS OF CONTRACT

2.1. Definitions

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

| Sr. No. | Words / Expressions | Meaning |
|---------|-----------------------|---|
| (a) | Contract | The Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein. |
| (b) | Contract Documents | The documents listed in the Contract Agreement, including any amendments thereto. |
| (c) | Contract Price | The price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract. |
| (d) | Day | Calendar day |
| (e) | Completion | The fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract. |
| (f) | GCC | The General Conditions of Contract. |
| (g) | Goods | All of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract |
| (h) | Related Services | The services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract. |
| (i) | SCC | The Special Conditions of Contract. |
| (j) | Subcontractor | Any natural person, private or government entity, or a combination of the above, to which any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier. |
| (k) | Supplier | The natural Person, Private or Government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement. |
| (l) | Council | The Council of Scientific & Industrial Research (CSIR), registered under the Societies Registration Act, 1860 of the Government of India having its registered office at 2, Rafi Marg, New Delhi-110001, India. |
| (m) | Purchaser | Any of the constituent Laboratory/Institute of the Council situated at any designated place in India as specified in SCC |
| (n) | The final destination | The place named in the SCC. |

2.2 Contract Documents

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

2.3 Fraud and Corruption

2.3.1. The purchaser requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,

(a) The terms set forth below are defined as follows:

| | | |
|------|---------------------|---|
| I. | Corrupt practice | 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 | A misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract |
| III. | Collusive practice | 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 |
| IV. | Coercive practice | 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 |

- (b) The purchaser 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.

2.4 Joint Venture, Consortium or Association

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

2.5 Scope of Supply

- 2.5.1. The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

2.6 Suppliers' Responsibilities

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

2.7 Contract price

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

2.8 Copy Right

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

2.9 Application

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

2.10 Standards

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

2.11 Use of Contract Documents and Information

- 2.11.1. The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.
- 2.11.2. The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.
- 2.11.3. Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.

2.12 Patent Indemnity

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

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

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

2.13 Performance Security (PS)

- 2.13.1. Within 21 days of receipt of the notification of award of contract / Purchase Order, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.

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

- 2.13.3. The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.

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

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

| | |
|-----------|--|
| (a) | A Bank guarantee or stand-by Letter of Credit issued by a Nationalized / Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. |
| OR | |
| (b) | A Banker's cheque or Account Payee demand draft in favour of the purchaser. |
| OR | |
| (c) | A Fixed Deposit Receipt pledged in favour of the Purchaser. |

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

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

- 2.13.8. The order confirmation should be received within 15 days from the date of notification of award. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order acceptance/PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.

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

2.14 Inspections and Tests

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

2.15 Packing

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

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

2.16 Delivery and Documents

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

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

2.16.3. The mode of transportation shall be as specified in SCC.

2.17 Insurance

2.17.1. Should the purchaser chooses to buy on CIF / CIP basis for Imported goods (or) FOR destination for Indigenous goods, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

2.17.2. Where delivery of the goods is required by the purchaser on CIF / CIP basis for imported goods (or) FOR destination for Indigenous goods, the supplier shall arrange and pay for Marine / Transit Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.

2.17.3. Where delivery is on FOB or FCA basis for imported goods or FOR dispatch station for indigenous goods, then insurance would be the responsibility of the purchaser.

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

2.18 Transportation

2.18.1. Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price.

2.18.2. Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.

2.18.3. In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.

2.19 Incidental Services

2.19.1. The supplier may be required to provide any or all of the services, including training, if any, specified in **Chapter 3 & 4.**

2.20 Spare Parts

2.20.1. The Supplier shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

| | |
|-----|--|
| (a) | Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and |
| (b) | In the event of termination of production of the spare parts: |
| (c) | Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and |
| (d) | Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested. |

2.21 Warranty

2.21.1. The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

2.21.2. The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.

2.21.3. Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

2.21.4. The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

2.21.5. Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

2.21.6. If having been notified, the Supplier fails to remedy the defect within a reasonable period of time, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

2.21.7. Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.

2.22 Terms of Payment

2.22.1. The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.

2.22.2. The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfillment of other obligations stipulated in the contract.

2.22.3. Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the invoice or claim by the Supplier.

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

2.23 Change Orders and Contract Amendments

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

| | |
|----|---|
| a) | 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. |
| e) | The delivery schedule. |

2.23.2. 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 fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.

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

2.24 Assignment

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

2.25 Subcontracts

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

2.26 Extension of time

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

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

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

2.27 Penalty clause

- 2.27.1. Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable.

2.28 Termination for Default

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

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

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

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

2.29 Force Majeure

- 2.29.1. Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 2.29.2. For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 2.29.3. If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 2.29.4. If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

2.30 Termination for Insolvency

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

2.31 Termination for Convenience

- 2.31.1. The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 2.31.2. The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

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

2.32 Settlement of Disputes

- 2.32.1. The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 2.32.2. If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. .
- 2.32.3. The dispute settlement mechanism / arbitration proceedings shall be concluded as under:

| | |
|-----|---|
| (a) | In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director General, Council of Scientific & Industrial Research and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order. |
| (b) | In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration In accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules. |

- 2.32.4. The venue of the arbitration shall be the place from where the purchase order or contract is issued.
- 2.32.5. Notwithstanding any reference to arbitration herein,

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

2.33 Governing Language

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

2.34 Applicable Law

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

2.35 Notices

- 2.35.1. Any notice given by one party to the other pursuant to this contract / order shall be sent to the other party in writing or by cable, telex, FAX, e-mail or / and confirmed in writing to the other party's address specified in the SCC.
- 2.35.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

2.36 Taxes and Duties

- 2.36.1. For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.
- 2.36.2. For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture / production.
- 2.36.3. If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall make its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 2.36.4. All payments due under the contract shall be paid after deduction of statutory levies (at source) (like ESIC, IT, etc.) wherever applicable.

2.37 Right to use Defective Goods

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

2.38 Protection against Damage

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

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

2.39 Site preparation and installation

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

2.40 Integrity Pact

- 2.40.1. As per directive of the CVC all organizations including CSIR laboratories / institutes have to adopt an Integrity pact (IP) to ensure transparency, equity and competitiveness in major Public procurement activities. The integrity pact envisages an agreement between the prospective bidders / vendors with the buyer committing the persons / officials of both the parties with the aim not to exercise any corrupt influence on any aspect of the contract. Only those bidders / vendors, who are willing to enter in to such an integrity pact with the Purchaser, would be competent to participate in the bidding.
- 2.40.2. IP also envisages Panel of Independent External Monitors (IEMs) which shall be provided / recommended by CSIR / its labs and institutes with the approval of by CVC.
- 2.40.3. The integrity Pact would be effective from the date of invitation of bids till complete execution of the contract.
- 2.40.4. The SCC shall specify whether there is a need to enter into a separate integrity pact or not. The model format of integrity pact (IP) is at **Chapter - 8**.

CHAPTER 2

B. SPECIAL CONDITIONS OF CONTRACT (SCC)

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

| GCC Clause | Special Condition of Contract (SCC) |
|--------------|---|
| GCC 2.1.1(l) | The Purchaser is: The Director, CSIR National Aerospace Laboratories (NAL) C-CADD, C-CMMACS Campus, Belur Bangalore- 560037, Karnataka, India. |
| GCC 2.1.1(m) | The Final Destination is: The Director, CSIR National Aerospace Laboratories (NAL) HAL Airport Road, Kodihalli Bangalore- 560017, Karnataka, India. |
| GCC 2.13.1 | The amount of the Performance Security shall be 10 % of the contract value , valid up to 60 days after the date of completion of performance obligations including warranty obligations. |
| GCC 2.15.2 | The marking and documentation within and outside the packages shall be marked with proper paint / indelible ink. (a) Each package should have a packing list within it detailing the part No.(s), description, quantity etc. (b) Outside each package, the contract No., the name and address of the purchaser and the final destination should be indicated on all sides and top. (c) Each package should be marked as 1/x, 2/x, 3/x.....x/x, where “x” is the total No. of packages contained in the consignment. (d) All the sides and top of each package should carry an appropriate indication / label / stickers indicating the precautions to be taken while handling / storage. |
| GCC 2.16.1 | Details of Shipping and other Documents to be furnished by the Supplier are : A) For goods manufactured within India Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by registered post / speed post and copies thereof by FAX. (a) Two copies of Supplier’s Invoice indicating, inter-alia description and specification of the goods, quantity, unit price, total value (b) Packing list (c) Certificate of country of origin (d) Insurance certificate, if required under the contract (e) Railway receipt/Consignment note (f) Manufacturer’s guarantee certificate and in-house inspection certificate (g) Inspection certificate issued by purchaser’s inspector, if any (h) Any other document(s) as and when required in terms of the contract NOTE: 1 The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s). 2 The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses. |

| | | |
|------------|---|---|
| GCC 2.16.1 | B) | For goods manufactured abroad |
| | | Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by Registered Post / courier and copies thereof by FAX. |
| | (a) | Two copies of supplier's Invoice giving full details of the goods including quantity, value, etc. |
| | (b) | Packing list |
| | (c) | Certificate of country of origin |
| | (d) | Manufacturer's guarantee and Inspection certificate |
| | (e) | Inspection certificate issued by the Purchaser's Inspector, if any |
| | (f) | Insurance Certificate, if required under the contract |
| | (g) | Name of the Vessel / Carrier |
| | (h) | Bill of Lading / Airway Bill |
| | (i) | Port of Loading |
| | (j) | Date of Shipment |
| | (k) | Port of Discharge & expected date of arrival of goods |
| | (l) | Any other document(s) as and when required in terms of the contract |
| | NOTE: | |
| 1 | The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s). | |
| 2 | The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses. | |
| GCC 2.16.3 | (a) | In case of supplies from within India, the mode of transportation shall be by Air / Rail / Road. |
| | (b) | In case of supplies from abroad, the mode of transportation shall be by Air/Sea. |
| GCC 2.17.1 | The insurance shall be for an amount equal to 110% of the CIF or CIP value of the contract from within "warehouse to warehouse (final destination)" on "all risk basis" including strikes, riots and civil commotion, in addition to storage policy for 60 days is advised so as to ensure the inspection by the Indian Agent at the time of opening the packages. | |
| GCC 2.21.3 | The period of comprehensive on-site replacement Warranty shall be Two Years from the date of final acceptance of the Machine. | |
| GCC 2.22.1 | The method and conditions of payment to be made to the Supplier under this Contract shall be as follows: | |
| | A | Payment for Goods supplied from abroad: |
| | Payment of foreign currency portion shall be made in currency of the Contract in the following manner: | |
| | (a) | On Shipment: Ninety (90%) percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 2.16. |
| | (b) | On Acceptance: Ten (10%) percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods and successful installation & commissioning upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the Performance security, if any. |
| | (c) | The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the FOB / FCA value. |
| | (d) | The LC will be confirmed at the suppliers cost, if requested specifically by the supplier. All bank charges abroad shall be to the account of the beneficiary i.e. supplier and all bank charges in India shall be to the account of the opener i.e. purchaser. If LC is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges thereof would be to the suppliers' account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed. |

| | | |
|------------|---|--|
| GCC 2.22.1 | B | Payment for Goods and Services supplied from India: |
| | | The payment shall be made in Indian Rupees, as follows: |
| | (a) | On shipment : Ninety (90%) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in GCC Clause 2.16.1 |
| | (b) | On Acceptance: The remaining Ten (10%) percent of the Contract value shall be paid to the Supplier within thirty (30) days after the date of the acceptance certificate issued by the Purchaser subject to submission of performance security, if any. |
| | NOTE: | |
| | | All payments due under the Contract shall be paid after deduction of statutory levies at source (like ESIC, Income Tax, etc.), wherever applicable. |
| GCC 2.27.1 | (a) | The penalty shall be 0.5% per week or part of a week towards late delivery and towards delay in installation and commissioning. |
| | (b) | The maximum amount of penalty shall be 10% . |
| | (c) | The liquidated damages shall be levied on the delivered price of the delayed Goods or unperformed Services or contract value. |
| GCC 2.34.1 | The place of jurisdiction is Bangalore , India. | |
| GCC 2.35.1 | For notices , the Purchaser's address is Attention: The Director, CSIR National Aerospace Laboratories (NAL) C-CADD, C-CMMACS Campus, Belur Bangalore- 560037, India Telephone : 0091-80-25051959 /1986 Facsimile number: 0091-80- 25224292 E-mail address : spo@ccadd.cmmacs.ernet.in | |
| GCC 2.40.4 | The integrity pact is not to be signed. However, efforts must be made to realize the objectives & spirits thereof. | |

CHAPTER 3

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

SCHEDULE OF REQUIREMENT

| Sr. No. | Brief Description of goods and services | Quantity | Final destination/ Place | Delivery Schedule (to be filled by the bidder) | Time frame required for conducting installation, commissioning of the equipment, acceptance test, etc. after the arrival of consignment (to be filled by the bidder) |
|---------|---|---------------------------|-----------------------------|---|--|
| 1 | Solutionizing Furnace | As mentioned in Chapter 4 | | | |

Term of delivery : Goods from Abroad –CIF / CIP Bangalore
Goods from India - **Free delivery** to NAL
Kodihalli, Bangalore – 560 017

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

Scope of Supply : _____

Standards : _____

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

Signature of the Bidder : _____

Date :

Place :

CHAPTER 4

SPECIFICATIONS AND ALLIED TECHNICAL DETAILS

The Bidder may submit the offer for either **Option I or Option II or both the Options I & II separately**. However, the Purchase Order would be placed for either Option-I or Option-II. NAL reserves the right to choose the Option.

The Bidders are advised to visit the designated site to enable design of the equipment to fit the allocated site for **both the Options I & II**

OPTION - I

I. **Scope of work** : Design, manufacture, assembly ,installation and commissioning including calibration of solutionising furnace as per the following specification , terms and conditions :

| Sr. No. | Description | Unit | Quantity |
|---------|--|------|----------|
| 1.1 | Elevated downdrop furnace | No. | 1 |
| 1.2 | Motorized sliding door | No. | 1 |
| 1.3 | Charge support ring (winch operated) | No. | 1 |
| 1.4 | Stainless steel(S.S) work basket | No. | 3 |
| 1.5 | Platform trolley with quenching tank | No. | 1 |
| 1.6 | Control panel with PLC | No. | 1 |
| 1.7 | Computer controlled parameter setting with associated software | No. | 1 |

| Sr. No. | Description | Specification |
|---------|---|---|
| 2.1 | Work Basket Size (effective) | 1450mm Dia. x 2000mm Height. |
| 2.2 | Furnace Inner Chamber Dimensions (baffle) | To suit Sl.no.2.1 (To be specified by the vendor) |
| 2.3 | Furnace Inner Dimensions | To suit Sl.no.2.1 (To be specified by the vendor) |
| 2.4 | Furnace Overall Size (approx.) | To be specified by the vendor |
| 2.5 | Space required | To be specified by the vendor |
| 2.6 | Max. Temperature | 700° C |
| 2.7 | Working Temperature | 0 ° - 600° C (continuously variable with programmable control) |
| 2.8 | No. of Temp. Control Zones | 1 No. |
| 2.9 | Temperature Accuracy | ± 3° C at 600° C |
| 2.10 | Power Rating | To be specified by the vendor |
| 2.11 | Power supply available | 415Volts , 3 Ph. 50 Hz. |
| 2.12 | Temperature Control System | Automatic through Micro Processor based PID Controller with thyristor power pack |
| 2.13 | Temperature Recorder | Multi Point Paperless recorder along with paper reading. |
| 2.14 | Quenching Tank | Vendor to design to suit Sl.No.2.1 (Stainless Steel) and other parameters as listed in the specification. |
| 2.15 | Platform Trolley | 1 No. to accommodate Quenching Tank with DM water |
| 2.16 | Hot Air Circulation | 1 No. Stainless steel Fan at Top - Required as part of our specification. Power & RPM to be specified by vendor to maintain uniform temp. distribution in the furnace |
| 2.17 | Bottom Door | Motorized / Hydraulically operated |
| 2.18 | Loading & Quenching Operation | By Motorized / Hydraulic / Pneumatic winch system provided at Top. To be specified by the vendor. |
| 2.19 | Quenching delay time (Time taken from opening /actuation of the furnace door till the complete charge loaded in the furnace is immersed in the quenchant) | shall not exceed 5 seconds |

II. CONSTRUCTION DETAILS

| Sr. No. | Description |
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| 1.0 | CASING |
| 1.1 | The outer casing of the furnace shall be fabricated out of thick mild steel plates reinforced with heavy channel & structural angles. The casing/ shell thickness to be specified by the vendor. |
| 1.2 | The furnace shall be of vertical circular elevated type supported on pillars. |
| 1.3 | The inner wall shall be fabricated out of thick stainless steel sheet. Vendor to specify the thickness. |
| 1.4 | The inner chamber (baffle) shall be fabricated out of thick stainless steel sheet. The baffle shall prevent the direct radiation of the heat from the heating element on to the charge. Vendor to specify thickness. |
| 1.5 | Third party weld inspection to be carried out and relevant certificate to be submitted by the vendor . |
| 2.0 | DOOR |
| 2.1 | Bottom of the furnace shall be fitted with motorized door. |
| 2.2 | The door shall be operated electro mechanically /hydraulically. |
| 2.3 | The door shall be held tight to the furnace by means of pneumatic/hydraulic cylinder for quick locking & releasing. |
| 2.4 | The door shall be fitted with ceramic fibre rope for sealing to the furnace. |
| 3.0 | FURNACE LINING |
| 3.1 | The space between outer casing & inner casing shall be filled with ceramic fibre modules of 1260° C range all around the furnace including bottom and door. Vendor to specify the thickness. The temperature on the outer surface of the furnace wall (exposed to ambient shop environment) shall not exceed 70 degree Celsius when the furnace is working at its maximum operating temperature. |
| 4.0 | HEATING ELEMENT |
| 4.1 | The heating element shall be Nichrome 80/20 strip supported on specially designed ceramic supports and shall be provided all around the chamber. Vendor to specify |
| 5.0 | HOT AIR CIRCULATION |
| 5.1 | The Hot air circulation is effected by means of 1 no. blower with stainless steel impeller supported on heavy duty bearings at top of the furnace driven by 1 no. of A.C motor of suitable capacity to maintain uniformity of furnace temperature within ± 3 Deg Celsius. |
| 6.0 | UNLOADING SYSTEM |
| 6.1 | The loading & unloading of the charge basket shall be from bottom of the furnace. |
| 6.2 | The charge basket with parts shall be hung by stainless steel frame with hooks and in turn hung by S.S. wire rope / chain from top. |
| 6.3 | The S.S. wire rope / chain shall be operated through a motorized/hydraulic winch mechanism provided at top with suitable capacity dual speed gear motor. |
| 6.4 | The S.S. charge basket with parts shall be transferred from the bottom opening of the furnace into Quenchant tank situated below the furnace meeting the quench delay requirements as per Sl. No. 2.19. |
| 6.5 | Overhead crane provision for loading /unloading of basket from the tank to be provided. Suitable locator on the basket to be provided for auto run of these operations. |
| 7.0 | WORK BASKET |
| 7.1 | The vendor shall provide 3 nos. work basket fabricated out of S.S. material grill / mesh type as per Sl. No. 2.1 |
| 7.2 | The design of the work basket shall have sufficient mesh opening for hot air circulation and Quenchant flow into and out of it. |
| 8.0 | PLATFORM TROLLEY, QUENCHING TANK & LOADING STATION |
| 8.1 | The Vendor shall provide one no. quenching tank fabricated out of 6mm thick S.S. Material with suitable reinforcement to maintain shape rigidity in fully loaded condition. |
| 8.2 | The size of the quenching tank to be designed by the vendor to suit specifications mentioned above . |
| 8.3 | The Quenchant tank should have suitable temperature sensor (J type thermocouple) to sense the Quenchant temperature |
| 8.4 | The quenching tank shall be fitted on a platform trolley. |
| 8.5 | Next to tanks, space shall be provided for the loading station. |
| 8.6 | The trolley shall be operated through geared motor of suitable capacity. |
| 8.7 | The quench delay shall not exceed 5 seconds and should be recorded in the system. |
| 8.8 | Loading / Quenching operation shall be both in auto and manual modes. |

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| 8.9 | The basket location /tank/container of suitable size to be mounted alongside the quenching tank which is moveable and should be controlled by PLC with proximity switches mounted on the trolley for positioning, quenching, and loading of the basket. |
| 9.0 | INSTRUMENTATION (TEMPERATURE CONTROL & RECORDING) |
| 9.1 | The temperature control shall be through appropriate microprocessor based auto tuning P.I.D temperature controller backed with Thyristor. |
| 9.2 | Digital overshoot temperature controller shall have closed loop feedback system to maintain the furnace working temperature within the tolerance limits as in sl. No.9.3. For temperatures outside the set temperature limits, the system shall alert the operator with audio / visual alarm. Necessary accept / reset buttons shall be provided to reset the system, if so desired. |
| 9.3 | Temperature variation in the furnace shall not exceed $\pm 3^{\circ}$ C at maximum operating temperature of the furnace. |
| 9.4 | Temperature recording shall be through a multi point, paper and paperless recording system with computer connectivity and supporting software of Eurotherm /equivalent reputed make. The resolution of the temperature plot shall be better than or equal to 6° C/mm (transverse direction) and the chart speed minimum 25mm/hour with a provision to print the date and time. These features shall be programmable by the user. |
| 9.5 | The furnace shall be equipped with at least two N type thermocouples for each cubic meter of the working volume to record the temperature. All thermocouples shall be serviceable and in addition have a valid and current calibration certificate. |
| 9.6 | Provision shall exist for mounting test thermocouple with a 10mm dia. Inspection hole within a distance of 75mm of the control thermocouple and recording temperature for the purpose of instrumentation system check with facility to plug the opening when not required. |
| 9.7 | An inspection hole of dia.25mm with plug shall be provided at the lower side of the furnace to enable insertion of thermocouples. |
| 9.8 | A suitable temperature indicator is to be provided (Digital) with $\pm 0.5^{\circ}$ C accuracy on the panel. |
| 10.0 | CONTROL PANEL |
| 10.1 | The control panel shall be vibration free, and housed with the following controlling instruments (and any additional instruments recommended by the Vendor) : |
| a | Digital Ammeters and Voltmeters to indicate current & voltage in each Phase |
| b | Heat treatment cycle time (duration) indicator with countdown timer. |
| c | Temperature controller & Digital overshoot controller. |
| d | Temperature recorder with an external ON/OFF switch. |
| e | Quenchant temperature indicators-digital. |
| f | Accept / Reset buttons. |
| g | Power Isolation switch. |
| h | Thyristor power pack. |
| i | Safety alarm/emergency stop switch. |
| j | Any other safety requirements as decided by the vendor. |
| 10.2 | Control panel shall be painted with approved quality paint and colour. |
| 10.3 | Temperature recorder shall be positioned at a suitable height and the recorder shall be adequately supported with programmable controller to record the operation cycles. |
| 10.4 | Heat treatment cycle programming module to be provided. (to program the heating/cooling ramp rate). |
| 10.5 | Computer controlled parameter setting with associated software. The software shall be user friendly, permit the operator to pre-set/ pre program heat treatment parameters like soaking time, ramp time, furnace temperature, and have provision for entry of other comments/ operational details. The software shall also store all the heat treatment parameters during the operation of furnace, and have post processing capability to generate user defined plots. Vendor to provide details. Vendor shall supply dedicated PC with software to meet these requirements, and a user manual for use of the software. |
| 11.0 | PRE-DISPATCH INSPECTION |
| 11.1 | Prior to dispatch the vendor shall ensure that the equipment and accessories supplied meet the NAL Purchase order requirements. NAL would carry out the pre-shipment inspection. The cost for travelling, boarding ,lodging will be borne by NAL. |
| 12.0 | INSTALLATION, CALIBRATION AND COMMISSIONING |
| 12.1 | The vendor shall install and prove the furnace for all functional aspects at NAL as per PO requirements. |
| 12.2 | The calibration of furnace shall be in accordance with AMS 2750D -Class 1. |
| 12.2 | Temperature uniformity shall be provided for $\pm 3^{\circ}$ C by placing a flexible thermo couples, for every 0.5 cubic meter of the furnace internal volume with necessary no. of thermocouples (to be |

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| | specified by the vendor). |
| 12.3 | The furnace shall be proved for 5 cycles of operation for loading, quenching, unloading, movement of trolley, operation of the door in auto/manual mode and programmable temperature ramp rate functionality. |
| 13.0 | TRAINING |
| 13.1 | Minimum 10 days of training to be provided for NAL Engineers on operation and maintenance of the furnace after installation and commissioning of the furnace at NAL . |
| 14.0 | FINAL ACCEPTANCE CRITERIA |
| 14.1 | Inspection of the furnace shall be carried out in presence of NAL engineers and checked for trouble free operation at NAL, Bangalore as per P.O. |
| 14.2 | Relevant temperature measurement tests shall be conducted and certificate to be produced. |
| 14.3 | All safety requirements shall confirm to OSHA-1910.217. |
| 14.4 | Trail runs will be conducted for 15 days at NAL after installation and commissioning |
| 14.5 | The final acceptance test includes prove out of heat treatment of four nos. of sheet metal components of Aluminium alloy of size 1500mm X 1300 mm X 2.5 mm at NAL . |
| 14.6 | Calibration certificates shall be provided for all the Temperature gauges etc. |
| 15.0 | SPECIAL NOTES |
| 15.1 | Packing at manufacturer's end, transportation to NAL, Installation, calibration & commissioning of the furnace will be the complete responsibility of the Supplier. |
| 15.2 | It is the vendor's responsibility to unload the furnace, move the furnace to the installation place and keeping the furnace in position at NAL. |
| 15.3 | Detailed drawings for site preparation shall be provided at the time of placing the P.O |
| 15.4 | Instruction manual including Operation, instrumentation, electrical wiring diagram, parts list and maintenance instructions to be supplied in English language -3 sets. |
| 15.5 | List of spares to be provided, specifying the periodicity of their replacement. |
| 15.6 | Only such vendors who have supplied 5 furnaces of approximately similar capacity as indicated in this Technical specification in the last five years to other organizations/ industries shall be considered for evaluation. Relevant copies of the P.O's and customer feedback certificates to be enclosed. |
| 15.7 | The construction of the furnace shall conform to NAL P.O. requirements. |
| 15.8 | All radiation test readings shall meet the requirement of AMS 2750D specification. |
| 15.9 | The vendors are requested to Visit the proposed Furnace installation site at NAL to assess the total requirements (including space availability) prior to quoting- |
| 15.10 | The vendors are requested to quote for both the furnaces separately. Director, NAL reserves the right to buy the entire quantity, or part of the quantity or annul the bidding process without assigning any reason there off. |
| 16.0 | WARRANTY/AMC |
| 16.1 | The furnace with the control panel shall have a warranty of 24 months from the date of installation, commissioning and final acceptance at NAL. It is the responsibility of the Vendor, during the warranty period to ensure periodic maintenance, breakdown maintenance, calibration (as per AMS 2750D) of all instruments (four times in a year), System Accuracy Test (SAT), Temperature Uniformity Survey (TUS) through any Organization having NABL accreditation. |
| 16.2 | The Vendor shall enter into an annual maintenance contract for a period of 3 years after the regular warranty which includes any number of break down maintenance. The AMC charges may be quoted separately which includes periodic calibration (as per AMS 2750D) of all instruments (four times in a year), System Accuracy Test (SAT), Temperature Uniformity Survey (TUS) through any Organization having NABL accreditation. |

ADDITIONAL ITEMS / SERVICES FOR SOLUTIONISING FURNACE FOR OPTION I

The following items required for Solutionising Furnace (as per specification given in Option – I) shall be quoted separately.

| Sr. No. | Description | Size /Specification | Reference clause No. of OPTION I |
|----------------|---|---|--|
| 01 | Work Basket Size (effective)-3 Nos. | 1450mm Diameter X 2000mm Height. | Sl.No. 2.1 of Spec. Table and clause No. 7.1 |
| 02 | Quenching Tank | Vendor to design to suit Sl.No. 2.1(Stainless steel)and other parameters as listed in the spec. | Clause No. 2.14 and Clause No. 8.1 |
| 03 | Heating Element | Nichrome 80/20 strip | Clause No. 4.0 and 4.1 |
| 04 | Pre- Dispatch Inspection charges if any | ----- | Clause No. 11 and 11.1 |
| 05 | Installation, calibration Commissioning and Prove out charges | ----- | Clause No. 12 to 12.3,15.1, 15.2 |
| 06 | Training Charges | ----- | Clause No. 13 and 13.1 |
| 07 | Final Acceptance at NAL and prove out Charges | ----- | Clause No. 14 to 14.6 |
| 08 | Instruction manual including Operation, instrumentation, electrical wiring diagram, parts list and maintenance instructions to be supplied in English language -3 sets. | ----- | Clause No. 15.4 |
| 09 | List of Spares | To be specified by the vendor | Clause No. 15.5 |
| 10 | The Vendor shall enter into an annual maintenance contract for a period of 3 years beyond warranty period of 2 years after the regular warranty which includes any number of break down maintenance | ----- | Clause no. 16.2 |

The prices for **ADDITIONAL ITEMS / SERVICES** will form part of total pricing of Option – I

OPTION – II

- I. **Scope of work** : Design, manufacture, assembly installation and commissioning including calibration of solutionising furnace as per the following specification , terms and conditions :

| Sr. No. | Description | Unit | Quantity |
|---------|--|------|----------|
| 1.1 | Elevated dropdown furnace | No. | 1 |
| 1.2 | Motorized sliding door | No. | 1 |
| 1.3 | Charge support ring (winch operated) | No. | 1 |
| 1.4 | S.S. work basket | No. | 3 |
| 1.5 | Platform trolley with quenching tank | No. | 1 |
| 1.6 | Control panel with PLC | No. | 1 |
| 1.7 | Computer controlled parameter setting with associated software | No. | 1 |

| Sr. No. | Description | Specification |
|---------|---|---|
| 2.1 | Work Basket Size (effective) | 1750mm dia. x 2500mm Height. |
| 2.2 | Furnace Inner Chamber Dimensions (baffle) | To suit Sl.no.2.1 (To be specified by the vendor) |
| 2.3 | Furnace Inner Dimensions | To suit Sl.no.2.1 (To be specified by the vendor) |
| 2.4 | Furnace Overall Size (approx.) | To be specified by the vendor |
| 2.5 | Space required | To be specified by the vendor |
| 2.6 | Max. Temperature | 700° C |
| 2.7 | Working Temperature | 0° - 600° C (continuously variable with programmable control) |
| 2.8 | No. of Temp. Control Zones | 1 No. |
| 2.9 | Temperature Accuracy | ± 3° C at 600° C |
| 2.10 | Power Rating | To be specified by the vendor |
| 2.11 | Power supply available | 415Volts , 3 Ph. 50 Hz. |
| 2.12 | Temperature Control System | Automatic through Micro Processor based PID Controller with thyristor power pack |
| 2.13 | Temperature Recorder | Multi Point Paperless recorder along with paper reading. |
| 2.14 | Quenching Tank | Vendor to design to suit Sl.No. 2.1(S.S)and other parameters as listed in the spec. |
| 2.15 | Platform Trolley | 1 No. to accommodate Quenching Tank with DM water |
| 2.16 | Hot Air Circulation | 1 No. ,S.S.Fan at Top- Required as part of our specification .Power & RPM to be specified by vendor to maintain uniform temp. distribution in the furnace |
| 2.17 | Bottom Door | Motorized / Hydraulically operated |
| 2.18 | Loading & Quenching Operation | By Motorized /Hydraulic/Pneumatic winch system provided at Top. To be specified by the vendor . |
| 2.19 | Quenching delay time (Time taken from opening /actuation of the furnace door till the complete charge loaded in the furnace is immersed in the quenchant) | shall not exceed 5 seconds |

II. CONSTRUCTION DETAILS :

| Sr. No. | Description |
|---------|--|
| 1.0 | CASING |
| 1.1 | The outer casing of the furnace shall be fabricated out of thick mild steel plates reinforced with heavy channel & structural angles. The casing/ shell thickness to be specified by the vendor. |
| 1.2 | The furnace shall be of vertical circular elevated type supported on pillars. |
| 1.3 | The inner wall shall be fabricated out of thick stainless steel sheet. Vendor to specify the thickness. |
| 1.4 | The inner chamber (baffle) shall be fabricated out of thick stainless steel sheet. The baffle shall prevent the direct radiation of the heat from the heating element on to the charge. Vendor to specify thickness. |
| 1.5 | Third party weld inspection to be carried out and relevant certificate to be submitted by the vendor . |
| 2.0 | DOOR |
| 2.1 | Bottom of the furnace shall be fitted with motorized door. |
| 2.2 | The door shall be operated electro mechanically /hydraulically. |
| 2.3 | The door shall be held tight to the furnace by means of pneumatic/hydraulic cylinder for quick locking & releasing. |
| 2.4 | The door shall be fitted with ceramic fibre rope for sealing to the furnace. |
| 3.0 | FURNACE LINING : |
| 3.1 | The space between outer casing & inner casing shall be filled with ceramic fibre modules of 1260° C range all around the furnace including bottom and door. Vendor to specify the thickness. The temperature on the outer surface of the furnace wall (exposed to ambient shop environment) shall not exceed 70 degree Celsius when the furnace is working at its maximum operating temperature. |
| 4.0 | HEATING ELEMENT |
| 4.1 | The heating element shall be Nichrome 80/20 strip supported on specially designed ceramic supports and shall be provided all around the chamber. Vendor to specify |
| 5.0 | HOT AIR CIRCULATION |
| 5.1 | The Hot air circulation is effected by means of 1 no. blower with stainless steel impeller supported on heavy duty bearings at top of the furnace, driven by 1 no. of A.C motor of suitable capacity to maintain uniformity of furnace temperature within ± 3 Deg Celsius. |
| 6.0 | UNLOADING SYSTEM |
| 6.1 | The loading & unloading of the charge basket shall be from bottom of the furnace. |
| 6.2 | The charge basket with parts shall be hung by stainless steel frame with hooks and in turn hung by S.S. wire rope / chain from top. |
| 6.3 | The S.S. wire rope / chain shall be operated through a motorized/hydraulic winch mechanism provided at top with suitable capacity dual speed gear motor. |
| 6.4 | The S.S. charge basket with parts shall be transferred from the bottom opening of the furnace into Quenchant tank situated below the furnace meeting the quench delay requirements as per Sl. No. 2.19. |
| 6.5 | Over head crane provision for loading /unloading of basket from the tank to be provided. Suitable locator on the basket to be provided for auto run of these operations. |
| 7.0 | WORK BASKET |
| 7.1 | The vendor shall provide 3 nos. work basket fabricated out of S.S. material grill / mesh type as per Sl. No. 2.1. |
| 7.2 | The design of the work basket shall have sufficient mesh opening for hot air circulation and Quenchant flow into and out of it. |
| 8.0 | PLATFORM TROLLEY, QUENCHING TANK & LOADING STATION |
| 8.1 | The Vendor shall provide one no. quenching tank fabricated out of 6mm thick SS. Material with suitable reinforcement to maintain shape rigidity in fully loaded condition. |
| 8.2 | The size of the quenching tank to be designed by the vendor to suit specifications mentioned above . |
| 8.3 | The Quenchant tank should have suitable temperature sensor (J type thermocouple) to sense the Quenchant temperature |
| 8.4 | The quenching tank shall be fitted on a platform trolley. |
| 8.5 | Next to tanks, space shall be provided for the loading station. |
| 8.6 | The trolley shall be operated through geared motor of suitable capacity. |
| 8.7 | The quench delay shall not exceed 5 seconds and should be recorded in the system. |
| 8.8 | Loading / Quenching operation shall be both in auto and manual modes. |
| 8.9 | The basket location /tank/container of suitable size to be mounted alongside the quenching tank which is moveable and should be controlled by PLC with proximity switches mounted on the trolley for positioning, quenching, and loading of the basket. |
| 9.0 | INSTRUMENTATION (TEMPERATURE CONTROL & RECORDING) |
| 9.1 | The temperature control shall be through appropriate microprocessor based auto tuning P.I.D |

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| | temperature controller backed with Thyristor. |
| 9.2 | Digital overshoot temperature controller shall have closed loop feedback system to maintain the furnace working temperature within the tolerance limits as in sl. No.9.3. For temperatures outside the set temperature limits, the system shall alert the operator with audio / visual alarm. Necessary accept / reset buttons shall be provided to reset the system, if so desired. |
| 9.3 | Temperature variation in the furnace shall not exceed $\pm 3^{\circ}$ C at maximum operating temperature of the furnace. |
| 9.4 | Temperature recording shall be through a multi point, paper and paperless recording system with computer connectivity and supporting software of Eurotherm /equivalent reputed make. The resolution of the temperature plot shall be better than or equal to 6° C/mm (transverse direction) and the chart speed minimum 25mm/hour with a provision to print the date and time. These features shall be programmable by the user. |
| 9.5 | The furnace shall be equipped with at least two N type thermocouples for each cubic meter of the working volume to record the temperature. All thermocouples shall be serviceable and in addition have a valid and current calibration certificate. |
| 9.6 | Provision shall exist for mounting test thermocouple with a 10mm dia. inspection hole within a distance of 75mm of the control thermocouple and recording temperature for the purpose of instrumentation system check with facility to plug the opening when not required. |
| 9.7 | An inspection hole of dia. 25mm with plug shall be provided at the lower side of the furnace to enable insertion of thermocouples. |
| 9.8 | A suitable temperature indicator is to be provided (Digital) with $\pm 0.5^{\circ}$ C accuracy on the panel. |
| 10.0 | CONTROL PANEL |
| 10.1 | The control panel shall be vibration free, and housed with the following controlling instruments (and any additional instruments recommended by the Vendor) : |
| a | Digital Ammeters and Voltmeters to indicate current & voltage in each Phase |
| b | Heat treatment cycle time (duration) indicator with countdown timer. |
| c | Temperature controller & Digital overshoot controller. |
| d | Temperature recorder with an external ON/OFF switch. |
| e | Quenchant temperature indicators-digital. |
| f | Accept / Reset buttons. |
| g | Power Isolation switch. |
| h | Thyristor power pack. |
| i | Safety alarm/emergency stop switch. |
| J | Any other safety requirements as decided by the vendor. |
| 10.2 | Control panel shall be painted with approved quality paint and colour. |
| 10.3 | Temperature recorder shall be positioned at a suitable height and the recorder shall be adequately supported with programmable controller to record the operation cycles. |
| 10.4 | Heat treatment cycle programming module to be provided. (to program the heating/cooling ramp rate). |
| 10.5 | Computer controlled parameter setting with associated software. The software shall be user friendly, permit the operator to pre-set/ pre program heat treatment parameters like soaking time, ramp time, furnace temperature, and have provision for entry of other comments/ operational details. The software shall also store all the heat treatment parameters during the operation of furnace, and have post processing capability to generate user defined plots. Vendor to provide details. Vendor shall supply dedicated PC with software to meet these requirements, and a user manual for use of the software. |
| 11.0 | PRE-DISPATCH INSPECTION |
| 11.1 | Prior to dispatch the vendor shall ensure that the equipment and accessories supplied meet the NAL Purchase order requirements. NAL would carry out the pre-shipment inspection. The cost for travelling , boarding, lodging will be borne by NAL . |
| 12.0 | INSTALLATION, CALIBRATION AND COMMISSIONING |
| 12.1 | The vendor shall install and prove the furnace for all functional aspects at NAL as per P.O requirements. |
| 12.2 | The calibration of furnace shall be in accordance with AMS 2750D -Class 1. |
| 12.2 | Temperature uniformity shall be provided for $\pm 3^{\circ}$ C by placing a flexible thermo couples, for every 0.5 cubic meter of the furnace internal volume with necessary no. of thermocouples (to be specified by the vendor). |
| 12.3 | The furnace shall be proved for 5 cycles of operation for loading, quenching, unloading, movement of trolley, operation of the door in auto/manual mode and programmable temperature ramp rate functionality. |
| 13.0 | TRAINING |
| 13.1 | Minimum 10 days of training to be provided for NAL Engineers on operation and maintenance of |

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| | the furnace after installation and commissioning of the furnace at NAL . |
| 14.0 | FINAL ACCEPTANCE CRITERIA |
| 14.1 | Inspection of the furnace shall be carried out in presence of NAL engineers and checked for trouble free operation at NAL ,Bangalore as per P.O . |
| 14.2 | Relevant temperature measurement tests shall be conducted and certificate to be produced. |
| 14.3 | All safety requirements shall confirm to OSHA-1910.217. |
| 14.4 | Trail runs will be conducted for 15 days at NAL after installation and commissioning |
| 14.5 | The final acceptance test includes prove out of heat treatment of four nos. of sheet metal components of Aluminium alloy of size upto 2000mm X 1500 mm X 2.5 mm at NAL . |
| 14.6 | Calibration certificates shall be provided for all the Temperature gauges etc. |
| 15.0 | SPECIAL NOTES |
| 15.1 | Packing at manufacturer's end, transportation to NAL, Installation, calibration & commissioning of the furnace will be the complete responsibility of the Supplier. |
| 15.2 | It is the vendor's responsibility to unload the furnace, move the furnace to the installation place and keeping the furnace in position at NAL. |
| 15.3 | Detailed drawings for site preparation shall be provided at the time of placing the P.O |
| 15.4 | Instruction manual including Operation, instrumentation, electrical wiring diagram, parts list and maintenance instructions to be supplied -3 sets. |
| 15.5 | List of spares to be provided, specifying the periodicity of their replacement. |
| 15.6 | Only such vendors who have supplied 5 furnaces of approximately similar capacity as indicated in this Technical specification in the last five years to other organizations/ industries shall be considered for evaluation. Relevant copies of the P.O's and customer feedback certificates to be enclosed. |
| 15.7 | The construction of the furnace shall conform to NAL P.O. requirements. |
| 15.8 | All radiation test readings shall meet the requirement of AMS 2750D specification. |
| 15.9 | The vendors are requested to v isit the proposed Furnace installation site at NAL to assess the total requirements (including space availability) prior to quoting |
| 15.10 | The vendors are requested to quote for both the furnaces separately. Director, NAL reserves the right to buy the entire quantity, or part of the quantity or annul the bidding process without assigning any reason there off. |
| 16.0 | WARRANTY /AMC |
| 16.1 | The furnace with the control panel shall have a warranty of 24 months from the date of installation, commissioning and final acceptance at NAL. It is the responsibility of the Vendor, during the warranty period to ensure periodic maintenance, breakdown maintenance, calibration (as per AMS 2750D) of all instruments (four times in a year), System Accuracy Test (SAT), Temperature Uniformity Survey (TUS) through any Organization having NABL accreditation. |
| 16.2 | The Vendor shall enter into an annual maintenance contract for a period of 3 years after the regular warranty which includes any number of break down maintenance. The AMC charges may be quoted separately which includes periodic calibration (as per AMS 2750D) of all instruments (four times in a year), System Accuracy Test (SAT), Temperature Uniformity Survey (TUS) through any Organization having NABL accreditation. |

ADDITIONAL ITEMS / SERVICES FOR SOLUTIONISING FURNACE FOR OPTION II

The following items required for Solutionising Furnace (as per specification given in OPTION II) shall be quoted separately.

| Sr. No. | Description | Size /Specification | Reference clause No. of OPTION II |
|----------------|--|--|---|
| 01 | Work Basket Size (effective)-3 Nos. | 1750mm dia. x 2500mm Height. | SI.No. 2.1 of Spec. Table |
| 02 | Quenching Tank | Vendor to design to suit SI.No. 2.1(S.S)and other parameters as listed in the spec.(6mm Thick plate) | SI.No. 2.14 of Spec. Table and clause 8.1 |
| 03 | Heating Element | Nichrome 80/20 strip | Clause No. 4.1 |
| 04 | Pre-dispatch inspection charges if any | ----- | Clause No. 11.1 |
| 05 | Installation , Calibration and Commissioning charges | ----- | Clause No. 12 to 12.3 and 15.2 |
| 06 | Training charges | ----- | Clause No. 13 and 13.1 |
| 07 | Final Acceptance criteria: 1. Trial runs charges conducted for 15 days at NAL 2. Prove out of heat treatment of four nos. of sheet metal components . 3. Calibration of temperature gauges | ----- | Clause No. 14.4 ,14.5 and 14.6 |
| 08 | Instruction manual including Operation, instrumentation, electrical wiring diagram, parts list and maintenance instructions to be supplied -3 sets. | ----- | Clause No. 15.4 |
| 09 | List of spares to be provided | as per vendors list | Clause No. 15.5 |
| 10 | The Vendor shall enter into an annual maintenance contract for a period of 3 years beyond warranty period of 2 years after the regular warranty which includes any number of break down maintenance | ----- | Clause No. 16.2 |

The prices for **ADDITIONAL ITEMS / SERVICES** will form part of total pricing of Option – II.

CHAPTER 5

Qualification Requirements

- 1) The bidder shall furnish documentary evidence to demonstrate that the bidder satisfies the bidders' eligibility criteria.
- 2) The vendor should give details of other similar activities carried out.
- 3) The Bidder should be a manufacturer/authorized representative of a manufacturer who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the "Technical Specification". The MAF must be enclosed with the technical bid. Such equipments must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening.
- 4) The Indian Agents of foreign manufacturers/ suppliers quoting directly on behalf of their principals for items appearing in the restricted list of the current EXIM policy of the Govt. of India are registered with DGS&D.
- 5) Either the Indian Agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. Further, to maintain sanctity of tendering system one Indian agent cannot represent two different foreign principals in one tender.
- 6) The Bidder should furnish the information on all past supplies and satisfactory performance in the proforma (Performance Statement Form).
- 7) Bidders shall invariably furnish documentary evidence (client's certificate) in support of the satisfactory operation of the equipment.
- 8) Details of Service Centers and information on service support facilities that would be provided after the warranty period (in the Service Support Form).
- 9) That adequate and specialized expertise is already available or will be made available following the execution of the contract in the Purchaser's country, to ensure that the support services are responsive and adequate as per **ITB 1.13.2(c)**.

CHAPTER - 6

A. PRICE SCHEDULE FOR GOODS BEING OFFERED FROM ABROAD

Name of the Bidder _____

Tender No. _____

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------|------------------|-------------------|------|----------|--|---|--|----------------------------|---|------------------------------------|
| Sl. No. | Item Description | Country of Origin | Unit | Quantity | Unit Price FCA (named place of delivery) | Total Price FCA (named place of delivery) | Charges for Insurance & transportation to place of destination | Total Price CIF, Bangalore | Indian Agents Commission as a percent of FCA price included in the quoted price | Approx. shipment weight and volume |
| | | | | | | | | | | |

Currency _____

Total Bid price in foreign currency _____

Note:

- (a) Indian agents name & address _____
- (b) Installation, commissioning & training charges, if any _____
- (c) Cost of Spares, if any _____
- (d) The Indian agent's commission shall be paid in Indian Rupees only based on the Exchange Rate prevailing on the date of negotiation of documents in accordance with clause 22.1 of GCC.
- (e) The cost of optional items shall be indicated separately.

Signature of Bidder _____

Name _____

Business Address _____

CHAPTER – 6

B. PRICE SCHEDULE FOR GOODS BEING OFFERED FROM INDIA

Name of the Bidder _____

Tender No. _____

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------|------------------|-------------------|------|----------|---|--|--|---|---|--|
| Sl. No. | Item Description | Country of Origin | Unit | Quantity | Unit Price Ex-Works, Ex-warehouse, Ex-showroom off the shelf price (inclusive of all taxes already paid) | Total Price Ex-Works, Ex-warehouse, Ex-showroom off the shelf price (inclusive of all taxes already paid) | VAT & other taxes like excise duty payable, if contract is awarded | Packing & for warding up to station of dispatch, if any | Charges for inland transportation, insurance up to Laboratory / Institute | Installation, commissioning and training charges, if any |
| | | | | | | | | | | |

Total Bid price in Indian Rupees _____

Note :

- (a) The cost of optional items shall be indicated separately.
- (b) Cost of Spares, if any _____

Signature of Bidder _____
 Name _____
 Business Address _____

CHAPTER 7

Contract Form

Contract No. _____ Date: _____

THIS CONTRACT AGREEMENT is made
the [insert: number] day of [insert: month], [insert: year].

BETWEEN

- (1) The Council of Scientific & Industrial Research registered under the Societies Registration Act 1860 of the Government of India having its registered office at 2, Rafi Marg, New Delhi-110001, India represented by _____ [insert complete name and address of Purchaser (hereinafter called "the Purchaser")], and
- (2) [insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called "the Supplier").

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

01. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
02. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

| | |
|-----|--|
| (a) | This Contract Agreement |
| (b) | General Conditions of Contract |
| (c) | Special Conditions of Contract |
| (d) | Technical Requirements (including Schedule of Requirements and Technical Specifications) |
| (e) | The Supplier's Bid and original Price Schedules |
| (f) | The Purchaser's Notification of Award |
| (g) | [Add here any other document(s)] |

03. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
04. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
05. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

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

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

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

For and on behalf of the Supplier

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

CHAPTER 8

OTHER STANDARD FORMS

| Form No. | Name of the Form |
|-----------------|-----------------------------------|
| 8.1 | Bidder Information Form |
| 8.2 | Manufacturers' Authorization Form |
| 8.3 | Bid Security Form |
| 8.4 | Performance Statement Form |
| 8.5 | Deviation Statement Form |
| 8.6 | Service Support Detail Form |
| 8.7 | Bid Form |
| 8.8 | Performance Security Form |
| 8.9 | Acceptance Certificate Form |
| 8.10 | Integrity Pact |

8.1: Bidder Information Form

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

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

Tender No : [insert number from Invitation for bids]

Page 1 of _____ pages

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

Signature of Bidder _____

Name _____

Business Address _____

8.2: MANUFACTURERS' AUTHORIZATION FORM

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

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

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

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

WHEREAS

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

We hereby extend our full guarantee and warranty in accordance with Clause 21 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

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

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

Title: *[insert title]*

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

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

8.3: BID SECURITY FORM

Whereas _____
(hereinafter called the tenderer")

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

Against the purchaser's tender enquiry No. _____
KNOW ALL MEN by these presents that WE _____
of _____ having our registered office at _____
_____ are bound unto _____ (hereinafter called the "Purchaser")

In the sum of _____

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

THE CONDITIONS OF THIS OBLIGATION ARE:

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

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

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

(Signature of the authorized officer of the Bank)

Name and designation of the officer
Seal, name & address of the Bank and address of the Branch

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

8.4: PERFORMANCE STATEMENT FORM

(For a period of last 3 years)

Name of the Firm.....

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

Signature and Seal of the manufacturer/Bidder

Place :

Date :

8.5: DEVIATION STATEMENT FORM

The following are the particulars of deviations from the requirements of the tender specifications:

| CLAUSE | DEVIATION | REMARKS (INCLUDING JUSTIFICATION) |
|--------|-----------|---|
| | | |

Place:

Date:

Signature and seal of the
Manufacturer/Bidder

NOTE:

Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

8.6: SERVICE SUPPORT DETAIL FORM

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

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

Place :

Date :

8.7: Bid Form

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

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

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

Invitation for Bid No. : *[insert No of IFB]*

To : *[insert complete name of Purchaser]*

We, the undersigned, declare that:

| | |
|-----|--|
| (a) | We have examined and have no reservations to the Bidding Documents, including Addenda No.: <i>[insert the number and issuing date of each Addenda]</i> |
| (b) | We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services <i>[insert a brief description of the Goods and Related Services]</i> |
| (c) | The total price of our Bid, excluding any discounts offered in item (d) below, is: <i>[insert the total bid price in words and figures, indicating the various amounts and the respective currencies]</i> |
| (d) | The discounts offered and the methodologies for their application are: Discounts. If our bid is accepted, the following discounts shall apply. <i>[Specify in detail each discount offered and the specific item of the Schedule of Requirements to which it applies.]</i> |
| (e) | Our bid shall be valid for the period of time specified in ITB Clause 1.16, from the date fixed for the bid submission due date in accordance with ITB Clause 1.19 and it shall remain binding upon us and may be accepted at any time before the expiration of that period |
| (f) | If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 1.41 and GCC Clause 2.13 for the due performance of the Contract |
| (g) | The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: <i>[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]</i> |

| Name of Recipient | Address | Reason | Amount |
|-------------------|---------|--------|--------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

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

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

Signed : *[insert signature of person whose name and capacity are shown]*
 In the capacity of *[insert legal capacity of person signing the Bid Submission Form]*

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

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

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

8.8: PERFORMANCE SECURITY FORM

MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY

To,
.....

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

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

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

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

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

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

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

(Signature of the authorized officer of the Bank)

.....
Name and designation of the officer

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

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

8.9: Acceptance certificate form

No.

Dated:

M/s. _____

Sub: Certificate of commissioning of equipment

01. This is to certify that the equipment as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para 2). The same has been installed and commissioned.

| | | |
|-----|--|--|
| (a) | Contract No. Date: | |
| (b) | Description of the equipment | |
| (c) | Name of the consignee | |
| (d) | Scheduled date of delivery of the consignment to the Laboratory / Institutes | |
| (e) | Actual date of receipt of consignment by the Laboratory / Institutes | |
| (f) | Scheduled date for completion of installation/commissioning | |
| (g) | Actual date of completion of installation/commissioning | |
| (h) | Penalty for late delivery (at Laboratory / Institutes level) Rs. | |
| (i) | Penalty for late installation (at Laboratory / Institutes level) Rs. | |

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

| Sr. No. | Description | Amount to be recovered |
|---------|-------------|------------------------|
| | | |

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

OR

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

| Sr. No. | Failure | Amount to be recovered |
|---------|---------|------------------------|
| (a) | | |
| (b) | | |
| (c) | | |

The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated at para 03.

For Supplier

For Purchaser

Signature

Signature

Name

Name

Designation

Designation

Name of the firm

Name of the Laboratory / Institute

Date

Date.....

8.10 Format of the Integrity Pact

INTEGRITY PACT

Between

Council of Scientific & Industrial Research (CSIR) hereinafter referred to as “The Principal”.

And

.....herein referred to as “The Bidder/ Contractor.”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s forThe Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and / or Contractor(s).

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

Section 1 – Commitments of the Principal

| | | |
|-----|--|--|
| (1) | The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: | |
| | (a) | No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to. |
| | (b) | The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution. |
| | (c) | The Principal will exclude from the process all known prejudiced persons. |
| (2) | If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary action. | |

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

| | | |
|-----|---|---|
| (1) | The Bidder(s) / Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution. | |
| | (a) | The Bidder(s)/Contractor(s) will not, directly or through any other Person or firm, offer, promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract. |
| | (b) | The Bidder(s) / Contractor(s) will not enter with other Bidders into any Undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, Certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. |
| | (c) | The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC / PC Act; further the Bidder(s) / Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically. |
| | (d) | The Bidder(s) / Contractor(s) of foreign origin shall disclose the name and address of the Agents / representatives in India, if any. Similarly the Bidder(s) / Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the “Guidelines on Indian Agents of Foreign Suppliers” shall be disclosed by the Bidder(s) / |

| | |
|-----|---|
| | Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent / representative have to be in Indian Rupees only. Copy of the “Guidelines on Indian Agents of Foreign Suppliers” is annexed and marked as Annexure. |
| (e) | The Bidder(s) / Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract. |
| (2) | The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences. |

Section 3 – Disqualification from tender process and exclusion from future Contracts

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the procedure mentioned in the “Guidelines on Banning of business dealings”. Copy of the “Guidelines on Banning of business dealings” is annexed and marked as Annex -“B”.

Section 4 – Compensation for Damages

| | |
|-----|---|
| (1) | If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid Security. |
| (2) | If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee. |

Section 5 – Previous transgression

| | |
|-----|---|
| (1) | The Bidder declares that no previous transgressions occurred in the last 3 Years with any other Company in any country conforming to the anti corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process. |
| (2) | If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealings.” |

Section 6 – Equal treatment of all Bidders / Contractors / Subcontractors

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

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

| | |
|-----|--|
| (1) | The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement. |
| (2) | The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the JS(A), CSIR. |
| (3) | The Bidder(s) / Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s) / Contractor(s) / Subcontractor(s) with confidentiality. |
| (4) | The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings. |
| (5) | As soon as the Monitor notice, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond |

| | |
|-----|--|
| | this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. |
| (6) | The Monitor will submit a written report to the JS (A), CSIR within 8 to 10 weeks from the date of reference or intimation to him by the Principal and should the occasion arise, submit proposals for correcting problematic situations. |
| (7) | Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors on the CSIR. |
| (8) | If the Monitor has reported to the JS(A),CSIR, a substantiated suspicion of an offence under relevant IPC/PC Act, and the JS(A), CSIR has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner. |
| (9) | The word 'Monitor' would include both singular and plural. |

Section 9 – Pact Duration

| | |
|-----|---|
| (1) | This Pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. |
| (2) | If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by JS(A), CSIR. |

Section 10 – Other provisions

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

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

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

Place.....

Date.....

Witness 1:

Witness 2:

(Name & Address):

(Name & Address):