

# Online Bids

(Through E-Procurement Portal of CPPP)

are invited

*for*

## Computerized Casting Furnace for metal matrix composites in Al and Mg for Centre of Excellence on Machine Tools Design

**Tender No.:** IIT(BHU)/COE/MTD/2022-23/TD/006-R Dated: 19.05.2023

**Last Date of Submission:** 15.06.2023

**Tender Opening:** 16.06.2023



**Centre of Excellence on Machine Tools Design  
Indian Institute of Technology (BHU) Varanasi  
Varanasi - 221005, Uttar Pradesh, India**

**E-mail: [coordinator.coemtd@itbhu.ac.in](mailto:coordinator.coemtd@itbhu.ac.in)**

**INDIAN INSTITUTE OF TECHNOLOGY (BHU) VARANASI**  
**Varanasi - 221005, Uttar Pradesh, India**

**DEPARTMENT/ CENTRE: Centre of Excellence on Machine Tools Design, Indian Institute of Technology (BHU) Varanasi, Varanasi - 221005, Uttar Pradesh, India**

**Advertised Tender Enquiry Documents**

**(NOTICE INVITING TENDER)**

IIT (BHU) Varanasi invites online tender from manufacturers (or their 'authorized' dealers that they have been authorized to quote in response to this NIT) of the following items are invited:

<b>S. No.</b>	<b>Tender No. and Last Date</b>	<b>Specifications &amp; Quantity of the item</b>	<b>Earnest Money Deposit to be submitted</b>
1	<b>Tender No.:</b> IIT(BHU)/COE/MTD/2022-23/TD/006-R Dated: 19.05.2023  <b>Last Date of Submission:</b> 15.06.2023	Computerized Casting Furnace for metal matrix composites in Al and Mg for Centre of Excellence on Machine Tools Design  <b>Quantity:</b> 01 Unit  Specifications as per Annexure I	Bid Security Declaration Annexure VIII

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app>. Tenderers can access tender documents on the CPP Portal. Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

Aspiring Bidders who have not enrolled/ registered in e-procurement should enroll/ register before participating through the website <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

**No manual bids will be accepted. All quotation (both Technical and Financial should be submitted in the e-procurement portal).**

The tender should be addressed to **Coordinator, Centre of Excellence on Machine Tools Design, Indian Institute of Technology (BHU) Varanasi, Varanasi - 221005, Uttar Pradesh, India** and should be submitted online one or before the last Date of Submission as mentioned in critical date sheet.

*The Institute shall not be responsible for any delay in submitting online Bids. The Institute reserves the right to accept or reject any bid, cancel the Tender without assigning any reason thereof. No correspondence in this regard will be entertained.*

**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**IIT (BHU) Varanasi**  
**Varanasi - 221005, Uttar Pradesh, India**

# INDIAN INSTITUTE OF TECHNOLOGY (BHU) VARANASI

Varanasi - 221005, Uttar Pradesh, India

**DEPARTMENT/ CENTRE: Centre of Excellence on Machine Tools Design, Indian Institute of Technology (BHU) Varanasi, Varanasi - 221005, Uttar Pradesh, India**

## **TENDER DOCUMENT FOR**

Computerized Casting Furnace for metal matrix composites in Al and Mg for Centre of Excellence on Machine Tools Design

## **CRITICAL DATA SHEET**

Name of Organization	<b>Indian Institute of Technology (BHU) Varanasi</b>
Tender	<b>Open</b>
Type/ Form of Contract (Work/ Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	<b>Supply</b>
Date of Issue/Publishing Original Tender	<b>25.05.2023 (03:00 PM)</b>
Document Download Start Date	<b>25.05.2023 (03:00 PM)</b>
Pre-Bid Meeting Date* (*Queries, if any, to be discussed, must be emailed to coordinator.coemtd@itbhu.ac.in, before the date of Pre-Bid meeting for consideration.)	<b>NA</b>
Corrigendum, if any	<b>---</b>
Last Date and Time for Uploading of Bids	<b>15.06.2023 (04:00 PM)</b>
Date and Time of Opening of Technical Bids	<b>16.06.2023 (04:00 PM)</b>
Tender Processing Fee (including GST as applicable)	<b>Rs. 2360/- (For Tender Processing Fee)</b> (To be paid through RTGS/NEFT as per the following details:  Name of Account: Registrar, IIT(BHU) Name of the Bank: State Bank of India Name of Branch: IT, BHU, Varanasi Account No.: 327F78803937 IFSC: SBIN0011445  <b>The proof of payment must be enclosed with Technical Bid.</b>
EMD (Earnest Money Deposit)	<b>Rs. Nil/- (For EMD, submit Bid Security Declaration)</b>
No. of Covers (1/2/3/4)	<b>02</b>
Bid Validity Days	<b>180 Days (From last date of opening of the tender)</b>
Address for Communication	<b>Coordinator Centre of Excellence on Machine Tools Design IIT (BHU) Varanasi Varanasi - 221005, Uttar Pradesh, India</b>
E-mail Address	<b>coordinator.coemtd@itbhu.ac.in</b>

**INDIAN INSTITUTE OF TECHNOLOGY (BHU) VARANASI**  
**Varanasi - 221005, Uttar Pradesh, India**

**DEPARTMENT/ CENTRE: Centre of Excellence on Machine Tools Design, Indian Institute of Technology (BHU) Varanasi, Varanasi - 221005, Uttar Pradesh, India**

***TENDER DOCUMENT FOR***

Computerized Casting Furnace for metal matrix composites in Al and Mg for Centre of Excellence on  
Machine Tools Design

**INVITATION FOR BIDS**

Online bids are invited from eligible bidders for the following:

<b>S. No.</b>	<b>Tender No. and Last Date</b>	<b>Specifications &amp; Quantity of the item</b>	<b>Earnest Money Deposit to be submitted</b>
1	<b>Tender No.:</b> IIT(BHU)/COE/MTD/2022-23/TD/006-R Dated: 19.05.2023  <b>Last Date of Submission:</b> 15.06.2023	Computerized Casting Furnace for metal matrix composites in Al and Mg for Centre of Excellence on Machine Tools Design  <b>Quantity:</b> 01 Unit  Specifications as per Annexure I	Bid Security Declaration Annexure VIII

1. Interested eligible Bidders may obtain further information from IIT (BHU) Varanasi website: [www.iitbhu.ac.in/iitnotifications/purchase\\_enquiries/](http://www.iitbhu.ac.in/iitnotifications/purchase_enquiries/) or from Central Public Procurement Portal (CPPP) <https://eprocure.gov.in/eprocure/app> .
2. Intending bidders are advised to visit IIT (BHU) website [www.iitbhu.ac.in/iitnotifications/purchase\\_enquiries/](http://www.iitbhu.ac.in/iitnotifications/purchase_enquiries/) and CPPP website <https://eprocure.gov.in/eprocure/app> regularly till closing date of BID submission of tender for any corrigendum/ addendum/ amendment.
3. Tender Processing Fee is to be deposited electronically by RTGS/NEFT in the account of Registrar, IIT (BHU) in the Bank details mentioned above. Bidders are required to submit the scan copy of payment receipt details of Tender processing fees payment at the time of Bid Preparation.
4. This Tender Document contains the following:
  1. Instructions for Online Bid Submission
  2. Instruction to Bidders
  3. General conditions of contract (GCC)
  4. Special Condition of Contracts
  5. Checklist for Bid/Tender submission
  6. Declaration Certificate
  7. Technical specifications for the complete project (Annexure 1)
  8. Compliance Sheet

## **SECTION 1: INSTRUCTION FOR ONLINE BID SUBMISSION**

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (<http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

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

### **1. Registration**

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (<http://eprocure.gov.in/eprocure/app>) by clicking on the link “Click here to Enroll”. Enrolment on the CPP Portal is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g., Sify/ TCS/ nCode/ eMudhra, etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/ password and the password of the DSC/ eToken.

### **2. Searching for Tender Documents**

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

### **3. Preparation of Bids**

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content

of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g., PAN card copy, annual reports, auditor certificates, etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

#### **4. Submission of Bids**

1. Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as “on-line” to pay the tender processing fee as applicable and enter details of the instrument. Whenever, Tender processing fees is sought, bidders need to pay the tender processing fee on-line through RTGS.
4. A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
5. The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

## **5. Assistance to Bidders**

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

## **6. General Instructions to the Bidders**

1. The tenders will be received online through portal <https://eprocure.gov.in/eprocure/app>. In the Technical Bids, the bidders are required to upload all the documents in **.pdf format**.
2. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/ e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link “Information about DSC”.
3. Tenderer are advised to follow the instructions provided in the ‘Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.

## **SECTION 2: INSTRUCTIONS TO BIDDERS**

### **A. Introduction**

#### **1. Scope of Work**

IIT (BHU) invites online bids from the manufacturers/suppliers on behalf of The Director, IIT (BHU) for supply of Equipment as per the technical specifications given in Annexure- III and as per terms and conditions of this tender document. Supplier should assure complete commissioning of the system including installation and application training for efficient utilization of **Computerized Casting Furnace for metal matrix composites in Al and Mg for Centre of Excellence on Machine Tools Design.**

#### **2. Cost of Bidding**

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.

### **B. The Bidding Documents**

#### **3. Tender Processing Fees**

The Tender Processing fees (Rs. 2360/-) should be submitted ONLINE as per the details mentioned above. Further, the proof of payment must be uploaded with Technical Bid. The exemption will be applicable as per Govt. of India norms.

#### **4. Content of Bidding Documents**

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

- (a) Instructions for Online Bid Submission
- (b) Instruction to Bidders (ITB)
- (c) General Conditions of Contract (GCC)
- (d) Special Conditions of Contract (SCC)
- (e) Schedule of Requirements
- (f) Tender Form (Technical Bid)
- (g) Tender Form (Financial Bid)

**4.2** 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.

#### **5. Amendment of Bidding Documents**

**5.1** 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.

**5.2** All prospective bidders who have received the bidding documents will be notified of the amendment in writing, which will be binding on them.

**5.3** In order to allow prospective bidders reasonable time within which to take the amendment into account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids.

### **C. Preparation of Bids**

#### **6. Language of Bid**

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.

#### **7. Documents Comprising the Bid**

**7.1 Techno commercial un-priced bid and priced bid:** The bids are to be submitted in two parts i.e.



Techno commercial un-priced bid and priced bid.

- (a) Techno commercial un-priced bid along with Bid Securing Declaration Form (EMD) as shown in invitation to bids shall be submitted through CPP Portal. If the proof of Bid Securing Declaration Form as EMD is not received along with the technical bid, such bid will not be considered. The samples (if required) of all the items shown in the schedule of requirements of each tender should also accompany the techno commercial un-priced bid in a separate cover.
- (b) Priced bid.

**7.2 Techno commercial un-priced bid:** The techno commercial un-priced bid prepared by the bidder shall be provided in the following Model Response Format:

**Model Response Format**

- (a) Standing of each Bidder Manufacturer/Dealer and past experience in supply of the material (certificates to be enclosed), proof of manufacturing Unit/Dealership along with all the documents required for proving the credentials regarding the fulfilment of essential pre-bid criteria.
- (b) List of other Govt. Departments, Public Sector units and Central Autonomous Bodies for which the bidder is supplying material or having the similar type of contracts and a certificate regarding the satisfactory performance of the contract (In the Annexure III format).
- (c) Copy of the audited balance sheet of the vendor for the previous financial year indicating the turnover in supply of the relevant materials/service.
- (d) Details of Permanent Account Number and latest income tax clearance certificate.
- (e) Details of GST No. along with a copy of certificate to be attached.
- (f) Submission of samples if required, for all items indicated in the schedule of requirements. The make of items proposed to be supplied should be indicated in the format of the schedule of requirements and submitted along with the techno commercial un-priced bid without indicating the pricing components.
- (g) Willingness to execute all orders which are placed to meet emergency requirement on priority basis. The Bidder shall note that standards for workmanship, material and equipment, and references to brand names designated by the Purchaser in the schedule of requirements are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in his bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

**7.3 Price Bid:** The price bid shall comprise the techno commercial bid along with the price component indicating the Unit prices for each and every item indicated in schedule of requirements (Annexure 1).

- (i) The prices quoted must be net per unit as shown in the Schedule and must include all charges for delivery at the designated stores i.e., F.O.R. IIT (BHU) Varanasi and should be mentioned clearly.
- (ii) The rate must be stated for each item separately both in words and figures. If there is a discrepancy between the price quoted in word and figures the higher price quoted will be treated as final.
- (iii) Quoted prices should be firm and inclusive of taxes/duties, freight and forwarding charges, handling charges, loading and unloading charges, and insurance charges etc. However, the prices must be reflected clearly in BoQ format by mentioning basic rate, GST, Freight charges, Any other Taxes/Duties/Levies and exemptions thereon as applicable to IITs.
- (iv) The prices once accepted by the Institute shall remain valid till the successful execution of the order and till supplies is fully effected and accepted or 12 months from the date of acceptance of tender whichever is later. The Institute shall not entertain any increase in the rates during the period. However, in the event there is a reduction or increase in Government levy/duties/taxes.
- (v) during the period of execution of the order, the rates shall be suitably adjusted with effect from the date notifying the said reduction or increase in the Government levy/taxes/duty, if any.

**8. Bid Prices**

**8.1** The Bidder shall indicate on the Schedule of requirements (BoQ), the unit prices of the goods it proposes to supply under the Contract and enclose it with the priced bid.

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

- (i) The prices quoted must be net per unit as shown in the schedule of requirements and must include all charges for delivery at the designated stores.
- (ii) Any Indian duties, GST and other taxes which will be payable on the goods, if this Contract is awarded.

**8.3** Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account.

## **9. Bid Currencies**

Prices shall be quoted in Indian Rupees only.

## **10. Period of Validity of Bids**

**10.1** Bids shall remain valid for **180** days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

**10.2** 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. A Bidder granting the request will not be required nor permitted to modify the bid.

**10.3** Bid evaluation will be based on the bid prices without taking into consideration the above modifications.

## **D. Submission of Bids**

**11.** The tender has to be submitted **ONLINE** before the due date. The offers received after the due date and time will not be considered. **No manual bids will be considered.**

## **12. Deadline for Submission of Bids**

**12.1** Bids must be received by the Purchaser **ONLINE** not later than the time and date specified in the Invitation for Bids.

**12.2** The Purchaser may, at his discretion, extend this deadline for submission of bids by amending the bid documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

## **13. Late/Delayed Bids**

The offers received after the due date and time will not be considered.

## **14. Modifications and Withdrawal of Bids**

**14.1** The Bidder may modify or withdraw its bid after the **ONLINE** bid's submission, as per the provision of CPP Portal.

**14.2** No bid may be modified subsequent to the deadline for submission of bids. No documents will be accepted in support of essential pre-bid criteria after the last date of submission of bids.

**14.3** No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity specified by the Bidder on the bid form.

## **E. Bid Opening and Evaluation of Bids**

### **15. Opening of Techno commercial un-priced Bids**

The purchaser will open all techno commercial un-priced bids in the first instance.

### **16. Clarification of Bids**

**16.1** During evaluation of the bids, the purchaser may, at its discretion, ask the Bidder for clarification of its bid. The request for clarification and the response shall be in writing and no change in price or substance of the bid shall be sought, offered or permitted.

**16.2** No Bidder shall contact the purchaser on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Institute, it should be done in writing.

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

### **17. Evaluation of Techno commercial un-priced Bid**

**17.1** Prior to the detailed technical evaluation, the purchaser will determine the substantial responsiveness of each bid. A substantially responsive bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviations and meets all the essential pre-bid criteria. If any bidder does not meet the essential pre-bid criteria as laid down in the Instruction to Bidders, then his bid will be summarily rejected. No documents will be accepted in support of essential pre-bid criteria after the last date of submission of bids.

**17.2** The purchaser will reject a bid determined as not substantially responsive.

**17.3** The bidders may be called for discussion and may be allowed to modify their technical bids to suit the organization's requirement. The idea is to arrive at a threshold level of acceptability above which all the bidders shall be treated on par. Those whose technical specifications do not reach the threshold level of acceptability shall be rejected as technically unsuitable. The price bids of the bidders who finally emerge as technically acceptable shall be opened, evaluated and the contract awarded to the lowest evaluated bidder.

**17.4** The bidders short-listed by the purchaser based on meeting the essential pre-bid criteria and detailed evaluation regarding satisfying the technical criteria laid down in this tender document may be called for detailed discussions with a team selected for the purpose, at a specified date, time and venue, if needed.

### **18. Opening of Priced Bids**

**18.1** The Purchaser will open the Priced Bids of only those bidders who meet the essential pre-bid criteria and whose techno commercial un-priced bids have been found to be substantially responsive.

**18.2** The priced Bids of the technically qualified bidders shall be opened by the tender committee.

### **19. Evaluation and Comparison of priced Bids**

**19.1** Arithmetical errors will be rectified on the following basis: If there is a discrepancy between words and figures, whichever is the higher of the two shall be taken as bid price. If the Vendor does not accept the correction of errors, its bid will be rejected

**19.2** Bidders shall state their bid price for the payment schedule outlined in the Clause 14 of General Conditions of Contract. Bids will be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The purchaser may consider the alternative payment schedule offered by the selected Bidder but it may not be binding on the purchaser.

**19.3** The purchaser, at its option may ask some more bidders to match the rates of the lowest bidder for creating parallel suppliers.

**19.4** The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: Indian Rupees

**19.5** The source of exchange rate shall be: Reserve Bank of India/Any other authentic source.

**19.6** The date for the exchange rate shall be: **Last day for submission of Bids.**

### **20. Purchasers right to accept any bid and to reject any bid or all bids**

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 or any obligation to inform the affected Bidder or bidders of the grounds for the Purchaser's action.

## **21. Award Criteria**

- a. IIT (BHU) shall award the contract to the technically qualified eligible BIDDER whose bid has been determined as the lowest evaluated commercial bid.
- b. If more than one BIDDER happens to quote the same lowest price, IIT(BHU) Varanasi reserves the right to award the contract to more than one BIDDER or any BIDDER.

## **22. Notification of Award**

Prior to the expiration of the period validity, the purchaser will notify the successful Bidder in writing by letter or by fax, to be confirmed in writing by speed post or hand delivered letter, that its bid has been accepted.

## **23. Factors Affecting the Award of Supply**

**23.1** The bidder should have its own Contract support facilities. The support facilities should be fully owned and managed by the bidder.

**23.2** Conformity with the Request for Bid/Tender required and conditions.

**23.3** The assessment based on the response to Model Response Outline.

**23.4** The assessment of the capability of the bidder to meet the terms and conditions.

**23.5** The bidders must have executed similar orders, for which the bidder is quoting, for Govt./Semi-Govt./Autonomous Organizations.

**23.6** The cost and the discount offered, if any.

## **24. Fall clause**

**24.1** The price quoted by the supplier should not be higher than the maximum retail price, if any, for the stores and the same shall not be higher than the price usually charged by the supplier for stores of the same nature, class or description to any other purchaser.

**24.2** The price charged for the stores supplied under the contract by the supplier shall in no event exceed the lowest price at which the supplier sells the stores of identical description to any other person during the period till performance of all supply orders placed during the currency of the contract is completed. If at any time during the period the supplier reduces the sale price of such stores or sells such stores to any other person including his dealers at a price lower than the price chargeable under the contract, he shall forthwith notify such reduction or sale to the purchaser and the price payable under the contract for these items of stores supplied after the date of coming into force of such reduction or sale shall stand correspondingly reduced.

**24.3** If it is discovered that the supplier has contravened the above conditions, then without prejudice to any other action which might be taken against him, it shall be lawful for the purchaser to (a) revise the price at any stage so as to bring it in conformity with sub-clause(i) above, or (b) to terminate the contract and purchase the items of stores at the risk and cost of the supplier and in that event the provisions of Clause 28 of General Conditions of Contract shall, as far as possible, be applicable or recover the loss.

## **SECTION 3: GENERAL CONDITION OF CONTRACTS**

### **1. Definitions**

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

- (a) "The order" means the agreement entered between the Purchaser and the Supplier including all the attachments and appendices and all documents incorporated as per notification of award.
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) "The Goods" means all the items, which the Supplier is required to supply to the Purchaser under the Contract.
- (d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services training and other obligations of the Supplier covered under the Contract.
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "The Purchaser" means the organization purchasing the Goods i.e., IIT (BHU) VARANASI.
- (g) "The Purchaser's country" is India.
- (h) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
- (i) "Day" means calendar day.

### **2. Application**

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

### **3. Standards**

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

### **4. Use of Contract Documents and Information**

- 4.1** 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.
- 4.2** The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information except for purposes of performing the Contract.
- 4.3** Any document, other than the Contract itself, 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.

### **5. Patent Rights**

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

### **6. Submission of the Bids**

- 6.1** All bids complete in all respect must be submitted online on or before the Bid Closing date and time as mentioned on Critical Data Sheet. Tenders received without Bid Securing Declaration Form as earnest money etc. shall be rejected.
- 6.2** The Tender document for this supply is available on the website of IIT (BHU) Varanasi ([www.iitbhu.ac.in/iitnotifications/purchase\\_enquiries/](http://www.iitbhu.ac.in/iitnotifications/purchase_enquiries/)) or from Central Public Procurement Portal (CPPP) <https://eprocure.gov.in/eprocure/app>.
- 6.3** Interested bidders may submit their bid through the Central Public Procurement Portal (CPPP) <https://eprocure.gov.in/eprocure/app>.

## **7. Inspections and Tests**

- 7.1** The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser.
- 7.2** The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data shall be furnished to the inspectors at no charge to the Purchaser.
- 7.3** Any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- 7.4** The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- 7.5** Nothing in GCC Clause 7 shall in any way release the Supplier from any warranty or other obligations under this Contract.

## **8. Consequences of rejection**

If in the event the stores are rejected by the purchaser at the destination and the supplier fails to make satisfactory supplies within the stipulated period of delivery, the purchaser will be at liberty to:

- (a) Allow the supplier to resubmit the stores in replacement of those rejected, within a specified time without any extra cost to the purchaser.
- (b) Reject the material, which shall be final and binding on the contractor.
- (c) Procure the rejected materials of comparable quality from the open market/Govt. stores and the supplier shall be liable to pay the difference in price over the RC prices or get the amount adjusted from the outstanding bills of the supplier, if any.

## **9. Packing**

- 9.1** The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2** The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, in any subsequent instructions ordered by the Purchaser.

## **10. Delivery and Documents**

- 10.1** The Supplier shall make delivery of the Goods within **60 days** from the placement of purchase order in pursuance of the notification of award. The purchase order would be placed after assessing the requirements on quarterly basis. However, the supplier shall also arrange to execute all orders on priority basis which would be placed to meet any emergent requirements.
- 10.2** In case the purchaser decides to conclude parallel rate contracts, then the requirements would be split on different firms on equitable basis as per the discretion of the purchaser.
- 10.3** The delivery of Stores shall be affected at the premises of the Institute free of all delivery charges and within the stipulated time and as may be elucidated in the confirmed order, accompanied by a delivery challan. No extension of time for delivery of Stores shall normally be accorded.

The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

1. 3 Copies of the Supplier Invoice showing contract number, goods' description, quantity, unit price, total amount, etc.
2. Installation Certificate.
3. Insurance Certificate if applicable.
4. Manufacturer's/Supplier's Warranty Certificate.
5. Inspection Certificate issued by the nominated inspection agency, if any.
6. Supplier's Factory Inspection Report.
7. Certificate of Origin (if possible, by the beneficiary).

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

**Time and Date of Delivery - Essence of the Contract:** The time for and the date of delivery of the stores stipulated shall be deemed to be of the essence of the contract and delivery must be completed not later than the date(s) specified.

### **11. Insurance**

The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. The insurance shall be obtained by the suppliers in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "all risks" basis including war risks and strikes.

### **12. Transportation**

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

### **13. Warranty**

**13.1** The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in the conditions prevailing in India.

**13.2** This warranty shall remain valid for at least **12 months** (or as specified) after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, unless specified otherwise.

**13.3** The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty.

**13.4** Upon receipt of such notice, the Supplier shall with all reasonable speed, repair or replace the defective Goods or parts thereof, without any extra cost to the Purchaser.

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

### **14. Payment**

**14.1** The payment shall be made **100% payment against Supply, Installation and Commissioning and submission of satisfactory PBG @ 3-10%.**

**14.2** The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents,

submitted pursuant to GCC Clause 10, and upon fulfilment of other obligations stipulated in the contract.

## **15. Prices**

Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in his bid. The bidder must mention the applicable taxes/duty and exemptions thereon, if any, as per the Government of India norms. The Institute will provide requisite certificate, if any, required by the bidder as per the applicable Govt. of India norms.

## **16. Change Orders**

**16.1** The Purchaser may at any time, by written order given to the Supplier, 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.

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

## **17. Contract Amendments**

Subject to GCC Clause 16, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

## **18. Assignment**

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.

## **19. Subcontracts**

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

## **20. Delays in the Supplier's Performance**

**20.1** 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 as per GCC clause 10.

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

**20.3** Except as provided under GCC Clause 23, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to GCC Clause 21, unless an extension of time is agreed upon pursuant to GCC Clause 20.2 without the application of liquidated damages.

## **21. Penalty**

Subject to GCC Clause 23, 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 1% per week and the maximum deduction is 10% of the contract price of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause 22.

## **22. Termination for Default**

**22.1** 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 purchase order, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 20;
- (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 practices in competing for or in executing the Contract.

‘For the purpose of this Clause:

“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

“Fraudulent practice: a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;”

**22.2** In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 22.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

## **23. Force Majeure**

**23.1** Notwithstanding the provisions of GCC Clauses 20 & 21, the Supplier shall not be liable for imposition of 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.

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

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

## **24. Termination for Insolvency**

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.

## **25. Termination for Convenience**

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

**25.2** 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.

## **26. Resolution of Disputes**

**26.1** 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.

**26.2** If, after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms as specified below. These mechanisms may include, but are not limited to, conciliation mediated by a third party, adjudication in an agreed national or international forum, and national or international arbitration.

**26.3** In case of Dispute or difference arising between the Purchaser and a supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996 as amended from time to time.

## **27. Governing Language**

The contract shall be written in English language. Subject to GCC Clause 28, English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

## **28. Applicable Law**

**28.1** The contract shall be governed by the Law of Contract for the time being in force.

**28.2** Irrespective of the place of delivery, the place of performance or place of payment under the contract, the contract shall be deemed to have been made at the place from which the acceptance of tender has been issued.

**28.3** Jurisdiction of Courts: The courts of the place from where the acceptance of tender has been issued shall alone have jurisdiction to decide any dispute arising out of or in respect of this contract.

**28.4** One-month notice will be given by either party for termination of Contract during the tenure of Contract for breach of Clause or otherwise.

## **29. Taxes and Duties**

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

## **30. Performance Security**

Successful bidder has to furnish **03%** of the order value as a performance security in the shape of Fixed Deposit Receipt / Bank Guarantee in favour of the Registrar, Indian Institute of Technology (BHU) Varanasi valid for a period of 60 days beyond the end of all warranty period / obligations (i.e., must valid for minimum 14 months). Fixed Deposit Receipt / Bank Guarantee should be issued from a schedule bank in India.

## **31. Supplier Integrity**

The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.

### **The Institute Reserves the Right to:**

**1.** Increase or decrease the quantity of the item(s) as per requirement and GOI Norms only, however, provided within the ceiling of the category in which the original order was placed i.e., if it is within 2.5 Lakh category than should not exceed the 2.5 lakh limit and so on.

2. Reject the quotation in absence of not furnishing the documentary evidence in respect of Trade Tax Registration (G.S.T), Income Tax and Trade Tax clearance certificates together with the performance of supplies in various branches/institutions.
3. Reject the quotation in the event of non-furnishing the authentic documentary evidence in respect of Testing reports / Performance report of the concerned Govt. Organization / Institutions about the products being manufactured and marketed. The performance test of the product can be conducted at Institute level also for which charge will have to be borne by the suppliers.
4. Reject the supplies already made, if not found up to the mark. Thorough checking may be adopted to test the correctness of the supply. In such an event, further action may call to conform or discard the supply.
5. To reject any addition/alteration in respect of local dealerships intimated by the Principals after consideration of the case by the committee appointed by the Institute for the purpose.
6. Cancel this Tender at any point of time without assigning any reason thereof.
7. The Institute also reserves the right to reject the bid of any participated bidder.
8. 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 purchase order, or within any extension thereof granted by the Purchaser.
  - 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 practices in competing for or in executing the Contract.
9. To reject any or all the offers without assigning any reasons thereof.
10. All disputes are subject to “*Varanasi Jurisdiction*” only.
11. The decisions of the Institute in all respect shall be final and binding on all.
12. The Institute reserves the right to ask the successful bidder to produce all the original documents submitted along with the bids for verification at any point of time. During the verification of the document, if it is found that the bidder has concealed/falsified/fabricated any information, the bid and/or purchase order will be cancelled and performance security will be forfeited and action including blacklisting will be taken against the bidder as per norms of the Institute.
13. Please ensure that your offer is complete in all respect as no further clarifications shall be sought from you and reaches us within the last date mentioned above. **The Institute shall not be responsible for any delay etc.**

**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**IIT (BHU) Varanasi**  
**Varanasi - 221005, Uttar Pradesh, India**

## **SECTION 4: SPECIAL CONDITIONS OF CONTRACT**

### **1. Essential Pre-Bid Criteria**

1. Bidders should be the manufacturer (OEM)/authorized dealer. In case the bid is submitted by the Authorized dealer, the currently valid Authorization letter for participating in this Tender (by clearly mentioning the Reference of this Tender) issued by the OEM must be uploaded (in Annexure V format). The Letter of authorization shall remain valid during execution of supply and installation.
2. An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend all support for the warranty period and five years beyond the warranty in confirmation with this bid for the quoted items. In case the OEM withdraws its authorization from bidder, the above service will continued to be provided by the OEM.
3. A notarized affidavit on a Non Judicial Stamp of Rs. 100 issued on/after the date of publish of this Tender to be submitted by the bidder that it has never been black-listed by any IITs/NITs/Govt. Offices/PSUs/Govt. Funded Universities/Govt. Funded Autonomous Bodies/Govt. Bodies must be uploaded along with the technical Bid under cover 1, failing which the Bid shall be rejected. The original shall be submitted before the award of bid by the lowest evaluated successful bidder. This affidavit must be issued on or after issuance of this tender.
4. The bidder/OEM must have delivered at least five bottom pouring casting furnaces for metal matrix composites in Al and Mg in the last three financial years to any of the IITs/NITs/Govt. Offices/PSU/Govt. Funded Universities/Govt. Funded Autonomous Bodies/Govt. bodies with order value of at least Rs. 10 lakhs for a single order. Copies of purchase order, satisfactory installation certificate, names of user, their mobile number/ phone number and email id need to be uploaded. The purchaser may ask for input from user where the quoted instrument has been installed.
5. The bidder has to give a LIVE VIDEO demonstration of quoted product during the technical evaluation process (most probably within one week of opening of technical bid). The institute will inform the date and time through a separate email to all the participating bidders. This will be a part of technical evaluation. The bidder needs to upload an undertaking in this regard that they will provide the demonstration as and when required by the Institute in Annexure IX.
6. Manufacturer comprehensive warranty for 3 years.
7. Adherence to all the technical specifications is compulsory.
8. Certificate as per Annexure VI, Annexure VII, Annexure IX on the letterhead of the company must be uploaded.

**NOTE: THE BID OF THOSE BIDDERS WHO FAILS TO COMPLY THE ABOVE ESSENTIAL CRITERIA WILL NOT BE CONSIDERED FOR TECHNICAL EVALUATION.**

### **2. Documents Comprising the Bid**

The tender/Bid shall be submitted online in two parts: Technical Bid and Commercial Bid.

#### **I. Technical Bid**

The following documents are to be scanned and uploaded as part of the Technical Bid as per the tender document:

- (a) Scanned copy of Tender Forms (Techno Commercial Un-Priced Bid), Declaration, Bidder's Information Form, and Tender Acceptance Letter.
- (b) Scanned copy of proof for submission of Tender Document Fee/ Earnest Money Deposit/Exemption Certificate, if any etc.
- (c) Scanned copy of written confirmation authorizing the signatory of the Bid to commit the Bidder.
- (d) Scanned copy of quoted product brochure.
- (e) Scanned copy of completely filled Annexure III with supporting documents
- (f) Scanned copy of Technical Bid and essential Pre-bid Details, if any.
  - i. Scanned copy of documentary evidence establishing the Bidder's qualifications to perform the contract if its bid is accepted and the Bidder's eligibility to bid.

- ii. Scanned copy of documentary evidence, that the Goods and Related Services to be supplied by the Bidder are of eligible origin and conform to the Bidding Documents.
- (g) Scanned copy of Checklist, compliance of Essential pre-bid criteria and Technical Compliance Sheet (Annexure II) and any other document required as per the tender.

## **II. Commercial Bid**

The commercial bid comprises of:

- (a) Scanned copy of Tender Form (Price Bid)
- (b) Price bid in the form of .xls format and to be uploaded in .xls and signed .pdf format.

The Price bid format is provided as .xls format along with this Tender Document at <https://eprocure.gov.in/eprocure/app>. Bidders are advised to download this .xls format and quote their offer/rates in the prescribed column.

In addition to the above requirements, bids submitted by a Joint Venture, shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement, there to.

The Bidder shall furnish in the Tender Forms information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

## **3. Installation & Demonstration**

The supplier is required to done the installation and demonstration of the equipment within one week of the arrival of materials at the IIT (BHU) site of installation, otherwise the penalty clause will be the same as per the supply of materials.

In case of any mis-happening/damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. IIT (BHU) will not be liable to any type of losses in any form.

## **4. Application Specialist**

The Tenderer should mention in the Techno-Commercial bid the availability and names of Application Specialist and Service Engineers in the nearest regional office.

## **5. Spares**

The Supplier is required to provide state availability of spares for ten years, if required.

## **6. Training of Personnel**

The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment for a minimum period of one week at the supplier's cost.

## **7. User List**

The bidder must provide the list of users where they have deployed similar nature of equipment's in last 03 years in prescribed format of Annexure III.

## **8. Manuals/Documents**

One set of hard copy and one set of soft copy in English (preferred as following).

- i. Operating manual
- ii. Servicing & Maintenance manual
- iii. Spare parts list with source of supply and prices
- iv. Pre-installation requirements.

## 9. Services

Vendor must submit Factory Acceptance Test procedure supported with relevant printed literature and certificates.

10. The Tender document should also indicate what kind of service/maintenance is required for the system. Whether this service has to be carried out by a company engineer or it can be carried by trained service personnel within India. The frequency of visit and the charges should be mentioned.
11. The Tender should be enclosed with proper certifications like **Authorization Certificate** and **Proprietary Certificate** (in case of Proprietary items).
12. Pre-installation site preparation/inspection requirements to be indicated and specified along with the bid.
13. Bid should include FOR IIT(BHU) Varanasi prices. The Institute will provide requisite certificate, if any, required by the bidder as per the applicable Govt. of India norms.
14. The vendor to provide compliance statement with respect to each technical specification in the tender document duly supported by the manufacturer's literature. Any other claim will not be accepted and may lead to rejection of the bid.
15. Printed literature in support of compliance to the prescribed specifications is to be submitted.
16. Compliance report needs to be submitted as a part of the technical bid.
17. Exemption is allowed from payment of Tender processing fees as per Government of India norms against submission of currently valid certificate specifically for the item(s) proposed to be procured through this Tender.
18. It is mandatory for bidders to quote items having local content minimum 20%. Refer revised Public Procurement (Preference to Make in India), Order 2017, No. P-45021/2/2017-PP (B.EII) dated 16.09.2020 issued by DPIIT, Ministry of Commerce and Industry, Govt. of India. (Submit duly filled Annexure VII for the same). The Annexure VII once submitted in the Technical Bid will be final. Submission of Revised Annexure VII will NOT be accepted. As per OM of DPIIT, Ministry of Commerce and Industry, Govt. of India No. P-45021/102/2019- BE-II- Part (1) (E-50310) Dated 04.03.2021, Bidders offering Imported products will fall under the category of Non-Local Suppliers. They cannot claim themselves as Class-I or Class-II Local Suppliers by claiming the services such as Transportation, Insurance, Installation, Commissioning, Training and After Sale Service Support like AMC/ CMC etc. as Local Value Addition.
19. As per the Government of India Order, only "Class-I Local Suppliers" and "Class-II Local Suppliers" can participate in this tender.
20. Bidder should confirm their acceptance that they comply with the provisions with report to "Guidelines for eligibility of a bidder from a country which shares a land border with India as detailed at Annexure VI. The bidder should submit Certificate for "Bidder from/ Not from Country sharing Land border with India & Registration of Bidder with Competent Authority" as per Order of DoE F.No.6/18/2019-PPD dated 23.07.2020 as mentioned. A certificate shall be submitted by bidders in the tender documents regarding their compliance with the said order. If the certificate submitted by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law. Annexure VI.
21. Defective Equipment: If any of the equipment supplied by the Tenderer is found to be substandard, refurbished, un-merchantable or not in accordance with the description/specification or otherwise faulty, the committee will have the right to reject the equipment or its part. The prices of such equipment shall be refunded by the Tenderer with 18% interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the

incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before installation and/or during warranty period, shall be replaced within 30 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges. In case supplier fails to replace above item as per above terms & conditions, IIT (BHU) may consider "Banning" the supplier.

**IMPORTANT NOTE**

1. Non-compliance of tender terms, non-uploading of required documents, lack of clarity of the specifications, contradiction between bidder specifications and supporting literature etc. may lead to rejection of the bid.
2. In the tender, either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.
3. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

## **SECTION 5: CHECKLIST FOR BID/TENDER UPLOADING**

**(The following check-list must be filled in and uploaded with the bid documents)**

<b>S. No.</b>	<b>Particulars Techno Commercial Unpriced Bid (Cover 1)</b>	<b>Yes/No</b>
1	Have you uploaded the techno commercial unpriced bid form duly filled in appropriately?	
2	Have you uploaded a copy of the last three financial years audited balance sheet and P & L Account of your firm?	
3	Have you attached the details of the income tax clearance certificate, proof of manufacturing unit/ dealership letter/ general order suppliers and copy of GST registration certificate?	
4	Have you executed the supply of at least five bottom pouring casting furnaces in metal matrix composites of Al and Mg in the last three financial years to any of the IITs/NITs/Govt. Offices/PSU/Govt. Funded Universities/Govt. Funded Autonomous Bodies/Govt. bodies, costing more than Rs. 10 lakhs for a single order and uploaded the copies of relevant work orders and satisfactory installation certificates in prescribed Format?	
5	Have you submitted DD/transferred online Tender Processing Fee asked for and Bid Securing Declaration Form as EMD separately and uploaded their proof of submission?	
6	Have you submitted samples of all items indicated in the respective schedule of requirements at the address of tender inviting authority within due date?	
7	Have you enclosed the schedule of requirement indicating the make offered without indicating the pricing components along with the techno commercial unpriced bid?	
8	Have you uploaded the bids both techno commercial unpriced and priced bid separately for the tender?	
9	Have you enclosed the statement of deviations from financial terms and conditions, if any?	
10	Have you submitted the Technical Compliance Sheet?	
11	Have you attached the compliance of Essential Pre-Bid criteria?	
12	Have you attached Manufacturer's Authorization certificate for this Tender?	
13	Have you attached a notarized affidavit that bidder has never been black-listed along with the technical Bid under cover 1?	
14	Have you attached the Declaration on the letter pad of Bidder?	
15	Have you attached the signed Tender acceptance letter?	
16	Have you attached a signed copy of the letter that a LIVE VIDEO demonstration of the machine will be arranged to the committee?	
<b>Price Bid (Cover 2)</b>		
1	Have you signed and uploaded the priced bid form?	
2	Have you uploaded the schedule of requirements duly priced i.e., BOQ and its pdf version?	

**NOTE: While arranging the Tender Documents, check list should be placed on TOP.**



## **COMPLIANCE SHEET OF ESSENTIAL PRE-BID CRITERIA**

#	Essential Pre-Bid Criteria	Compliance
1	Bidders should be the manufacturer (OEM)/authorized dealer. In case the bid is submitted by the Authorized dealer, the currently valid Authorization letter for participating in this Tender (by clearly mentioning the Reference of this Tender) issued by the OEM must be uploaded (in Annexure V format). The Letter of authorization shall remain valid during execution of supply and installation.	
2	An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend all support for the warranty period and five years beyond the warranty in confirmation with this bid for the quoted items. In case the OEM withdraws its authorization from bidder, the above service will continued to be provided by the OEM.	
3	A notarized affidavit on a Non Judicial Stamp of Rs. 100 issued on/after the date of publish of this Tender to be submitted by the bidder that it has never been black-listed by any IITs/NITs/Govt. Offices/PSUs/Govt. Funded Universities/Govt. Funded Autonomous Bodies/Govt. Bodies must be uploaded along with the technical Bid under cover 1, failing which the Bid shall be rejected. The original shall be submitted before the award of bid by the lowest evaluated successful bidder. This affidavit must be issued on or after issuance of this tender.	
4	The bidder/OEM must have delivered at least five bottom pouring casting furnaces for metal matrix composites in Al and Mg in the last three financial years to any of the IITs/NITs/Govt. Offices/PSU/Govt. Funded Universities/Govt. Funded Autonomous Bodies/Govt. bodies with order value of at least Rs. 10 lakhs for a single order. Copies of purchase order, satisfactory installation certificate, names of user, their mobile number/ phone number and email id need to be uploaded. The purchaser may ask for input from user where the quoted instrument has been installed.	
5	The bidder has to give a LIVE VIDEO demonstration of quoted product during the technical evaluation process (most probably within one week of opening of technical bid). The institute will inform the date and time through a separate email to all the participating bidders. This will be a part of technical evaluation. The bidder needs to upload an undertaking in this regard that they will provide the demonstration as and when required by the Institute in Annexure IX.	
6	Manufacturer comprehensive warranty for 3-years.	
7	Certificate as per Annexure VI, Annexure VII, Annexure IX on the letterhead of the company must be uploaded.	

**All documents in support of above essential pre-bid criteria shall be scanned and uploaded under cover 1.**

-----  
Signature of the Authorized Person  
Date: -----  
Full Name -----  
Place: -----  
Company Address with Seal

**SECTION 6: DECLARATION**  
*(On the letter head of the firm submitting the bid)*

1. I, ----- Son /Daughter of Shri-----  
----- Proprietor/ Partner/ CEO /MD/ Director/  
Authorized Signatory of M/s. ----- am competent to sign this  
declaration and execute this tender document.
2. I have carefully read and understood all the terms and conditions of the tender and hereby convey my  
acceptance of the same.
3. The information/ documents furnished along with the above application are true and authentic to the  
best of my knowledge and belief.
4. I/ we/ am are well aware of the fact that furnishing of any false information/ fabricated document would  
lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate  
law.
5. Each page of the tender document and papers submitted by my Company is authenticated, sealed and  
signed, and I take full responsibility for the entire documents submitted.
6. This is certified that our organization has been authorized (Copy attached) by the OEM to participate  
in Tender. We further certified that our organization meets all the conditions of eligibility criteria laid  
down in this tender document. Moreover, OEM has agreed to support on regular basis with technology  
/product updates and extend support for the warranty.
7. The prices quoted in the price bids are subsidized due to academic discount given to IIT (BHU)  
Varanasi.
8. We, further specifically certify that our organization has not been Black Listed/De Listed or put to any  
Holiday by any Institutional Agency/Govt. Department/Public Sector Undertaking in the last three  
years.

-----  
Signature of the Authorized Person

Date: -----

Full Name -----

Place: -----

Company Address with Seal

## **SECTION 7: TENDER FORM**

**(Techno commercial un-priced Bid)**  
*(On the letter head of the firm submitting the bid)*

Tender No. ....

**To,**  
**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**Indian Institute of Technology (BHU) Varanasi**  
**Varanasi-221005, Uttar Pradesh, India**

Dear Sir,

1. I/We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders;
2. I/We meet the eligibility requirements and have no conflict of interest;
3. I/We have not been suspended nor declared ineligible in India;
4. I/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: *[insert a brief description of the Goods and Related Services]*
5. I/We offer to supply the items as listed in the schedule to this tender hereto/portion thereof as you may specify in the acceptance of Tender at the price given in the said Schedule and agree to hold this offer open for a period of ..... days from the date of opening of the tender.
6. I/we shall be bound by a communication of acceptance issued by you.
7. I/We have understood the Instruction to bidders and Conditions of Contract in the form as enclosed with the invitation to the tender and have thoroughly examined the specifications quoted in the Schedule hereto and am/are fully aware of the nature of the goods required and my/our offer is to supply the goods strictly in accordance with the specifications and requirements.
8. A proof of payment of Rs..... (Rupees.....only) as Tender Processing Fee in the aforementioned account of Registrar, IIT (BHU).
9. The following have been added to form part of this tender.
  - (a) Schedule of requirements, quoting the make only duly signed and stamped. (without indicating price)
  - (b) Income Tax clearance certificate.
  - (c) Copy of last audited balance sheet.
  - (d) Copy of Valid GST registration certificate.
  - (e) Copy of similar relevant major purchase orders executed during last three years in IITs/NITs/IISc/DRDO/Central Govt. Organization
  - (f) Proof of manufacturing Unit, dealership certificate/general order suppliers.
  - (g) Statement of deviations from financial terms & conditions, if any.
  - (h) Any other enclosure. (Please give details)
10. We undertake to execute all orders which have been placed to meet emergent requirements on priority basis.
11. Certified that the bidder is:

(a) A sole proprietorship firm and the person signing the bid document is the sole proprietor/constituted attorney of the sole proprietor,

**Or**

(a) A partnership firm, and the person signing the bid document is a partner of the firm and he has authority to refer to arbitration disputes concerning the business of the partnership by virtue of the partnership agreement/by virtue of general power of attorney.

**Or**

(b) A company and the person signing the document is the constituted attorney.

***(NOTE: Delete whatever is not applicable. All corrections/deletions should invariable be duly attested by the person authorized to sign the bid document).***

12. We do hereby undertake that, until a formal notification of award, this bid, together with your written acceptance thereof shall constitute a binding contract between us.

13. If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents.

14. We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process, other than alternative bids submitted.

15. We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.

Name of the Bidder\* .....

Name of the person duly authorized to sign the Bid on behalf of the Bidder\*\* .....

Title of the person signing the Bid .....

Signature of the person named above .....

Date signed ..... day of .....

\* In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

\*\* Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

Yours faithfully,

(Signature of bidder)

Dated this day of .....

Address: .....

Telephone No.: .....

FAX .....

E-mail .....

Company seal

**(Priced Bid)**  
*(On the letter head of the firm submitting the bid)*

Tender No. ....

**To,**  
**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**Indian Institute of Technology (BHU) Varanasi**  
**Varanasi-221005, Uttar Pradesh, India**

Dear Sir,

Having examined the bidding documents and having submitted the techno commercial unpriced bid for the same, we, the undersigned, hereby submit the priced bid for supply of goods and services as per the schedule of requirements and in conformity with the said bidding documents.

1. We hereby offer to supply the Goods/Services at the prices and rates mentioned in the enclosed schedule of requirement.
2. We do hereby undertake that, in the event of acceptance of our bid, the supply of Goods/Services shall be made as stipulated in the schedule of requirement and that we shall perform all the incidental services.
3. The prices quoted are inclusive of all charges net F.O.R IIT (BHU) Varanasi. We enclose herewith the complete Price Bid as required by you. This includes:
  - (a) Price Schedule (Bill of Quantity - BOQ) in .pdf format and .xls format
  - (b) Statement of deviations from financial terms and conditions, if any.
4. We agree to abide by our offer for a period of 90 days from the date fixed for opening of the bid documents and that we shall remain bound by a communication of acceptance within that time.
5. We have carefully read and understood the terms and conditions of the bid document and we do hereby undertake to supply as per these terms and conditions. The Financial Deviations are only those mentioned in the statement of deviations from financial terms and conditions.
6. We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: **[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]**

Name of Recipient	Address	Reason	Amount

**(If none has been paid or is to be paid, indicate “none.”)**

7. 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; and
8. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Certified that the bidder is:

A sole proprietorship firm and the person signing the bid document is the sole proprietor/ constituted attorney of sole proprietor,

**Or**

A partnership firm, and the person signing the bid document is a partner of the firm and he has authority to refer to arbitration disputes concerning the business of the partnership by virtue of the partnership agreement/by virtue of general power of attorney,

**Or**

A company and the person signing the bid document is the constituted attorney.

***(NOTE: Delete whatever is not applicable. All corrections/deletions should invariably be duly attested by the person authorized to sign the bid document.)***

We do hereby undertake that, until a formal notification of award, this bid, together with your written acceptance thereof, shall constitute a binding contract between us.

Dated this day of .....

Signature of Bidder .....

Details of enclosures .....

Full Address: .....

.....

Telephone No. ....

Mobile No. ....

Fax No. ....

E-mail: .....

Company Seal

## BIDDER INFORMATION FORM

Date:

ADVT. No.:

1. Bidder's Name:
2. In case of JV, legal name of each member: <i>[insert legal name of each member in JV]</i>
3. Bidder's actual or intended country of registration:
4. Bidder's year of registration:
5. Bidder's Address in country of registration:
6. Bidder's Authorized Representative Information Name:  Address:  Telephone/Fax:  Email:  Address:
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i>  <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above.  <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement.  <input type="checkbox"/> In case of Government-owned enterprise or institution, documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li><li>• Establishing that the Bidder is not dependent agency of the Purchaser</li></ul> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

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

**Date:**

**To,**  
**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**Indian Institute of Technology (BHU) Varanasi**  
**Varanasi-221005, Uttar Pradesh, India**

**Sub: Acceptance of Terms & Conditions of Tender.**

**Tender Reference No. ....**

**Name of Tender/ Work: .....**

.....

---

Dear Sir,

1. I/We have downloaded/ obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: ..... as per your advertisement, given in the above-mentioned website(s).
2. I/We hereby certify that I/We have read the entire terms and conditions of the tender documents from Page No. .... to ..... (including all documents like section(s), schedules(s) etc.), which form part of the contract agreement and I/we shall abide hereby by the terms/conditions/ clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.
4. I/We hereby unconditionally accept the tender conditions of above-mentioned tender document(s)/ corrigendum(s) in its totality/entirety.
5. In case any provisions of this tender are found violated, then your department/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender.

**Yours faithfully,**

**(Signature of the Bidder, with Official Seal)**



**FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)/ PERFORMANCE SECURITY**

*(To be typed on non-judicial stamp paper of the value of Indian Rupees of One Hundred)*

[To Be Established Through Any of the Nationalized Commercial Banks (Whether situated at Varanasi or Outstation) with A Clause to Enforce the Same on Their Local Branch at Varanasi]

**To,  
The Registrar  
Indian Institute of Technology (BHU) Varanasi  
Varanasi – 221005, Uttar Pradesh, India**

**LETTER OF GUARANTEE**

WHEREAS Indian Institute of Technology (BHU), Varanasi (Buyer) has invited tender vide Tender No..... dated..... for purchase of ..... AND WHEREAS the said tender document requires that eligible successful bidder (seller)..... wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Bank Guarantee in favour of “The Registrar, Indian Institute of Technology (BHU) Varanasi” in the form of Bank Guarantee for Rs. .... (3-10% of the contract value) and the Performance Bank Guarantee shall remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the seller, including warranty obligations from the date of issue of Performance Bank Guarantee and the eligible successful bidder (the seller) shall submit the same within 14 (Fourteen) days from the date of Award of Contract.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said bidder (seller) fails to abide by any of the conditions referred to in tender document / Award of Contract / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology (BHU), Varanasi on demand and without protest or demur Rs. .... (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology (BHU) Varanasi (Buyer) as to whether the said bidder (Seller) has committed a breach of any of the conditions referred in tender document / Award of Contract shall be final and binding.

We, ..... (Name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the bidder (Seller) and/ or Indian Institute of Technology (BHU), Varanasi (Buyer). **Notwithstanding anything contained herein:**

1. Our liability under this Bank Guarantee shall not exceed Rs. .... (Indian Rupees ..... only).
2. This Bank Guarantee shall be valid up to ..... (date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT (BHU), Varanasi serve upon us a written claim or demand on or before .....(date). This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at ..... situated at ..... (Address of local branch).

Yours truly,

Signature and seal of the guarantor:

Name of Bank:

Address:

Date:

## SECTION 8

### ANNEXURE I

#### **Computerized Casting Furnace for Metal Matrix Composites in Al and Mg for Centre of Excellence on Machine Tools Design**

##### **Description**

Computerized Casting Furnace for Metal Matrix Composites in Al and Mg having 3-years warranty.

##### **Quantity**

1 No.

##### **Detailed Specifications**

<b>S.No</b>	<b>Feature</b>	<b>Specification</b>
1.	Bottom Pouring Type Stir Casting Furnace	<ol style="list-style-type: none"><li>1. Maximum temperature: 1000 °C or more. The machine must be capable of continuous operation in the said maximum temperature.</li><li>2. Heating element: High quality KANTHAL APM Coils or better.</li><li>3. Chamber material: Inner wall of the chamber shall be made of high temperature muffle construction with high temperature withstanding refractory. Outer wall shall be made of thick gauge non-corrosive steel material or better.</li><li>4. Insulation: The furnace should be well insulated with High density non-cryogenic ceramic fiber. The surface temperature of the outer covering shall not exceed 50 °C even during continuous operation.</li><li>5. Pouring arrangement: Bottom pouring<ol style="list-style-type: none"><li>a. Motorized gate valve should be provided for convenient and remote operation.</li><li>b. Gate valve should have auto-stop mechanism for fully opened and fully closed position.</li></ol></li><li>6. Retort<ol style="list-style-type: none"><li>a. Material: Made of stainless steel 310 grade or better which is highly corrosive and heat resistant.</li><li>b. Protective Sleeve: A replaceable mild steel sleeve should be provided inside the Retort to protect from wear and tear while stirring at high temperature.</li><li>c. Capacity: 2 Kg of Aluminium/ Magnesium or better.</li></ol></li></ol>
2.	Stirrer arrangement	<ol style="list-style-type: none"><li>1 Design: Twin Fin blade type.</li><li>2 Material: Stainless Steel of 310 grade or better.</li></ol>

		<p>3 Speed: 300 to 1200 rpm or better range using an electric motor of high power. Should be capable of driving power to stir molten Aluminium and Magnesium even at their near-melting temperature.</p> <p>4 Speed control: Digitally through the software with controllable step of 10 rpm.</p> <p>5 Indication: Digital indication &amp; control with accuracy of +/- 10 RPM or better.</p> <p>6 Lift: Motorized lift to move the stirred up and down the furnace should be available. Auto cut-off of stirrer rotation should be available at extreme TOP and BOTTOM.</p> <p>7 Auto-jog: Provision to move the stirrer UP/DOWN while stirring automatically should be available.</p> <p>8 10 pairs of additional stirrer blades shall be supplied along with the equipment.</p>
3.	Pre-heating furnace for reinforcement	<p>1. Maximum operating temperature: 800 °C or better. High quality Nichrome filament or better technology shall be used for heating.</p> <p>2. Should be attached on top of the Stir Casting Furnace.</p> <p>3. Heating Chamber interior should be made of high quality refractory material to withstand high temperature.</p> <p>4. Heating chamber outer body should be made of stainless steel tube provided with a gate valve at the bottom. The chamber shall be insulated using high density non-cryogenic ceramic fibre. The surface temperature of the outer covering shall not exceed 50 °C even during continuous operation.</p> <p>5. Gate valve should be digitally controlled through the same interface used to control the furnace. Provision to control the flow of reinforcement into the melt.</p>
4.	Pre-heater for mould	<p>1. Shall be of immersion type to be placed inside the main furnace.</p> <p>2. Should be portable and easy to handle.</p> <p>3. Maximum working temperature of 450 °C or higher.</p>
5.	Gas supply and mixing system	<p>1. Two cylinders of Argon gas should be provided as input for maintaining Inert Gas Atmosphere.</p> <p>2. Two cylinders of SF6 gas should be provided as input for maintaining the temperature in case if the temperature shoots up</p>

		<p>because of firing of Mg or any flammable materials added in the melt.</p> <ol style="list-style-type: none"> <li>3. Double stage regulators made of stainless steel for the cylinders stated above - 2 units (1 for Ar and another one for SF6).</li> <li>4. Separate stainless steel gas storage tanks should be provided to store the input gases at the set pressure.</li> <li>5. Digital gas mixing controller should be provided to mix the input gases to required ratio (0 to 100%). The control should be provisioned in the same interface used to control the main casting unit.</li> <li>6. Digital mass flow controller should be provided for the mixed gas output to the combustion chamber. Flow control from 0 to 10 lpm should be digitally available.</li> <li>7. A gas shield should be provided around the bottom pouring tube to avoid the flashing of Mg while pouring into the die.</li> </ol>
6.	Controller and control interface	<ol style="list-style-type: none"> <li>1. The human-machine interface (HMI) of the stir casting setup can be Android Tablet or touch screen panel which is connected to the machine wirelessly. So that the users can use the HMI at least 10 m away from the machine.</li> <li>2. The control module (software) should consist of the indication, control and recording of all process parameters in real time.</li> <li>3. Parameters controlled, monitored, recorded and stored in real-time (not limited to): <ol style="list-style-type: none"> <li>a. Furnace and Heaters <ol style="list-style-type: none"> <li>i. Actual Melt Temperature</li> <li>ii. Reinforcement Temperature</li> <li>iii. Mold Temperature</li> </ol> </li> <li>b. Stirrer <ol style="list-style-type: none"> <li>i. Speed indication &amp; control +/- 10 RPM</li> <li>ii. Stirrer vertical height control with auto cut off at extreme top and bottom</li> <li>iii. Stirrer jog control</li> </ol> </li> <li>c. Bottom Pouring Gate Valve Control (OPEN/CLOSE)</li> <li>d. Gas Mixing Control <ol style="list-style-type: none"> <li>i. SF6 &amp; Ar gas mixing percent (0 to 100%)</li> <li>ii. Gas Pressure Control</li> <li>iii. Gas Flow Control: 0 to 10 LPM</li> </ol> </li> <li>e. Parameters for additional accessories <ol style="list-style-type: none"> <li>i. Vacuum Die Casting</li> </ol> </li> </ol> </li> </ol>

		<ul style="list-style-type: none"> <li>➤ Vacuum Pump ON/OFF</li> <li>ii. Squeeze casting <ul style="list-style-type: none"> <li>➤ Pressure and stroke indication and control</li> <li>➤ Runway temperature</li> <li>➤ Hydraulic pump control</li> </ul> </li> <li>iii. Centrifugal casting <ul style="list-style-type: none"> <li>➤ Speed of the rotational die indication and control with +/- 10 RPM accuracy</li> </ul> </li> </ul> <p>4. All thermocouples used should be of K Type, stainless steel sheathed and grounded for accurate capture of temperatures in all furnaces and heaters.</p> <p>5. The furnace should have PID based temperature controller for precise temperature control with an accuracy of +/- 1 °C.</p> <p>6. Digital VAF meter shall be provided with the machine to indicate the power, current and voltage consumed by the machine. Power control should be through Solid State Relays and Necessary HRC Fuses are to be provided.</p> <p>7. Control and monitoring of other accessories shall also be done through the same interface.</p>
7.	Essential Accessory -1: Vacuum die casting attachment	<p>Vacuum die casting attachment should be supplied with the following components:</p> <ol style="list-style-type: none"> <li>1. Vacuum pump – High power vacuum pump to provide high vacuum (700 mm Hg or better) to the vacuum die casting arrangement. Vacuum should be indicated through a dial gauge.</li> <li>2. Vacuum storage tank – The stainless steel tank shall serve as the buffer chamber to create instant vacuum in the casting die. The vacuum storage tank shall be coupled with the vacuum pump.</li> <li>3. Die holding chamber – The stainless steel chamber shall hold the die and is coupled with the vacuum storage tank. The chamber shall have air-tight provision so that instant vacuum can be released on the die to create defect free cast.</li> <li>4. Die – The die shall be placed inside the die holding chamber for direct pouring of melt to get the cast. <ol style="list-style-type: none"> <li>i. Mold to get plate of dimension 300 x 100 x 15mm – 1 no.</li> <li>ii. Mold to get plate of dimension 300 x 100 x 10 mm – 1 no.</li> <li>iii. Mold to get cylindrical bar 50 mm diameter and 250 mm height – 1 no.</li> <li>iv. Mold to get cylindrical bar 100 mm diameter and 250 mm height – 1 no.</li> </ol> </li> <li>5. The whole setup of vacuum die system should be able to slide below the bottom pouring tube for directly pouring the melt into the die.</li> </ol>

8.	Essential Accessory -2: Squeeze die casting attachment	<p>A standalone setup connecting to the bottom pouring tube with an L- type connector with following features:</p> <ol style="list-style-type: none"> <li>1. Hydraulic power pack of 150 tons capacity or better for squeeze casting.</li> <li>2. Hydraulic press with a capacity of 100 tons or better.</li> <li>3. Runway L type tube – one end connected to the bottom pouring tube of the furnace. The other end connected to the squeeze casting die. The runway tube will have heater provision capable of maintaining the runway temperature at 800 °C maximum.</li> <li>4. The runway temperature and squeeze pressure to be controlled and monitored using the digital control interface used for the main casting setup.</li> <li>5. Die made of mild steel or stainless steel with a cast dimension of 50 mm outer diameter and 250 mm height.</li> </ol>
9.	Essential Accessory -3: Rotary centrifugal casting attachment	<p>A customized centrifugal casting arrangement that can be placed directly below the bottom pouring tube of the casting furnace with the following feature.</p> <ol style="list-style-type: none"> <li>1. AC/DC motor to drive the rotary die at a speed ranging from 300 to 1400 rpm.</li> <li>2. Rotary cast split die made of mild steel to form cylindrical rod/tube of 100 mm OD and 200 mm long – 1 No.</li> <li>3. The die should have a die preheater capable of maintaining a die temperature of 350 °C or higher.</li> </ol>
10.	Essential Accessory -4: Ultrasonic Vibrator Horn	<ol style="list-style-type: none"> <li>1. 2500 W ultrasonic generator with power adjustments of 60%, 70%, 90%, and 100%. Ultrasonic frequency of 20 KHz. 30 mm horn diameter.</li> <li>2. The system should be Inclusive of convertor, booster and titanium tipped probe with full wavelength horn nearly of 250 mm for uniform reinforcement particle dispersion in molten aluminium and magnesium.</li> <li>3. Motorized Horn lifting arrangement with auto cut off at extreme top and bottom ends.</li> <li>4. The ultrasonic vibrator arrangement should be accommodated within the existing stir casting furnace.</li> <li>5. Water Cooling arrangement with water tank and pump should be provided to cool the ultrasonic horn during high temperature operations.</li> <li>6. Portable trolley with rigid frame structure to move the ultrasonic vibrator arrangement setup for dipping the ultrasonic probe into the stir casting machine should be provided.</li> </ol>

11.	Essential Accessory -5: Data Acquisition System for Obtaining Cooling Curve	<ol style="list-style-type: none"> <li>1. Data acquisition is to be added in the HMI of stir casting machine to obtain the cooling curve while solidification of melt in the die.</li> <li>2. The temperature should be recorded at the vertical centre at 3 different heights using thermocouple. The 300 x 100 x 15mm thickness mold should have a provision to hold the thermocouples to measure the temperature.</li> <li>3. The software should obtain data with high accuracy with a sampling rate from 1 s to 120 s. The data obtained should be displayed and recorded in real time and can be exported in MS Excel format to obtain the cooling curve.</li> <li>4. At least 10 nos. K-Type Thermocouples should be provided.</li> </ol>
12.	Other essential accessories	<ol style="list-style-type: none"> <li>1. Toolbox containing all essential tool for operation and maintenance of the casting setup - 1 no</li> <li>2. Tray for sand filling - 1 no.</li> <li>3. Asbestos gloves - 10 pair</li> <li>4. Melt Thermocouple (K type, Stainless Steel Sheathed &amp; L Shaped) - 10 nos.</li> <li>5. Furnace Cleaning Tool Kit - 1 set</li> <li>6. High temperature non-stick coating 750 g – 6 nos.</li> <li>7. Controlled atmosphere spares: <ul style="list-style-type: none"> <li>• SF6 gas filled Cylinders: 2 nos.</li> <li>• 99.99% pure Ar gas filled Cylinders: 2 nos.</li> <li>• Stainless steel double stage regulators for the cylinders: 2 nos.</li> </ul> </li> <li>8. Pure Al and Mg – 5 kgs each to be supplied with the machine.</li> <li>9. SiC reinforcement in micron size: 100 grams to be supplied with the machine.</li> <li>10. Any other items that are necessary for the smooth function of the setup.</li> </ol>
13.	Other mandatory conditions	<ol style="list-style-type: none"> <li>1. The warranty for the quoted machine should be for 3 years from the date of commissioning.</li> <li>2. Offer for 3 years AMC after the warranty period clearly indicating the scope of the AMC must be quoted separately.</li> <li>3. Installation and commissioning should be done by a well-trained engineer of the company at our premises.</li> <li>4. Operation, service, and maintenance training should be provided to at least five people for a minimum of two days. In addition, extra trainings sessions, if needed, must be provided online/offline without any charges.</li> <li>5. One set of maintenance and operating manuals in English (with a hard copy) must be provided.</li> <li>6. Support of hardware and spares for 10 years and more after the End of life of the model.</li> </ol>
14.	Certificate	The manufacturer must be an ISO_9001 - 2015 certified company.

## **Other Terms**

1. Price of the facility should be quoted in Indian currency.
2. Price should be quoted F.O.R to IIT (BHU) Varanasi.
3. Custom Clearance will be the responsibility of the supplier.
4. **Indian agency commission:** Should be clearly stated in the financial bid in Indian currency.
5. **Penalty:** A penalty of 1% of the order value will be applied for late delivery of the goods for each week thereof subject to a maximum of 10%.
6. **Bank Guarantee (BG):** Successful bidder have to furnish **03-10%** of the order value as a performance security in the shape of Fixed Deposit Receipt / Bank Guarantee in favour of the Registrar, Indian Institute of Technology (BHU) Varanasi which will be valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Fixed Deposit Receipt / Bank Guarantee should be issued from a schedule bank in India. Bank guarantee is only applicable for the Supplier who will get the Award of Contract and will submit at the time of installation of the instrument.
7. **Payment:** The payment shall be made by **100% payment against Supply, Installation and Commissioning and submission of satisfactory PBG.**
8. **User List:** Provide users for the last 5 years with contact person name, address, phone, and email IDs.
9. **Manuals/Documents:** 1 set of hard copy and 1 set of soft copy in English (preferred as following).
  - i. Operating manuals
  - ii. Maintenance manual
  - iii. Servicing manual
  - iv. Programming manual
  - v. Manuals of bought out items incorporated in the system
  - vi. Details of any custom-made ICs & components & their sources
10. The bidder must be authorized by the respective OEM to supply, install and maintain the system. The Tender should be enclosed with proper certifications like **Authorization Certificate and Proprietary Certificate**, in case of Proprietary items.
11. Pre-installation site preparation/inspection requirements to be indicated and specified along with the bid.
12. Warranty period to be clearly mentioned and should begin from the date of installation. Annual Maintenance Contract Charges should be clearly mentioned after warranty period. Preferably 3-years comprehensive warranty with attachments.
13. Submit Electronic copy of the technical specifications and bids.
14. The vendor to provide compliance statement with respect to each technical specification in the tender document duly supported by the manufacturer's literature. Any other claim will not be accepted and may lead to rejection of the bid.
15. Printed literature in support of compliance to the prescribed specifications is to be submitted.
16. Compliance report needs to be submitted as a part of the technical bid.
17. In case during shipment period newer versions of software/hardware is available with vendor in lieu of the existing one for which Letter of Credit was opened, then improved version should be made available without any extra cost.
18. Institute reserves the right to visit installation in India of similar capabilities the details with to regard to such installation should be given as a part of technical bid.
19. Technical evaluation by the Institute may include demonstration to verify functionalities and capabilities of the system quoted.

**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**Indian Institute of Technology (BHU) Varanasi**  
**Varanasi-221005, Uttar Pradesh, India**



## TECHNICAL COMPLIANCE STATEMENT

*(To be submitted by bidder duly filled)*

S.No	Feature	Specification	Yes/No
1.	Bottom Pouring Type Stir Casting Furnace	<ol style="list-style-type: none"> <li>1. Maximum temperature: 1000 °C or more. The machine must be capable of continuous operation at the said maximum temperature.</li> <li>2. Heating element: High quality KANTHAL APM Coils or better.</li> <li>3. Chamber material: Inner wall of the chamber shall be made of high temperature muffle construction with high temperature withstanding refractory. The outer wall shall be made of thick gauge non-corrosive steel material or better.</li> <li>4. Insulation: The furnace should be well insulated with High density non-cryogenic ceramic fiber. The surface temperature of the outer covering shall not exceed 50 °C even during continuous operation.</li> <li>5. Pouring arrangement: Bottom pouring               <ol style="list-style-type: none"> <li>a. Motorized gate valve should be provided for convenient and remote operation.</li> <li>b. Gate valve should have auto-stop mechanism for fully opened and fully closed position.</li> </ol> </li> <li>6. Retort               <ol style="list-style-type: none"> <li>a. Material: Made of stainless steel 310 grade or better which is highly corrosive and heat resistant.</li> <li>b. Protective Sleeve: A replaceable mild steel sleeve should be provided inside the Retort to protect from wear and tear while stirring at high temperature.</li> <li>c. Capacity: 2 Kg of Aluminium/ Magnesium or better.</li> </ol> </li> </ol>	
2.	Stirrer arrangement	<ol style="list-style-type: none"> <li>1. Design: Twin Fin blade type.</li> <li>2. Material: Stainless Steel of 310 grade or better.</li> <li>3. Speed: 300 to 1200 rpm or better range using an electric motor of high power. Should be capable of driving power to stir molten Aluminium and Magnesium even at their near-melting temperature.</li> <li>4. Speed control: Digitally through the software with controllable step of 10 rpm.</li> </ol>	

		<ol style="list-style-type: none"> <li>5. Indication: Digital indication &amp; control with accuracy of +/- 10 RPM or better.</li> <li>6. Lift: Motorized lift to move the stirred up and down the furnace should be available. Auto cut-off of stirrer rotation should be available at extreme TOP and BOTTOM.</li> <li>7. Auto-jog: Provision to move the stirrer UP/DOWN while stirring automatically should be available.</li> <li>8. 10 pairs of additional stirrer blades shall be supplied along with the equipment.</li> </ol>	
3.	Pre-heating furnace for reinforcement	<ol style="list-style-type: none"> <li>1. Maximum operating temperature: 800 °C or better. High quality Nichrome filament or better technology shall be used for heating.</li> <li>2. Should be attached on top of the Stir Casting Furnace.</li> <li>3. Heating Chamber interior should be made of high quality refractory material to withstand high temperature.</li> <li>4. Heating chamber outer body should be made of stainless steel tube provided with a gate valve at the bottom. The chamber shall be insulated using high density non-cryogenic ceramic fiber. The surface temperature of the outer covering shall not exceed 50 °C even during continuous operation.</li> <li>5. Gate valve should be digitally controlled through the same interface used to control the furnace. Provision to control the flow of reinforcement into the melt.</li> </ol>	
4.	Pre-heater for mold	<ol style="list-style-type: none"> <li>1. Shall be of immersion type to be placed inside the main furnace.</li> <li>2. Should be portable and easy to handle.</li> <li>3. Maximum working temperature of 450 °C or higher.</li> </ol>	
5.	Gas supply and mixing system	<ol style="list-style-type: none"> <li>1. Two cylinders of Argon gas should be provided as input for maintaining Inert Gas Atmosphere.</li> <li>2. Two cylinders of SF6 gas should be provided as input for maintaining the temperature in case of temperature shoots up because of firing of Mg or any flammable materials added in the melt.</li> <li>3. Double stage regulators made of stainless steel for the cylinders stated above - 2 units (1 for Ar and another one for SF6).</li> </ol>	

		<ol style="list-style-type: none"> <li>4. Separate stainless steel gas storage tanks should be provided to store the input gases at the set pressure.</li> <li>5. Digital gas mixing controller should be provided to mix the input gases to required ratio (0 to 100%). The control should be provisioned in the same interface used to control the main casting unit.</li> <li>6. Digital mass flow controller should be provided for the mixed gas output to the combustion chamber. Flow control from 0 to 10 lpm should be digitally available.</li> <li>7. A gas shield should be provided around the bottom pouring tube to avoid the flashing of Mg while pouring into the die.</li> </ol>	
6.	Controller and control interface	<ol style="list-style-type: none"> <li>1. The human-machine interface (HMI) of the stir casting setup can be Android Tablet or touch screen panel which is connected to the machine wirelessly. So that the users can use the HMI at least 10 m away from the machine.</li> <li>2. The control module (software) should consist of the indication, control and recording of all process parameters in real time.</li> <li>3. Parameters controlled, monitored, recorded, and stored in real-time (not limited to): <ol style="list-style-type: none"> <li>a. Furnace and Heaters <ol style="list-style-type: none"> <li>i. Actual Melt Temperature</li> <li>ii. Reinforcement Temperature</li> <li>iii. Mold Temperature</li> </ol> </li> <li>b. Stirrer <ol style="list-style-type: none"> <li>i. Speed indication &amp; control +/- 10 RPM</li> <li>ii. Stirrer vertical height control with auto cut off at extreme top &amp; bottom</li> <li>iii. Stirrer jog control</li> </ol> </li> <li>c. Bottom Pouring Gate Valve Control (OPEN/CLOSE)</li> <li>d. Gas Mixing Control <ol style="list-style-type: none"> <li>i. SF6 &amp; Ar gas mixing percent (0 to 100%)</li> <li>ii. Gas Pressure Control</li> <li>iii. Gas Flow Control: 0 to 10 LPM</li> </ol> </li> <li>e. Parameters for additional accessories <ol style="list-style-type: none"> <li>i. Vacuum Die Casting <ul style="list-style-type: none"> <li>➤ Vacuum Pump ON/OFF</li> </ul> </li> <li>ii. Squeeze casting <ul style="list-style-type: none"> <li>➤ Pressure and stroke indication and control</li> <li>➤ Runway temperature</li> <li>➤ Hydraulic pump control</li> </ul> </li> </ol> </li> </ol> </li> </ol>	

		<ul style="list-style-type: none"> <li>iii. Centrifugal casting <ul style="list-style-type: none"> <li>➤ Speed of the rotational die indication and control with +/- 10 RPM accuracy</li> </ul> </li> <li>4. All thermocouples used should be of K Type, stainless steel sheathed and grounded for accurate capture of temperatures in all furnaces and heaters.</li> <li>5. The furnace should have PID based temperature controller for precise temperature control with an accuracy of +/- 1 °C.</li> <li>6. Digital VAF meter shall be provided with the machine to indicate the power, current and voltage consumed by the machine. Power control should be through Solid State Relays and Necessary HRC Fuses are to be provided.</li> <li>7. Control and monitoring of other accessories shall also be done through the same interface.</li> </ul>	
7.	Essential Accessory -1: Vacuum die casting attachment	<p>Vacuum die casting attachment should be supplied with the following components:</p> <ul style="list-style-type: none"> <li>1. Vacuum pump – High power vacuum pump to provide high vacuum (700 mm Hg or better) to the vacuum die casting arrangement. Vacuum should be indicated through a dial gauge.</li> <li>2. Vacuum storage tank – The stainless steel tank shall serve as the buffer chamber to create instant vacuum in the casting die. The vacuum storage tank shall be coupled with the vacuum pump.</li> <li>3. Die holding chamber – The stainless steel chamber shall hold the die and is coupled with the vacuum storage tank. The chamber shall have air-tight provision so that instant vacuum can be released on the die to create defect free cast.</li> <li>4. Die – The die shall be placed inside the die holding chamber for direct pouring of melt to get the cast. <ul style="list-style-type: none"> <li>i. Mold to get plate of dimension 300 x 100 x 15mm – 1 no.</li> <li>ii. Mold to get plate of dimension 300 x 100 x 10 mm – 1 no.</li> <li>iii. Mold to get cylindrical bar 50 mm diameter and 250 mm height – 1 no.</li> <li>iv. Mold to get cylindrical bar 100 mm diameter and 250 mm height – 1 no.</li> </ul> </li> <li>5. The whole setup of vacuum die system should be able to slide below the bottom pouring tube for directly pouring the melt into the die.</li> </ul>	

8.	Essential Accessory -2: Squeeze die casting attachment	<p>A standalone setup connecting to the bottom pouring tube with an L- type connector with following features:</p> <ol style="list-style-type: none"> <li>1. Hydraulic power pack of 150 tons capacity or better for squeeze casting.</li> <li>2. Hydraulic press with a capacity of 100 tons or better.</li> <li>3. Runway L type tube – one end connected to the bottom pouring tube of the furnace and the other end connected to the squeeze casting die. The runway tube will have heater provision capable of maintaining the runway temperature at 800 °C maximum.</li> <li>4. The runway temperature and squeeze pressure to be controlled and monitored using the digital control interface used for the main casting setup.</li> <li>5. Die made of mild steel or stainless steel with a cast dimension of 50 mm outer diameter and 250 mm height.</li> </ol>	
9.	Essential Accessory -3: Rotary centrifugal casting attachment	<p>A customized centrifugal casting arrangement that can be placed directly below the bottom pouring tube of the casting furnace with the following feature.</p> <ol style="list-style-type: none"> <li>1. AC/DC motor to drive the rotary die at a speed ranging from 300 to 1400 rpm.</li> <li>2. Rotary cast split die made of mild steel to form cylindrical rod/tube of 100 mm OD and 200 mm long – 1 no.</li> <li>3. The die should have a die preheater capable of maintaining a die temperature of 350 °C or higher.</li> </ol>	
10.	Essential Accessory -4: Ultrasonic Vibrator Horn	<ol style="list-style-type: none"> <li>1. 2500 W ultrasonic generator with power adjustments of 60%, 70%, 90%, and 100%. Ultrasonic frequency of 20 KHz. 30 mm horn diameter.</li> <li>2. The system should be Inclusive of convertor, booster and titanium tipped probe with full wavelength horn nearly of 250 mm for uniform reinforcement particle dispersion in molten aluminium and magnesium.</li> <li>3. Motorized Horn lifting arrangement with auto cut off at extreme top and bottom ends.</li> <li>4. The ultrasonic vibrator arrangement should be accommodated within the existing stir casting furnace.</li> <li>5. Water Cooling arrangement with water tank and pump should be provided to cool the ultrasonic horn during high temperature operations.</li> <li>6. Portable trolley with rigid frame structure to move the ultrasonic vibrator arrangement setup for dipping the ultrasonic probe into the stir casting machine should be provided.</li> </ol>	

11.	Essential Accessory -5: Data Acquisition System for Obtaining Cooling Curve	<ol style="list-style-type: none"> <li>1. Data acquisition is to be added in the HMI of stir casting machine to obtain the cooling curve while solidification of melt in the die.</li> <li>2. The temperature should be recorded at the vertical centre at 3 different heights using thermocouple. The 300 x 100 x 15mm thickness mold should have a provision to hold the thermocouples to measure the temperature.</li> <li>3. The software should obtain data with high accuracy with a sampling rate from 1 s to 120 s. The data obtained should be displayed and recorded in real time and can be exported in MS Excel format to obtain the cooling curve.</li> <li>4. At least 10 nos. K-Type Thermocouples should be provided.</li> </ol>	
12.	Other essential accessories	<ol style="list-style-type: none"> <li>1. Toolbox containing all essential tool for operation and maintenance of the casting setup - 1 no.</li> <li>2. Tray for sand filling - 1 no.</li> <li>3. Asbestos gloves - 10 pairs</li> <li>4. Melt Thermocouple (K type, Stainless Steel Sheathed &amp; L Shaped) - 10 nos.</li> <li>5. Furnace Cleaning Tool Kit - 1 set</li> <li>6. High temperature non-stick coating 750 gm – 6 nos.</li> <li>7. Controlled atmosphere spares: <ul style="list-style-type: none"> <li>• SF6 gas filled Cylinders: 2 nos.</li> <li>• 99.99% pure Ar gas filled Cylinders: 2 nos.</li> <li>• Stainless steel double stage regulators for the cylinders: 2 nos.</li> </ul> </li> <li>8. Any other items that are necessary for the smooth function of the setup.</li> <li>9. Pure Al and Mg – 5 kgs each to be supplied with the machine.</li> <li>10. SiC reinforcement in micron size: 100 grams to be supplied with the machine.</li> </ol>	
13.	Other mandatory conditions	<ol style="list-style-type: none"> <li>1. The warranty for the quoted machine should be for 3 years from the date of commissioning.</li> <li>2. Offer for 3 years AMC after the warranty period clearly indicating the scope of the AMC must be quoted separately.</li> <li>3. Installation and commissioning should be done by a well-trained engineer of the company at our premises.</li> <li>4. Operation, service, and maintenance training should be provided to at least five people for a minimum of two days.</li> </ol>	

		<p>In addition, extra trainings sessions if needed must be provided online/offline without any charges.</p> <p>5. One set of maintenance and operating manuals in English (with a hard copy) must be provided.</p> <p>6. Support of hardware and spares for 10 years and more after the End of life of the model should be guaranteed.</p>	
14.	Certificate	The manufacturer must be an ISO_9001 – 2015 certified company.	

**Signature of the Authorized  
Official with Seal**

**SECTION 9****PREVIOUS SIMILAR ORDER EXECUTED**

Please quote best minimum prices applicable for a premier Educational and Research Institution. The party must give details of purchase orders identical or similar equipment supplied to any IITs/NITs/Govt. Office/PSU/University/Autonomous Body as per below Format in last Three years (to be enclosed in Price Bid / Commercial Bid) along with the final price paid and details are mandatory.

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 delivery as per contract	Remarks indicating reasons for late delivery, if any and justification for price difference of their supply order & those quoted to us	Has the Equipment being installed satisfactorily (Attach a Certificate from the Purchaser/ Consigner)	Contact Person along with Telephone No., Fax No. and e-mail address.

*(Kindly enclose the scan copy of aforementioned purchase orders)*

**Details of Technical Expert**

<b>Name of application specialist / Service Engineer who have the technical competency to handle and support the quoted product during the warranty period.</b>		
<b>Name of the organization</b>	<b>Name of Contact Person</b>	<b>Contact No.</b>

Place: .....

Date: .....

Signature and Seal of the Manufacturer/ Bidder



**BID SUBMISSION****Online Bid Submission**

The Online bids (complete in all respect) must be uploaded online in **two covers** as explained below:

<b>Cover - 1</b>			
<b>S. No.</b>	<b>Document</b>	<b>Content</b>	<b>File Type</b>
1	Technical Bid	Technical Compliance Sheet, Bidder information form	.pdf
2		Organization Declaration Sheet, Compliance sheets for Essential Pre-Bid Criteria	.pdf
3		Checklist, Tender Acceptance, Tender Form, Annexure I, etc.	.pdf
4		List of organizations/clients where similar products have been supplied (in last five years) along with their contact number(s). (Annexure III)	.pdf
5		Technical supporting documents in support of all claims made at Annexure I	.pdf
6		EMD and Tender fee submission proof	.pdf
7		Brochure of quoted product and other documents, if any	.pdf
8		Other Documents, if any which are not covered above	.pdf
<b>Cover - 2</b>			
<b>S. No.</b>	<b>Document</b>	<b>Content</b>	<b>File Type</b>
1	Price Bid	Duly filled and signed Tender Form (Price Bid)	.pdf
2		Duly signed BOQ	.pdf
3		BOQ in .xls Format	.xls/ .xlsx

**ORIGINAL EQUIPMENT MANUFACTURER (OEM)**  
**Manufacturing Authorization Form (MAF)**  
*(On Letter Head of Manufacturer)*

Tender No.: .....

**To,**  
**Coordinator**  
**Centre of Excellence on Machine Tools Design**  
**Indian Institute of Technology (BHU) Varanasi**  
**Varanasi-221005, Uttar Pradesh, India**

Dear Sir,

We manufacturer of original equipment at ..... (address of factory) do hereby authorize M/s ..... (Name and address of Agent) to submit a bid, negotiate and receive the order format against your tender enquiry. M/s. .... is authorized to bid and conclude the contract in regard to this business. We hereby extend our full guarantee and warranty as per clause ..... of the terms and conditions NIQ for the goods and services offered by the above firm.

Yours Faithfully,

(Name)

(Name & Seal of Manufactures)

**Note:**

1. Items of indigenous nature or quoted in INR, more than 1 authorized representative may participate in the same tender and submit their bids on behalf of their OEM/Principal/Manufacturer if the OEM permits more than one authorized bidder in such case as per their policy.
2. In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer.
3. The letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The same should be included by the bidder in its techno-commercial unpriced bid.

**DECLARATION**

*(To be submitted on the letterhead of Company)*

**To,  
Coordinator  
Centre of Excellence on Machine Tools Design  
Indian Institute of Technology (BHU) Varanasi  
Varanasi-221005, Uttar Pradesh, India**

**We certify as under:**

We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries, and solemnly certify that we fulfill all requirements in this regard and are eligible to be considered.

**We certify that:**

- (a) We are not from such a country or, if from such a country, we are registered with the Competent Authority (copy enclosed);
- and**
- (b) We shall not subcontract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

Yours faithfully,

(Signature of the Bidder, with Official Seal)

**DECLARATION OF LOCAL CONTENT**

*(To be given on Company Letter Head for Tender Value below Rs.10 Crores)/ (To be given by Statutory Auditor/ Cost Auditor/ Cost Accountant/ CA for tender value above Rs.10 Crores)*

**To,  
Coordinator  
Centre of Excellence on Machine Tools Design  
Indian Institute of Technology (BHU) Varanasi  
Varanasi-221005, Uttar Pradesh, India**

**Subject: Declaration of Local Content**

Tender Reference No: .....

Name of Tender/ Work: .....

1. Country of Origin of Goods being offered: .....

2. We hereby declare that items offered has ..... % local content

3. Details of the Location at which the Local Value Addition is made .....

4. Details of Local Content

“Local Content” means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent. Bidders offering Imported products will fall under the category of Nonlocal Suppliers. They cannot claim themselves as Class-I or Class-II Local Suppliers by claiming the services such as Transportation, Insurance, Installation, Commissioning, Training and After Sale Service Support like AMC/ CMC etc. as Local Value Addition.

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

Yours faithfully,

(Signature of the bidder, with Official Seal)

**Note:** It is mandatory for bidders to quote items having local content minimum 20%. Refer revised Public Procurement (Preference to Make in India), Order 2017, No. P-45021/2/2017-PP (B.E-II) dated 16.09.2020 issued by DPIIT, Ministry of Commerce and Industry, Govt. of India.

**BID SECURING DECLARATION FORM***(Letterhead of the bidder)*

To

(Insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with IIT(BHU) Varanasi for a period of two years from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

- (a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity or its extended period, if any; or
- (b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity
  - (i) fail or refuse to execute the contract, if required, or
  - (ii) fail or refuse to furnish the Performance Bank Guarantee, in accordance with the Instructions to Bidders.
- (c) If the bidder is found indulging in any corrupt, fraudulent or other malpractice in respect of the bid; or
- (d) If there is a discrepancy between words and figures quoted by the bidder then in that case the amount quoted in words will be treated as final.

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

Signed: .....

*(Insert signature of person whose name and capacity are shown in Bid Securing Declaration)*

Name: .....

*(Insert complete name of person signing the Bid Securing Declaration)*Duly authorized to sign the bid for an on behalf of *(Insert complete name of Bidder)*Dated on ..... day of ..... *(Insert date of signing)*

Corporate Seal (where appropriate)

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

*(to be submitted on the letterhead of Company)*

**UNDERTAKING FOR LIVE VIDEO DEMONSTRATION**

**To,  
Coordinator  
Centre of Excellence on Machine Tools Design  
Indian Institute of Technology (BHU) Varanasi  
Varanasi-221005, Uttar Pradesh, India**

We, M/s ..... do hereby confirms that the LIVE VIDEO demonstration for the quoted product ..... will be given by our company as and when asked by the Centre of Excellence on Machine Tools Design committee, IIT (BHU) during the technical evaluation process.

Yours faithfully,

(Signature of the Bidder, with Official Seal)

**----END----**