



No. HD/PUR/SP-45/MF/04/2020-21/12602

Date:01.04.2021

Centre for Materials for Electronics Technology (C-MET), Hyderabad invites Tenders against Tender No. HD/PUR/SP-45/MF/04/2020-21/12602 dated 01.04.2021. Closing Date/Time **22.04.2021 at 17:00 Hrs.** Bidders will be able to submit their original/revised bids upto closing date and time only.

2. ITEM: ELECTRICAL HIGH TEMPERATURE BOX TYPE MUFFLE FURNACE

Supply, Installation & Commissioning of Electrical High Temperature Box Type Muffle Furnace

Tender Type : **OPEN TENDER**
Closing time : **22.04.2021 at 17:00 Hrs.**

Note: Bidders who downloaded tender documents from our web site shall send an email to vnrao@cmet.gov.in immediately giving the tender reference number, date of downloading, your full address and contact details. This will help us post any corrigendum or addendum to the tender taken place after the bidder downloaded it. Addendum/corrigendum will be posted in our website as well as in CPP portal only. It will also be sent to bidder who had informed after downloading of the document from our website.

NOTE:

- (i) The Technical bid & Financial bid should be in separate sealed covers
- (ii) The quotation should be submitted in the enclosed format only.
- (iii) Conditional tenders shall not be accepted
- (iv) The envelope super-scribed with [a] Enquiry Letter No. & date [b] Due Date & [c] Description of the Item should be clearly indicated, otherwise quotation will be rejected.
- (v) Firms or their authorized representatives will not be allowed to attend the opening of Technical bids on 23.04.2021 at 11:30 hours due to existing COVID-19 pandemic situation. If there is any delay in opening of technical bids will be intimated to the bidder.
- (vi) Requests for the postponement shall not normally be entertained. In rare cases however, if the response to a notice is poor, a decision to postpone the opening date of the tender by a minimum 15 days shall be taken by the competent authority. The time extension so granted shall be intimated to all concerned so that adequate response is received
- (vii) The tender details are also available in our website: <http://www.cmet.gov.in> & CPP Portal
- (viii) The offer should be valid for a period of 120 days from the date of opening of Tender.

- (ix) C-MET is registered under Department of Scientific and Industrial Research (DSIR) and eligible for concessional GST rates @ 5% for Research Institutions as per Notification No 45/2017-Central Tax (Rate) dated 14.11.2017 and Notification No. 10/2018-Integrated tax (Rate) dated 25.01.2018. The requisite certificate for availing concessional GST Rate along with documents will be provided.

3. Bid Security Declaration: The bidder has to sign a Bid Security declaration accepting that if the bidder withdraws or modify its bid during the period of validity i. e., not less than 120 (one hundred twenty) days from the bid due date or if the bidder is awarded the contract and fail to sign the contract or to submit a performance security before the deadline defined in the request for bid documents, the bidder will be suspended for participation in the tendering process for the tenders of C-MET, Hyderabad for a period of one year from the bid due date of this tender. The bid security declaration shall be submitted as per format (Format for Bid Security Declaration).

4. SUBMISSION OF BIDS

(i) Sealing and Marking of Bids

- (i) The Bidders shall seal the two envelopes in separate inner envelopes, duly marking the envelopes as Technical Bid and Commercial Bid. Tender Reference No. and name and address of the Bidder should be marked on each of Technical Bid Envelope and Commercial Bid Envelope. These two envelopes should be placed inside an outer envelope. The outer envelope shall be sealed and indicate Tender Reference No. and name of the item and the name and address of the bidder.
- (ii) The inner and outer envelopes shall be addressed to the Administrative Officer (A), Centre for Materials for Electronics Technology, IDA Phase-III, Cherlapally, HCL (Post), Hyderabad-500 051, Telangana State, INDIA.
- (iii) The inner envelope shall also indicate the name and address of the Bidder to be returned unopened in case it is declared "LATE".
- (iv) If the outer envelope is not sealed and marked as specified, C-MET will assume no responsibility for Bid's misplacement of premature opening.
- (v) E-mail, FAX bids will be rejected.

(ii) CLARIFICATION OF BIDS

During evaluation of bids, C-MET, at its discretion, may ask the Bidder for clarifications of its bid. The request for clarifications and the responses shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no post bid clarification at the initiative of the bidder shall be entertained.

5. Deadline for Submission of Bids

- (i) Bids must be received by C-MET at its address mentioned above not later than **17:00 Hrs. on 22.04.2021**. Bids may be sent through courier/speed post or dropped in the Tender Box available in the

Laboratory. In the event of the specified date for the submission of Bids being declared as a Holiday for C-MET, the bids will be received upto the appointed time on the next working day.

- (ii) C-MET may, at its discretion, extend this deadline for submission of bids by amending the tender document, in which case all rights and obligations C-MET and Bidders will thereafter be subject to the deadline as extended.

6. Late Bids

Any bid inadvertently received by C-MET after the deadline for submission of bids prescribed by C-MET, will not be considered and returned unopened to the Bidder.

7. Contacting C-MET

No Bidder shall contact C-MET, Hyderabad on any matter relating to its bid, from the time of the bid opening to the time of contract is awarded. If he wishes to bring additional information to the notice of C-MET, it should do so in writing. C-MET reserves its right as to whether such additional information should be considered or otherwise.

Any effort by a Bidder to influence C-MET in its decision on bid evaluation, bid comparison or contract award shall result in disqualification of the Bidders Bid.

CLARIFICATION ON BIDDING DOCUMENTS

A prospective Bidder requiring any clarification of the bidding documents may notify to

Administrative Officer (A)
C-MET
IDA Phase-III
Cherlapally, HCL (Post),
Hyderabad-500 051
TELANGANA STATE, INDIA
Tel No.:+91-40 27265587 / 27267006
Fax: +91-40-27261658

8. TERMS AND CONDITIONS

F.O.R: C-MET, HYDERABAD

Delivery Period

The Furnace should be supplied within 3 months from the date of placing Purchase Order.

LIQUIDATED DAMAGES: – The delivery period quoted should be realistic. The delivery period so quoted and mentioned in the order is the essence of the order/contract. In case of delay in delivery of material as per the delivery schedule, Liquidated Damage @ 0.5% per week or part thereof on

the undelivered portion subject to a maximum of 10% of the contract value shall be levied. Wherever, installation and commissioning is also involved, the supply will be deemed to have been completed only when the entire stores is supplied, installed and accepted.

9. PERFORMANCE SECURITY DEPOSIT (PSD)

- Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish Performance Security (PS) [also known as Bank Guarantee] for the amount specified in the purchase order. It is an option to the Purchaser either to submit single Bank Guarantee/FD etc as detailed to cover both supply, installation and commissioning (as indicated in PO/WO) and warranty/extended warranty period or two BGs one each to cover supply and warranty/extended warranty separately. The validity shall be as stipulated in PO plus 60 days.
- The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries or in equivalent Indian Rupees in case the Performance Security is submitted by the Indian Agent.
- The Performance security shall be in one of the following forms: (a) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/ Scheduled bank located in India or a foreign bank with preferably its operating branch in India in the form provided in the bidding documents. Or (b) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or, (c) A Fixed Deposit Receipt pledged in favour of the Purchaser.
- The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty/extended warranty obligations, unless specified otherwise, without levy of any interest.
- In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- The performance security must be received within 21 days. However, the Purchaser has the powers to extend the time frame for submission of Performance Security (PS). Even after extension of time, if the PS is not received, the contract is liable to be cancelled provided that the purchaser, on being satisfied that it is not a case of cartelization and the integrity of the procurement process has been maintained, may, for cogent reasons, offer the next successful bidder an opportunity to match the financial bid of the first successful bidder, and if the offer is accepted, award the contract to the next successful bidder at the price bid of the first successful bidder.

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

10. PAYMENT TERMS

Our standard payment term is 100% payment within 30 days against receipt, installation, commissioning, training and acceptance of material in good condition by NEFT/RTGS subject to submission of BG for 10% of basic cost covering warranty period including extended warranty period, if any.

Special Condition: The stipulated delivery date for completion of all activities to be performed by the supplier under contractual obligations i.e., supply of equipment/machinery and erecting & commissioning including all the civil, electrical works, if any under the contract.

S. No.	Description
1	The tenderer shall quote the rate by taking into account all the existing statutory duties/taxes up to the date of opening of tender and provide details in respect of this break up at the time of tendering. Any New Import or revision in the duties, taxes during the original currency of the contract will be to the purchasers account subject to production of Govt. notification and documentary evidence. This will also be applicable for the relevant quantity supplied during the extended delivery period, if such extension is on purchase's account. However, if the extension of delivery period is on account of failure of supplier, no compensation shall be made towards upward revision or imposition of any new taxes. Any benefit on account of downward revision of duty either in original Delivery Period or during extended Delivery Period shall be passed on by the supplier to C-MET.

11. STATUTORY VARIATION CLAUSE:

S. No.	Description
1	Statutory Variation in taxes and duties, or fresh imposition of taxes and duties by State/Central Governments in respect of the items stipulated in the contract (and not the raw materials thereof), within the original delivery period stipulated in the contract, or last unconditionally extended delivery period shall be to C-MET's account. Only such variation shall be admissible which takes place after the submission of bid. No claim on account of statutory variation in respect of existing tax/duty will be accepted unless the tenderer has clearly indicated in his offer the rate of tax/duty considered in his quoted rate. No claim on account of statutory variation shall be admissible on account of misclassification by the supplier/contractor.

12. Standard Governing Conditions

S. No.	Description
1	Tenderers must accept the C-MET conditions of contract, Instructions to the Tenderers, General Conditions and Special conditions of contract

13. CONDITIONS FOR ELIGIBILITY OF TENDERER

S. No.	Description	Confirmation Required
1	The tenderer must have supplied the same or similar items/Equipments to other organizations and documentary evidence must be furnished alongwith their offer evidencing the execution of such Purchase Orders. Tenderer's with past performance of satisfactory execution of contracts before the date of tender opening as mentioned above for the supply of the subject or similar items in last three (3) years from date of tender opening may be considered as responsive to C-MET requirements for placement of purchase order.	YES

14. (i) The Tenderer shall furnish along with his offer the details of past performance of the machines, same or similar to those offered in the tender in the following proforma during the last 3 years:

S. No.	Name of Machine	Name of customer	Purchase Order No. & Dt.	Delivery due date as per PO	Actual date of delivery	Whether customer's certificate in respect of past performance of the machine is enclosed
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(ii) Certificates from the customers to whom such machines have been supplied in the past, regarding performance of the machines shall be enclosed with the above information failing which the offer shall not be considered. Certificates from Central/State Govt. Departments & Public Sector Undertaking only shall be accepted, and performance from at least two such customers should be submitted. Same/Similar refers to function and capacity within reasonable range.

(iii) If the tenderer is not a manufacturer, but only an agent/trader, a certificate from the manufacturer authorizing him as agent shall be attached with the offer failing which the offer shall not be considered.

(iv) The tenderer shall submit with his offer particulars plant and machinery installed at his works as well as equipment for ensuring quality control and inspection. Details like make, capacity, quality, horse power of all plant and machinery shall be given. In case of an agent/dealer, the above details of their principal manufacturer shall be given.

(v) The tenderer shall submit with his offer details of man-power available with him showing the designation, no. of men, qualification & experience separately for each section like management, shop floor, inspection and quality control etc.,

(vi) C-MET has the option to verify the above information by physical inspection or otherwise by any authorized representative of C-MET at any time.

15. ELEMENT OF FREIGHT FOR INDIGENOUS PURCHASE

- a) In case where the consignees are more (say more than 4 or so), Tenderers are required to quote for the FOR station of dispatch prices with an average freight for all consignees, which will be added to FOR station for dispatch price to get FOR destination prices.
- b) In case where the consignees are 4 or less, Tenderers are required to quote FOR station of dispatch price with an actual freight for each individual consignee, which will be added to FOR station for dispatch price to get FOR destination prices for each individual consignee.

16. TIMELY COMMISSIONING:

In the event of contractors failure to have commissioned by the time or times respectively specified in the letter of acceptance or contract, purchaser shall levy Liquidated damages for the delay:

S. No.	Description	Confirmation Required
1	Electrical High Temperature Box Type Muffle Furnace Technical Specifications is to be read before quoting	YES

17. COMPLIANCE CONDITIONS

Commercial-Compliance

S. No.	Description	Confirmation Required
1	Please enter the percentage of local content in the material being offered. Please enter 0 or fully imported item, and 100 for fully indigenous items. The definition and calculation of local content shall be in accordance with the Make in India policy as incorporated in the tender conditions.	

18. SUBMISSION OF BID

1	Technical Bid	Documents should be serially arranged as per CHECK LIST WITH PAGE NUMBERING. This will be opened on 23.04.2021 at 11:30 hours
2	Commercial Bid (Price Bid)	Should contain only Price Bid as per CHECK LIST WITH PAGE NUMBERING. Date of opening of Price bid will be informed to the technically qualified bidders only.

CRITERIA FOR PRE-QUALIFICATION OF TENDER AND NEGOTIATIONS

Specifications conforming to the requirement or better than that, Past Performance, Financial Soundness, Technical Competence, Total Cost and Organizational Capability of the Tenderer to provide installation, delivery period and supply, commissioning, after sale service and spare parts supply shall be some of the crucial parameters for pre-qualification of Tenderer's.

RE-TENDERING/CANCELLATION OF TENDER

In case of inadequate response to Tender Notice OR if the Prices quoted are substantially high & negotiations with the Tenderer's have not resulted in any positive response, C-MET may Re-tender. C-MET reserves the right to cancel the tender also.

In case cartel is suspected, re-tendering will normally be resorted to.

CORRUPT OR FRAUDULENT PRACTICES

C-MET requires that the bidders/suppliers/contractors under this tender, observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, the following is defined for the purposes of this provision, the terms set forth as follows:

- a) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution and
- b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or an execution of a contract to the detriment of C-MET, 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 C-MET of the benefits of the free and open competition;

C-MET will reject the proposal for award of contract, if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

C-MET will declare a firm ineligible, either indefinitely or for a stated period of time to be awarded a contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.

INTERPRETATION OF THE CLAUSES IN THE TENDER DOCUMENT

In case of any ambiguity in the interpretation of any of the clauses in Tender Document, the interpretation of the Director, C-MET shall be final and binding on all parties.

IN CASE OF ANY LEGAL DISPUTE THE JURISDICTION WILL BE HYDERABAD (INDIA) ONLY.

C-MET shall have the right to issue addenda to tender documents to clarify, amend, modify, supplement or delete any of the conditions, clauses or delete any of the conditions clauses or items stated therein. Each addendum so issued shall form part of **ORIGINAL INVITATION TO THE TENDER**. *Addendum/corrigendum will be posted in our website as well as in CPP portal only.*

FORCE MAJEURE

The Supplier shall not be liable for forfeiture of its performance security, penalty 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.

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.

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

CANCELLATION OF ORDER

C-MET reserves the right to cancel the order without any liability in case the stores/goods/equipments is not supplied within the stipulated period and for non-fulfillment of specifications.

ARBITRATION

Any dispute between the parties on the purchase would be settled by arbitration. The Place of arbitration proceedings shall be at the place decided by C-MET. Applicable laws shall be laws of Union of India.

19. GENERAL INSTRUCTIONS

S. No.	Description	Confirmation Required
1	All conditions shall be as per tender document	
2	The bidder confirms that Rates and other financial terms quoted in relevant columns of financial bid will only be ruling terms for acceptance, and such terms quoted anywhere else should be ignored. [Denial of this condition not recommended]	
3	The bidder agrees to supply the tendered stores at the rates quoted by him in accordance with C-MET conditions of Contract and [OR] Special Conditions and [OR] other Conditions specified/attached with the tender	
4	Pre-despatch Inspection - By nominated C-MET official at supplier's site	
5	In case the date of bid opening falls on a gazette holiday or is subsequently declared as such, the bids will be opened on the next working date at the appointed time	

20. SPECIAL CONDITIONS

S. No.	Description	Confirmation Required
1	<p>Taxes/Duties</p> <ol style="list-style-type: none"> 1. Tenderer should clearly indicate Basic rate and applicable rate of GST & HSN Code 2. Tenderer's should ensure that they are GST compliant and their quoted tax structure/rates are as per GST law. 3. In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, C-MET shall deduct the applicable GST from his/their bills under reverse charge mechanism [RCM] and deposit the same to the concerned tax authority. TDS-GST @ 2% is applicable for all the contracts, if the contract/PO value exceeds Rs.2.50 lakhs. 4. While submitting offer, it shall be the responsibility of the bidder to ensure that they quote correct GST rate and HSN Code. 5. Wherever the successful bidder invoices the goods at GST rate or HSN Code which is different from that incorporated in the Purchase Order, payment shall be made as per GST rate which is lower of GST rate incorporated in the Purchase Order or billed. 6. Any amendment to GST rate or HSN Code in the contract shall be as per the contractual conditions and statutory amendments in the quoted GST rate and HSN Code. 7. Vendor is informed that he/she would be required to adjust his/her basic price to the extent required by 	

	higher tax billed as per invoice to match the all inclusive price as mentioned in the Purchase Order.	
2	Bidders are requested to refer Special Conditions of Contract while submitting their offers	

21. DOCUMENTS ATTACHED WITH TENDER

S. No.	Document Name	Document Description
1	Technical Specifications	Electrical High Temperature Box Type Muffle Furnace

22. RESPONSIVENESS

S. No.	Description
1	Validity of the Offer: No deviation from the offer validity period stipulated in the tender is permitted
2	Payment Terms: No deviation from the Payment Terms stipulated in the tender is permitted.

**CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET)
HYDERABAD**

**Technical Specification
for Supply, Installation & Commissioning of
HIGH TEMPERATURE BOX TYPE ELECTRICAL MUFFLE FURNACE**

1. Inner working dimension of the furnace : 2 mtr (D) X 1 mtr (W) X 0.4 mtr(Ht)
2. Maximum charge weight : ~ 65 Kgs.
3. **Temperature Control**
 - a) Maximum temperature : 1000°C
 - b) Operating temperature : 800°C± 5°C
 - c) Power rating : 36 KW ± 5KW, 3 phase, 440 V
 - d) Maximum skin temperature : ≤25°C above ambient temperature
 - e) Programmable PID temperature with Master and two slaves for furnace uniformity with thyristor drive for three phases with phase angle fired control for three zones up to operating temperature.
4. **Furnace Environment**
 - a. The proposed furnace should have the provision for internal environment control in order to prevent the oxidation of surface for which inert gas purging provision is required
 - b. Provision for atmospheric gas from the rear side of the furnace for inert gas purging. Exhaust Duct to be positioned suitably preferably rear side. Vendor should specify the exhaust duct position. Water jacket mechanism to be provided to the exhaust pipe for cooling the hot gases coming from the exhaust.
5. **Furnace Body:**

Body should be made of adequate Mild steel plates with sufficient structural reinforcement all around the circumference. The surface of the body should be smooth finished and should be painted with suitable paint (silver colour) that can withstand skin temperature. Working volume to have the enclosure of High Nickel heat resistant grade steel chamber in such a way that the job is not directly exposed to heating elements.
6. **Insulation system:**

Furnace to be lined with refractory bricks, ceramic blocks/ blankets. Bottom of the furnace to be lined with refractory bricks while the furnace body should be lined with ceramic fibre blocks. Refractory bricks will conform to IS 8 standard. Ceramic blocks to conform IS 14406 and will have a density of 160Kg/m³.
7. **Muffle :**

High temperature withstanding stainless steel high nickel and chrome grade material SS310 fabricated with 5mm thickness with extra angle reinforcement from all the five sides and front ceramic/ graphite rope gasket provided with thick flange to be provided.

8 Trays :

Four trays to be provided 2 x 1 mtr with 50mm wall and inside having 2mm thick one inch pitch mesh located at one inch height in tray with additional reinforcement supports. These four trays should be resting on a high temperature nickel chrome steel frame with 50mm gap from tray to tray. All material should be SS310.

9. Furnace Doors:

Hinge doors should be provided with manual operation. The outer surface of the door to be made of Mild steel of appropriate thickness while inner side of the furnace facing the hot zone to be heat resistant SS 310. Appropriate insulation with ceramic blocks to be provided in between to prevent the heat loss. Ceramic gasket to be provided for perfect Gas sealing.

10. Gas Purging

Provision to be made for the gas purging by ducts from the back of the furnace. Since the furnace is gas sealed hence an escape route for the gas to be provided preferably to the rear side of the furnace. The escape duct to be hollow SS tube with water cooling jacket.

11. Heating Element:

Wire type heating elements are of Kanthal make to be in spiral form and supported by appropriate ceramic tubes with refractory hooks. Necessary arrangements to be made in order to avoid short circuiting of heating elements of different zones. Gauge of the heating element, coil dia and total power requirement with charge to be indicated by the vendor.

Thermocouple: Total 3 Nos of K-Type thermocouples (Chromel-alumel) to be placed for measuring the temperature. Necessary extension line for feedback from thermocouple to control panel to be provided.

12. Control panel

Standalone Fully furnished/wired control panel required to monitor and control the furnace functions with an independent SMPS power supply with suitable capacity for controllers and thyristors, each controller to be provided with power isolation switches and output isolation switches and should consist of following accessories of reputed makes with IS standards:

- a) Programmable PID Temperature Controller, 96mmx96mm
Eurotherm/Honeywell or equivalent : 3 No.s
- b) Safety controller : 1 No.
- c) Power controller/ Thyristor power pack (Semicron make or equivalent)
: 3 No.s
- d) On/Off contactor : 1 No.
- e) Semi-conductor fuses (Req. Capacity) : 3 No.s
- f) Digital Ammeter, Voltmeter, Wattmeter: 3 No.s
- g) Main Switch MCB/MCCB
- h) On/off switches
- i) Pushbutton switches

13. Controller:

One Programmable PID controller with two slave controller for operating furnace with any give time and temperature cycle with thyristor drive for precise and uniform controlling facility is to be provided for controlling the temperature. The controller will have an accuracy of $\pm 1^{\circ}\text{C}$. Temperature uniformity for each zone should be $\pm 10^{\circ}\text{C}$.

14. Safety

- i. Thermal Safety Switches for each heating zone of the furnace
- ii. Limit switch to be provided to energize the heater circuit only when the door is closed.
- iii. A Safety relief Valve to be provided in rear side for excess pressure relief inside the Furnace.

15. Approximate Overall dimensions (Width x Depth x Height) : 2 mtr x 3 mtr x 2 mtr

16. Weight of the furnace : Should be lowest weight for ease of handling

17. Warranty

Comprehensive warranty of one year for the furnace to be provided. The warranty period will start after successful installation, commissioning and acceptance of the furnace at our site.

18. General Terms :

Vendor should demonstrate the working and operation of the furnace at works before dispatch, to ensure that it has met the specifications and requirement

Vendor to Supply, Installation & commissioning the unit at our site and demonstrate the same at operating conditions, provide training to the operating staff for safe operation and routine maintenance.

Vendor to provide operating manual, maintenance manual from the OEMs for the items installed with the furnace system.

Vendor to provide detailed drawings and installation requirements including power earthing needs, for the smooth operation and maintenance of the furnace that have to be arranged by C-METwell in advance

The vendor should clearly indicate the number of customers with full contact details to whom similar unit has been supplied. Brief profile of the company with brochure, if available can be attached to the offer.

The vendor should provide complete electrical diagram of the furnace and control panel

(in the company letter head)

CHECK LIST

Documents to be submitted along with the bids
(TECHNICAL BID)

S No	Description	Yes/No	Page No
1	Covering/introduction letter from the Firm referring to C-MET's tender enquiry No and date towards participation in the tender.		
2	Details of EMD (Bid Security declaration)		
3	Acceptance of terms & conditions of tender enquiry		
4	Signed copy of tender enquiry		
5	Price Reasonability Certificate		
6	Bid form and Price schedule with commercial terms WITHOUT PRICE		
7	Bid form and Price schedule for Optical Accessories WITHOUT PRICE	NA	
8	Bid form and Price schedule for extended warranty WITHOUT PRICE	NA	
9	Price schedule for non-comprehensive annual maintenance contract after warranty period WITHOUT PRICE	NA	
10	Previous experience details alongwith documents like PO/WO etc. (not more than 3 years old)		
11	Undertaking and declaration		
12	Technical compliance statement with/without deviation		
13	Technical brochure of the Product offered or drawings		
14	GST Registration certificate or No		
15	Bank details for NEFT/RTGS		
16	Warranty		

**Documents to be submitted alongwith Commercial bids
(PRICE BID)**

(Separate sealed cover)

S No	Description	Page No
1	Bid form and Price schedule with commercial terms WITH PRICE	
2	Bid form and Price schedule for Optional Accessories WITH PRICE	NA
3	Bid form and Price schedule for extended warranty WITH PRICE	NA
4	Price schedule for non-comprehensive annual maintenance contract after warranty period WITH PRICE	NA

(in the company letter head)

BIDDER'S DETAILS

1	Name of the supplied/party/firm	
2	Name of the authorized representative	
3	Communication address	
4	Telephone Nos.	
5	Mobile Nos.	
6	Fax and e-mail address	
7	Web address	
8	Bank details for payment through NEFT/RTGS	
9	Name of Bank	
	Branch	
	Account No	
	IFSC No	
	MICR No	
	Cancelled cheque for verification of above details	

Signature of Tenderer _____

Name _____

Business Address _____

Seal of the Tenderer _____

(in the company letter head)

**PREVIOUS EXPERIENCE DETAILS
(LAST 3 YEARS)
{01.04.2017 to 31.03.2020}**

S. No.	Name of System	Name, address, e-mail and mobile no.	Purchase Order No. & Dt.	Delivery due date as per PO	Actual date of delivery	Date of installation and commissioning
(1)	(2)	(3)	(4)	(5)	(6)	(7)

Signature of Tenderer _____

Name _____

Seal of the tenderer _____

Date:

Place:

(in the company letter head)

DETAILS ABOUT THE PRODUCT OFFERED

The following are the particulars about the Product offered:
ELECTRICAL HIGH TEMPERATURE BOX TYPE MUFFLE FURNACE

S No	Description	Product details	
1	Model/Make/Part No		
2	Year of launch of the model/Make		
3	Year of manufacturer of the model/ make now offered to C-MET		
4	No of Electrical High Temperature Box Type Muffle Furnace of the model now offered to C-MET were sold during last 1 year upto _____	India	
		Hyderabad	
	India/Hyderabad		
5	Feedback (if any) from the end user of the Product on model supplied		
6	Any other information supplier would like to offer about the Product offered		

Signature of Tenderer _____

Name _____

Business Address _____

Seal of the Tenderer _____

Date:

Place:

NOTE: 1) Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

(in the company letter head)

PRICE REASONABILITY CERTIFICATE

It is certified that the rates quoted _____ are not more than as charged to other Govt. /PSU's for similar supplies made in recent past. Copies of the supply orders received from other Govt/PSU's are enclosed alongwith the technical bid.

Signature of Tenderer _____

Name _____

Business Address _____

Seal of the Tenderer _____

Date:

Place:

(TO BE SUBMITTED ALONG WITH TECHNICAL BID)

(in the company letter head)

UNDERTAKING/ DECLARATION

I/We having our office at _____ declare that I/we have never been blacklisted by any State Government/Central Government or any State/Central PSU.

2. I/We, _____ hereby declare that the particulars furnished by me/us in this offer are true to the best of my/our knowledge and I/We understand and accept that, if at any stage the information furnished by me/us are found to be incorrect or false, I/We am/are liable for disqualification from this tender and also liable for any penal action that may arise due to the above, besides being black listed.

3. I/We _____ hereby accept to provide warranty/ guarantee and Free Service for a period of minimum one year from the date of supply/ installation of the materials.

4. I/We _____ of _____ hereby agree on the acceptance of this tender by Director, C-MET to _____, in accordance with the terms and conditions of contract and at the rates or price specified in financial bid.

5. This is also certified that the rates quoted in the financial bid are not more than the rates charged from any other Institution/Department/ Organization in the last six months. No Other charges would be payable by the Institute.

6. I/We _____ have gone through the terms and conditions and will abide by them as laid down above. I hereby undertake that the information provided above and elsewhere in the tender is true and the tender is liable to rejection if the same is found to be false or the information is found to have been suppressed by me.

Name & Signature of the Supplier/Contractor/
Authorized signatory with Official stamp/seal

(TO BE SUBMITTED ALONG WITH TECHNICAL BID)
(in the company letter head)

To,

Date:

The Administrative Officer
C-MET, IDA Phase III
Cherlapally,
Hyderabad 500 051

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No. _____ dated _____

Name of the Tender/Work:

Sir/Madam,

I/We have downloaded/obtained the tender document(s) for the above mentioned 'Tender/Work' for the web site(s) namely:

_____ as per your advertisement, given in the mentioned website(s)/enquiry letter.

2. I/we hereby certify that I/we have read the entire terms & conditions of the tender documents from Page No. _____ to _____ (including all documents like Annexure(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 all 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 totally/entirely.

5. In case any provisos of this tender are found violated, then your Department/Organizations shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours faithfully,

Name & Signature of the Supplier/Contractor/
Authorized signatory with Official stamp/seal

(in the company letter head)

BID FORM AND PRICE SCHEDULE

Tender Reference No. : ENQ. NO.: HD/PUR/SP-45/MF/04/2020-21/12602
Date : 01.04.2021

Name of the Stores/
Goods/Equipment : SUPPLY, INSTALLATION & COMMISSINING OF
**ELECTRICAL HIGH TEMPERATURE BOX TYPE
MUFFLE FURNACE**

Sl. No.	Description	HSN/SN CODE	Qty.	Amount(₹)
1	SUPPLY, INSTALLATION & COMMISSINING OF ELECTRICAL HIGH TEMPERATURE BOX TYPE MUFFLE FURNACE		1 No.	
	Packing & Forwarding charges			
	Freight charges			
	Insurance			
	Installation charges			
	Taxable value			
	GST			
	GRAND TOTAL			

(Rupees _____ only)

1. Payment Terms:
2. Bid Validity:
3. Delivery Schedule:
4. Place of delivery: C-MET, HYDERABAD
5. Warranty, if applicable:
6. Any other relevant information:

Signature of Tenderer _____

Name _____

Seal of the Tenderer _____

Date:

Place:

(in the company letter head)

COMPLIANCE STATEMENT IN R/O COMMERCIAL TERMS

Tender Reference No. : ENQ. NO.: HD/PUR/SP-45/MF/04/2020-21/12602
Date : 01.04.2021

Name of the Stores/
Goods/Equipment : SUPPLY, INSTALLATION & COMMISSINING OF
**ELECTRICAL HIGH TEMPERATURE BOX TYPE
MUFFLE FURNACE**

Sl. No.	Description	C-MET Terms	Accepted / Not Accepted	Remarks
1	Payment Terms	100% payment within 30 days against receipt, installation, commissioning, training and acceptance of material in good condition by NEFT/RTGS subject to submission of BG for 10% of basic cost covering warranty period/ extended warranty period		
2	Bid Validity	120 days		
3	Delivery Schedule	Within 3 months from the date of placing Purchase Order		
4	Place of delivery	C-MET, Hyderabad		
5	Warranty	Comprehensive warranty of one year for the furnace to be provided. The warranty period will start after successful installation, commissioning and acceptance of the furnace at our site.		
6	Any other relevant information			

Signature of Tenderer _____

Name _____

Seal of the Tenderer _____

Date:

Place:

(in the company letter head)

BID SECURITY DECLARATION

I hereby submit a declaration that the bid submitted by the undersigned, on behalf of the bidder. *[Name of the bidder]*, either sole or in JV, shall not be withdrawn or modified during the period of validity i. e., not less than 120 (one hundred twenty) days from the bid due date.

I, on behalf of the bidder, *[Name of the bidder]*, also accept the fact that in case the bid is withdrawn or modified during the period of its validity or if we fail to sign the contract in case the tender is awarded to us or we fail to submit a performance security before the deadline defined in clause 9 of the Tender Document, then *[Name of the bidder]* will be suspended for participation in the tendering process for the tenders of C-MET, Hyderabad for a period of one year from the bid due date of this tender.

(Signature of the authorized signatory)
Official Seal

Date:

Place:

BANK GUARANTEE FORM FOR PERFORMANCE SECURITY DEPOSIT

To

The Administrative Officer
C-MET, IDA Phase-III
Cherlapally, HCL Post
Hyderabad – 500 051
TELANGANA STATE
INDIA

WHEREAS _____ (Name and address of the supplier) (Hereinafter called "the supplier") has undertaken, in pursuance of contract no _____ dated _____ to supply (description of goods and services) (herein after called "the contract").

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

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

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

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

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

This guarantee shall be valid up to (In words) months from the date of Notification of Award i.e up to ----- (indicate date)

.....
(Signature with date of the authorized officer of the Bank)

.....
Name and designation of the officer

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

(TO BE SUBMITTED ALONG WITH TECHNICAL BID)

(in the company letter head)

Technical compliance statement in r/o ELECTRICAL HIGH TEMPERATURE BOX TYPE MUFFLE FURNACE

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
1.	Inner working dimension of the furnace	2 mtr (D) X 1 mtr (W) X 0.4 mtr(Ht)				
2.	Maximum charge weight	~ 65 Kgs				
3.	Temperature Control	a) Maximum temperature : 1000°C b) Operating temperature : 800°C± 5°C c) Power rating : 36 KW ± 5KW, 3 phase, 440 V d) Maximum skin temperature : ≤25°C above ambient temperature e) Programmable PID temperature with Master and two slaves for furnace uniformity with thyristor drive for three phases with phase angle fired control for three zones up to operating				

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
		temperature.				
4.	Furnace Environment	<p>a. The proposed furnace should have the provision for internal environment control in order to prevent the oxidation of surface for which inert gas purging provision is required</p> <p>b. Provision for atmospheric gas from the rear side of the furnace for inert gas purging. Exhaust Duct to be positioned suitably preferably rear side. Vendor should specify the exhaust duct position. Water jacket mechanism to be provided to the exhaust pipe for cooling the hot gases coming from the exhaust.</p>				
5.	Furnace Body	Body should be made of adequate Mild steel plates with sufficient structural reinforcement all around the circumference. The surface of the body should be smooth finished and should be painted with suitable paint (silver colour) that can withstand skin temperature. Working volume to have the enclosure of High Nickel heat resistant grade steel chamber in such a way that the job is not				

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
		directly exposed to heating elements				
6.	Insulation system	Furnace to be lined with refractory bricks, ceramic blocks/ blankets. Bottom of the furnace to be lined with refractory bricks while the furnace body should be lined with ceramic fibre blocks. Refractory bricks will conform to IS 8 standard. Ceramic blocks to conform IS 14406 and will have a density of 160Kg/m ³				
7.	Muffle	High temperature withstanding stainless steel high nickel and chrome grade material SS310 fabricated with 5mm thickness with extra angle reinforcement from all the five sides and front ceramic/ graphite rope gasket provided with thick flange to be provided.				
8.	Trays	Four trays to be provided 2 x 1 mtr with 50mm wall and inside having 2mm thick one inch pitch mesh located at one inch height in tray with additional reinforcement supports. These four trays should be resting on a high temperature nickel chrome steel frame with 50mm gap from tray to tray. All material should be SS310.				
9.	Furnace Doors	Hinge doors should be provided with manual operation. The outer surface of the door to be made of Mild steel of appropriate thickness while inner side of the furnace facing the hot				

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
		zone to be heat resistant SS 310. Appropriate insulation with ceramic blocks to be provided in between to prevent the heat loss. Ceramic gasket to be provided for perfect Gas sealing.				
10.	Gas Purging	Provision to be made for the gas purging by ducts from the back of the furnace. Since the furnace is gas sealed hence an escape route for the gas to be provided preferably to the rear side of the furnace. The escape duct to be hollow SS tube with water cooling jacket.				
11.	Heating Element	<p>Wire type heating elements are of Kanthal make to be in spiral form and supported by appropriate ceramic tubes with refractory hooks. Necessary arrangements to be made in order to avoid short circuiting of heating elements of different zones. Gauge of the heating element, coil dia and total power requirement with charge to be indicated by the vendor.</p> <p>Thermocouple: Total 3 Nos of K-Type thermocouples (Chromel-alumel) to be placed for measuring the temperature. Necessary extension line for feedback from thermocouple to control panel to be provided.</p>				

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
12.	Control panel	<p>Standalone Fully refurbished/wired control panel required to monitor and control the furnace functions with an independent SMPS power supply with suitable capacity for controllers and thyristors, each controller to be provided with power isolation switches and output isolation switches and should consist of following accessories of reputed makes with IS standards:</p> <p>a) Programmable PID Temperature Controller, 96mmx96mm Eurotherm/Honeywell or equivalent : 3 No.s</p> <p>b) Safety controller : 1 No.</p> <p>c) Power controller/ Thyristor power pack(Semicon make or equivalent) : 3 No.s</p> <p>d) On/Off contactor : 1 No.</p> <p>e) Semi-conductor fuses (Req.Capacity) :3 No.s</p> <p>f) Digital Ammeter, Voltmeter, Wattmeter :3No.s</p> <p>g) Main Switch MCB/MCCB</p> <p>h) On/off switches</p> <p>i) Pushbutton switches</p>				
13.	Controller	One Programmable PID controller with two slave controller for operating furnace with any give time and				

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
		temperature cycle with thyristor drive for precise and uniform controlling facility is to be provided for controlling the temperature. The controller will have an accuracy of $\pm 1^{\circ}\text{C}$. Temperature uniformity for each zone should be $\pm 10^{\circ}\text{C}$.				
14.	Safety	<ul style="list-style-type: none"> i. Thermal Safety Switches for each heating zone of the furnace ii. Limit switch to be provided to energize the heater circuit only when the door is closed. iii. A Safety relief Valve to be provided in rear side for excess pressure relief inside the Furnace. 				
15.	Approximate Overall dimensions (Width x Depth x Height)	2 mtr x 3 mtr x 2 mtr				
16.	Weight of the furnace	Should be lowest weight for ease of handling				
17.	Warranty	Comprehensive warranty of one year for the furnace to be provided. The warranty period will start after successful installation, commissioning and acceptance of the furnace at our site.				
18.	General Terms					

Sl. No.	Description	Technical Specification	Specifications of quoted Model	Compliance whether "YES" OR "NO"	Deviation, if any, to be indicated in unambiguous terms	Remarks
(i)	Vendor should demonstrate the working and operation of the furnace at works before dispatch, to ensure that it has met the specifications and requirement					
(ii)	Vendor to Supply, Installation & commissioning the unit at our site and demonstrate the same at operating conditions, provide training to the operating staff for safe operation and routine maintenance.					
(iii)	Vendor to provide operating manual, maintenance manual from the OEMs for the items installed with the furnace system.					
(iv)	Vendor to provide detailed drawings and installation requirements including power earthing needs, for the smooth operation and maintenance of the furnace that have to be arranged by C-MET well in advance					
(v)	The vendor should clearly indicate the number of customers with full contact details to whom similar unit has been supplied. Brief profile of the company with brochure, if available can be attached to the offer.					
(vi)	The vendor should provide complete electrical diagram of the furnace and control panel					

Signature of Tenderer _____

Name _____

Business Address _____

Seal of the tenderer _____

Place:

Date: