



**MMTC Limited**

**(A Govt. of India Enterprise)**

**Delhi Regional office:** F 8-11, Jhandewalan Flatted Factories Complex,  
Rani Jhansi Road, New Delhi-110055.

Tel. No.: 011-23529188/ Fax No.: 011-23633175

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**Sub: Open tender for purchase of Electric Melting Furnace at Delhi Regional Office (DRO), MMTC Ltd.**

Delhi Regional Office, MMTC Ltd. invites bids for purchase of Electric Melting Furnace to be used for melting of Gold and Silver at its Medallion Manufacturing Unit, Jhandewalan, New Delhi.

**Summary of Tender**

Item	Electric Melting Furnace
Tender Notification Date	10.03.2015
Tender Closing Date and Time	09.04.2015 at 12:00 pm
Technical Bid Opening Date and Time	09.04.2015 at 3:00 pm
Price Bid Opening Date and Time	After evaluation of Technical Bid
EMD Amount	Rs.1,00,000/-
Supply Duration	60 days
Installation Duration	15 days

**1. DETAILED TECHNICAL SPECIFICATIONS OF THE MELTING FURNACE****SCOPE OF WORK**

The scope will be to supply, install and commission an Electric Melting Furnace and hand over the furnace in ready to use condition along with all the accessories, tools, consumables, materials etc. needed for smooth functioning of the furnace.

Sr. No.	Furnace Part	Requirements
1	Type	Electric
2	Furnace shell	Box Furnace with two individual independent chambers with independent temperature control for each chamber whose temperature can be set
3	Furnace stands cum control	Furnace should be top opening with separate doors for each chamber
4	Furnace hot zone volume	8-12 inch for each chamber, should be suitable for easy withdrawal and placing of size 6 & 7 crucibles in furnace for melting 8-10 kg non ferrous alloys of gold and silver
5	Furnace Body Construction	Double wall fabrication of steel body & steel sheet structure with proper stiffeners and neat powder coating
6	Door Construction	Sophisticated system to avoid heat loss made by thick steel door with proper insulation for each chamber
7	Insulation	High alumina Bricks backed up by mechanically pressed Zirconium blanket ceramic fiber for each chamber and entire furnace wall
<b>HEATING and CONTROL SYSTEM</b>		
1	Heating elements	Silicon carbide rods (at least 6 numbers with even Distribution) for each chamber
2	Power control	Through Thyristor Drive control with independent timer set for each chamber (for 3 phase 440 Volt)
3	Type of element	18 mm Diameter Solid type
4	Hot zone length	200 mm or as suitable for size 6 and 7 crucible
5	Total length of element	650 mm (approx.; bidder can specify the length)
6	Resistance of the element	1.24 ohms
7	Heating rate	The heating rate should be such that temperature of the material in the crucible will be 1150 °C within 30 minutes
8	Cooling Rate	10 to 100°C/ hour max

9	Power	3 phase AC 440V; Minimum 6KW
10	Maximum temperature	1550°C
11	Working temperature	1350°C (For continuous operation upto 12 hours)
12	Electrical line requirement	40A - MCB
13	Temperature control	Microprocessor based PID Thyristor control with adjustable digital temperatures; there should be simultaneous LED display of actual and set point temperature programmable in °C for each heating chamber.
14	Temperature sensor	<b>Pt+Rh13%/Pt - 'R' type thermocouple</b> (two for each chamber with separate temperature readers)
15	Accuracy	<b>±1°C</b>
16	Power control	Control panel should be 3 phase, 440 volt Safety Controller, Main MCB, Voltmeter, Ammeter, Main indicator, heating indicator, transformer as required and other accessories for continuous working upto 12 hours.
17	Control switches	As required
18	Safety Switch	Safety switch to cut off power to heating
19	Gas supply	The furnace should be equipped with passages for supply of inert gases to the melt for each chamber on the top side
20	Extra heating elements	Twelve extra heating elements should be supplied with the furnace
21	Stirring Rods	Five stirring rods should be provided for hand stirring of the melt which can withstand a temperature upto 1500 °C.
22	Crucibles	The furnace should be supplied with at least eight graphite crucibles of size 6 & 7 (four each)
23	Preheating arrangement	The preheating arrangement should be a small box furnace with heating capacity upto 1100 °C for pre heating of crucibles of size 6 & 7.

**2. SUBMISSION OF BIDS**

The offer should be submitted in a two bid format viz. Technical bid and Price bid in two separate envelopes put together in another envelope. The name of the bidder should be clearly mentioned on all the envelopes of the bid. The instructions for submission of bids are as given below:

**Part A: Technical Bid**

The technical bid should comprise of the following:

- a) An EMD amount of Rs. 1,00,000/- in form of DD / Banker's cheque from a Nationalized Bank in favour of "MMTC Limited" payable at New Delhi
- b) All Technical Details/Brochures/Leaflets regarding the Electric melting furnace including technical details like insulation material used, power control mechanism, element type, heating rate, maximum temperature that could be attained, maximum working temperature, crucible size needed, type of sensor used etc
- c) The tender document should be signed on all pages as a token of acceptance of all the terms and conditions mentioned in the tender
- d) Pre-requisites if any for installation of the melting furnace
- e) Tentative duration for supply and installation of the furnace (Delivery schedule)
- f) Guarantee / warranty period for the furnace
- g) The supplier has to provide list of firms/companies (references) where supplier has supplied similar model
- h) Certificate from supplier on his letter head confirming that he is the Original Equipment Manufacturer (OEM) of the furnace, with the furnace being manufactured in India; along with easy availability of accessories/spares
- i) Name and address of service center/service provider (if the service would be provided by an authorized agent/representative of the supplier). If the service would be provided by the supplier himself the same may be mentioned in the certificate mentioned in (h) above

The technical bid comprising the above documents should be submitted in an envelope superscribing Technical Bid for Tender No.: MMTC/DRO/Med. Unit/MF/14-15/02 dtd. 10.03.2015.

**Part B: Price Bid**

The Price bids of only those bidders would be opened who qualify in the Technical bid. The Price bid envelope should contain the following:

- a) Price quote on FOR destination basis inclusive of all taxes, duties, levies etc. and insurance. Training, spares, consumables, installation charges or any other chargeable expenses related to the supply, installation and commissioning of the furnace to be mentioned separately.
- b) The bidder must mention the rate/amount of annual maintenance charges in the quotation, if MMTC opts for maintenance contract after expiry of warranty period.
- c) Price list of consumables like crucibles, elements, sensors etc. should also be mentioned. All the documents to be enclosed in the price bids should be duly signed by the bidder.

The Price bid envelope should be superscribed "Price Bid for Tender No.: MMTC/DRO/Med. Unit/MF/14-15/02 dated 10.03.2015."

The Technical bid and Price bid envelopes should be put together in another envelope superscribing "Tender No.: MMTC/DRO/Med. Unit/MF/14-15/02 dated 10.03.2015 for Purchase of Electric Melting Furnace at MMTC, DRO" and the sealed envelope addressed to **The Chief General Manager (DRO)** should be sent through Speed Post/Courier or may be dropped at the following address:

**To,**

**The CGM (DRO),**

**MMTC LTD., Delhi Regional office,**

**F 8-11, Jhandewalan Flatted Factories Complex,**

**Rani Jhansi Road, New Delhi-110055.**

(Contact Person: Mr. Swapnil Hedao, Dy. Manager; Mob: 9911023585)

### **3. TERMS & CONDITIONS**

#### **(1) PRICING**

- 1.1** Prices should be FOR at Jhandewalan inclusive of packing, forwarding, installation and commissioning charges etc. Sales tax/other Government levies will be paid at actual and the prevailing rates of excise duty and sales tax etc. should be mentioned separately. No other charges than those mentioned clearly in the quotation will be paid.
- 1.2** Vague terms like "packing, forwarding, transportation.....etc. extra" without mentioning the specific amount/ percentage of these charges will

not be accepted. Such offers shall be treated as incomplete and may be rejected.

**1.3** Bidder should note that MMTC Ltd. is a PSU and is authorized to issue Sales Tax Form 'C'.

**1.4** Bidder should ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been supplied.

**(2) CERTIFICATE CONFIRMING OEM AND EASY AVAILABILITY OF ACCESSORIES/SPARES**

The furnace supplier should be the Original Equipment Manufacturer (OEM) and the furnace should be manufactured within India. Bidder shall issue a certificate to this effect on his letter head. He shall also mention on the certificate that the essential spares of the furnace are readily available in India and the same shall be provided by him or his authorized agent/representative.

**(3) INSPECTION REPORT**

**3.1** The supplier shall arrange and assist MMTC for the testing and physical inspection of the machine directly or through their authorized representative before delivery of equipment by a technical expert/ scientist nominated by MMTC in the presence of firms' representatives.

**3.2** The cost of inspection will be borne by MMTC Ltd.

**(4) INSTALLATION / PRE - INSTALLATION REQUISITES**

**4.1** Pre-installation requisites (electrical/floor/space/air-conditioning etc.) if any should invariably be mentioned clearly in technical bid. Installation/Training will be the full responsibility of the supplier or his agent. This training has to be arranged by the supplier.

**4.2** Operation Manual in 2 (two) numbers of copies is to be supplied alongwith the equipment.

**4.3** The equipment should be installed/commissioned and demonstrated by the supplier at the Unit within the time mentioned in the tender document, after receipt of the furnace at MMTC and the same will be put under operation to the satisfaction of our technical expert/Scientist who will test the performance of the equipment. No separate charges for installation etc. will be paid to the party beyond the quoted prices.

**(5) OPENING OF BIDS**

- 5.1 The last date of receipt of bids is 09.04.2015 upto 12:00pm. The technical bids will be opened on 09.04.2015 at 3:00pm, in the presence of the representatives of bidders who choose to be present.
- 5.2 Bids received after the due date and time would not be accepted.
- 5.3 The acceptance of the quotation / offer will rest with MMTC limited which does not bind to accept the lowest quotation and reserves the right to accept or reject any quotation in part or full or to waive off any condition without assigning any reason thereof. Prime importance would be given to the technical fit of the furnace with the specifications as mentioned in the tender.
- 5.4 The price bid should be duly signed by an authorized signatory giving his/her name and designation below the signatures and stamped.
- 5.5 Price bid of only those bidders would be opened who qualify in the technical bid.

**(6) ANNUAL MAINTENANCE CHARGES**

- 6.1 Annual Maintenance Charges should be separately mentioned in the Price bid quotation and whether the after sales services during and after the completion of warranty shall be provided directly by the supplier or by their authorized agent/ representative. Terms of the after sales services, if any, may also be mentioned in the offer. However, in both the cases the original supplier shall be responsible for poor performance/services.
- 6.2 It is mandatory to mention annual maintenance charges. Merely quoting the annual maintenance charges does not bind MMTC to opt for maintenance contract after expiry of the warranty period.

**(7) SPECIFICATIONS**

- 7.1 Specifications of the furnace are of utmost importance. It must be ensured that the offers are according to our requirements and specifications and should meet our purpose. At the same time, it must be kept in mind that merely copying our specifications in the quotation shall not make the parties eligible for consideration of the Bid. The bid has to be supported with the printed technical leaflet/literature of the quoted model of the furnace along with its complete specifications.

- 7.2 Non-compliance of the above shall be treated as incomplete/ambiguous and the offer can be ignored without giving an opportunity for clarification/negotiation etc. to the quoting party.
- 7.3 The bidders may visit the Medallion Manufacturing Unit at DRO. This will give a clear picture of the furnace workload to the bidders and they will have a better understanding of the technical specifications of the furnace.

**(8) WARRANTY**

- 8.1 The equipment/instrument must be guaranteed/ warranted for a period of at least one year from the date of its satisfactory installation/commissioning against all manufacturing defects. If the equipment is found defective during this period, the whole equipment or part thereof will have to be replace/repared by the supplier free of cost at the Unit or at site of the supplier for which 'to and fro' expenses will be borne by the supplier.
- 8.2 The warranty period of an item shall commence from the date of satisfactory installation/ commissioning/ demonstration at the project site in Medallion Unit, MMTC Limited, Jhandewalan, New Delhi. The warranty period and validity of Performance Guarantee shall be extended for the period of delay in satisfactory installation.

**(9) LIQUIDATED DAMAGES FOR LATE DELIVERY & LATE INSTALLATION**

- 9.1 Time for delivery and satisfactory installation/commissioning is the essence of this contract. The supplier shall deliver the ordered materials within the delivery period mentioned in the order unless extended in writing.
- 9.2 In case of delay in supply/installation on part of the supplier, a penalty @ 0.5% per week upto maximum ceiling of 7.5% of the order value will be charged.
- 9.3 If the delay in the shipment of the ordered material attributable to the supplier exceeds agreed time period, the MMTC Limited shall have the right to cancel the contract/ purchase order and recover the liquidated damages or any other dues of the party or by legal means.

**(10) EARNEST MONEY DEPOSIT (EMD)**

- 10.1 A demand draft/ banker's cheque drawn of Rs. 1,00,000/- in favour of MMTC Limited payable at New Delhi must be enclosed with the Technical Bid as per amount indicated in tender document.



- 10.2** The EMD of unsuccessful bidders shall be returned without interest after award of contract to successful bidder/s. Further EMD shall be returned without any interest to the successful bidder after commissioning or submission of Performance Bank Guarantee whichever is later.
- 10.3** Firms registered with Government PSUs are not exempted for payment of EMD. All tenders received without EMD shall be summarily rejected.

**(11) FORCE MAJEURE**

If at any point of time during the existence of this contract either party is unable to perform in whole or in part any obligation under this contract because of war, hostility, military operation, civil commotion, sabotage, quarantine, restrictions, acts of god and act of Government (including but not restricted to prohibitions of exports and imports), fires, floods, explosions, epidemics, strikes, or any other labour trouble, embargoes, then the date of fulfillment of any obligation/engagement shall be postponed during the time when such circumstances are operative. Any waiver/extension of time in respect of the delivery of any installment or part of the goods shall not be deemed to be waiver/extension of time in respect of the remaining deliveries.

If operation of such circumstances exceeds three months other party will have the right to refuse further performance of the contract in which case neither party shall have the right to claim eventual damages.

The party who is unable to fulfill its obligations under the present contract must at the earliest or latest within 15 days of occurrence of any of the causes mentioned in the clause shall inform the other party of the existence or termination of the circumstance preventing the performance of the contract. Certificate issued by the Chamber of Commerce or any other competent authority connected with the case in the country of either party shall be sufficient proof of the existence of the above circumstance and their duration. Now, availability of raw-material shall not be an excuse to the suppliers for the no performing their obligation under the contract.

**(12) ARBITRATION**

Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitrator and the award made in pursuance thereof shall be binding on the parties. The venue of arbitration shall be New Delhi (India).

**(13) PERFORMANCE BANK GUARANTEE (PBG)**

Unconditional Performance Bank Guarantee (PBG) of 15% of invoice value will have to be submitted by the supplier from a scheduled bank which shall be valid till 60<sup>th</sup> day after the expiry of warranty period. The performance BG shall have to be submitted at the time of release of final payment. In case the same is not submitted the EMD of the supplier may be invoked.

**(14) TERMS OF PAYMENT WILL BE AS FOLLOWS**

- 14.1** 25% of invoice value shall be released to the supplier after receipt of equipment and successful installation.
- 14.2** 70% of invoice value shall be released to the supplier after successful commissioning of machine.
- 14.3** 5% of invoice value shall be retained by MMTC till submission of performance bank guarantee

The payment will be made only after receiving certificate of performance of equipment from our technical expert/scientist.

**(15) VALIDITY OF OFFER**

The quoted prices should remain valid for at least 90 days from the date of tender opening date. No changes in quoted prices will be acceptable in any condition after opening of tender till the validity of the offer or execution of the order whichever is later.

**(16) DELIVERY SCHEDULE**

The entire installation/commissioning must be over within the time frame as quoted by the supplier in the Technical bid

**TECHNO-COMMERCIAL BID EVALUATION CRITERIA FOR ELECTRIC MELTING FURNACE****A. Primary Requirements**

1.	EMD Submitted	Bid would be rejected in case of non-compliance
2.	Acceptance of terms and conditions	Bid would be rejected in case of non-compliance

**B. Essential Documents****Points****Points Obtained**

1.	Meeting Technical Specifications	35	
2.	List of firms/companies (references)	10	
3.	Certificate confirming OEM and easy availability of spares	10	
4.	Name and Address of the service provider	5	
5.	Terms and Conditions of AMC	10	
6.	Guarantee/ Warranty Period	15	
7.	Delivery Period	15	
	<b>TOTAL</b>	<b>100</b>	

**Bidders who score a minimum of 75 points will be considered for opening of price bid.**

**C. Technical Specifications**

The detailed Technical Specifications as mentioned in the tender document should be preferably complied with. The Price bid of only those bidders would be opened who qualify in the Technical bid. If the technical bid of the bidder does not match with the mentioned technical specifications, the bid would be rejected.

(Praveen Jain)  
DGM (Retail)