

*Maulana Azad*

National Institute of Technology Bhopal- 462 003

(An Institution of National Importance under MHRD, Govt. of India)



**LIMITED TENDER ENQUIRY  
FOR  
SUPPLY OF**

***MAGNESIUM MELTING FURNACE (Temp. 1200 °C)  
Protective Atmosphere***

***IN  
THE DEPARTMENT MATERIALS AND METALLURGICAL  
ENGINEERING (MME), MANIT BHOPAL***

Website [www.manit.ac.in](http://www.manit.ac.in)  
Email Address: [info@manit.ac.in](mailto:info@manit.ac.in)

Fax No: 0755-2670562  
Telephone No: 0755-4051000, 0755-4052000

## INDEX

SN	Description	Page Nos.
1	Notice Inviting Tenders	3
2	Important Information at a Glance	4
3	Instructions to Bidders	5-7
4	ANNEXURE-I-- Technical Specifications& Drawing	8-10
5	ANNEXURE-II—Price Bid Form	11

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No. MANIT/MME/EQ/2019/01

Date: 05.09.2019

**NOTICE INVITING TENDERS**

Sub: *Supply of Goods/ Items in “Magnesium Melting Furnace (1200 C) with Protective Atmosphere ”*

Tenders are invited for *Supply Goods/Items in “Magnesium Melting Furnace (1200 °C) with Protective Atmosphere”* Interested Manufacturers/Authorized Partner/Agencies may log on Institute website [www.manit.ac.in](http://www.manit.ac.in) and CPPP website [www.eprocure.gov.in/epublish/app](http://www.eprocure.gov.in/epublish/app) for further details. Tender Document can be downloaded and the duly completed be submitted to the Assistant Registrar, Stores & Purchase, Maulana Azad National Institute of Technology- Bhopal- 462 003.

Last date of receipt of complete tender document is **26.09.2019** up to 17.00 hours. The Director of the Institute reserves the right to accept or reject any or the entire tender in full or in part without assigning any reason whatsoever.

**Registrar**

*Maulana Azad*  
National Institute of Technology Bhopal- 462 003

<b>IMPORTANT INFORMATION AT A GLANCE</b>		
Tender No & Date	No. MANIT/MME/EQ/2019/02	
	Date: 05.09.2019	
SCOPE OF TENDER		
Brief Description of Goods/Items	Quantity	Remarks
<i>“Magnesium Melting Furnace (1200 C) with Protective Atmosphere ”</i>	1	Detailed Specification at Annexure-I
Estimated cost of Tender	Rs. 3,50,000	
Location of Supplies & Installation	MME Department , at Institute	

TENDER DOCUMENT	
Tender Document can be downloaded free of cost from Institute website <a href="http://www.manit.ac.in">www.manit.ac.in</a> and CPPP website <a href="http://www.eprocure.gov.in/epublish/app">www.eprocure.gov.in/epublish/app</a>	
<b>Last Date &amp; Time of Submission of Tender</b>	<b>26.09.2019 up to 17:00 hours</b>
<b>Date &amp; Time of Opening of Bids</b>	<b>27.09.2019 at 15:30 hours</b>
<b>Expected Delivery Period</b>	<b>Four to six weeks from issuance of order</b>
Details of Contact Persons for Query if any	
<b>Name : Mr. Rakesh Singh</b> <b>Designation: Junior Assistant</b> Tel No: 07554051808 Email: <a href="mailto:rakesh_singh18@rediffmail.com">rakesh_singh18@rediffmail.com</a>	<b>Name : Dr. Jayashree Baral</b> <b>Designation : Assistant Professor</b> Tel No: 9437569034 Email: <a href="mailto:jayashree2k4@gmail.com">jayashree2k4@gmail.com</a>

<b>INSTRUCTIONS TO BIDDERS</b>	
<b>1</b>	<b>Scope of Supplies &amp; Work:</b>
a	The Goods/ Items shall be supplied as per the specification & drawing mentioned in <b>ANNEXURE-I</b> .
b	Where ISI certification marked goods are available in market, procurement should generally be limited to goods with those or equivalent marking only. The warranty/AMC required must be specified
c	After the supply of Goods/ Items& Accessories as mentioned in the <b>ANNEXURE-I</b> , the bidder has to execute its installation at the designated location(s).No extra cost shall be paid for this reason.
<b>2</b>	<b>Delivery of Supplies &amp; Installation:</b>
a	The purchaser interested for complete delivery of Goods/items along with Installation by bidder within stipulated time limit.
b	The material shall be inspected on receipt at site and bidder shall be responsible for any damage during the transit of Goods/Items.
c	The insurance cover including insuring the goods against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery/ installation shall be obtained by bidder in his own name and not in the name of purchases.
<b>3</b>	<b>Warranty &amp; After Sales Services:</b>
a	The bidder shall offer on-site comprehensive warranty of Good/Items for 01 (one) year from the date of successful commissioning of goods at the designated location & shall cover each and every part of the goods including parts having limited life etc. The purchaser is not liable to pay any extra charges on any account during warranty period.
b	The bidder shall ensure to render after sales services during the warranty period to the satisfaction of purchaser.
c	The performance Bank Guarantee 10% of the basic value is required for the warrantee period.
<b>4</b>	<b>Eligibility Criteria:</b>
a	Bidder should have registered with appropriate Authority.
b	Bidder should have minimum annual turnover (Double value of estimated cost of tender) in last year .CA certification in this regard is to be submitted.
c	Bidder should have GST Number & Income PAN both.
d	OEM Authorization Letter
<b>5</b>	<b>Amendment of Tender Document:</b>
a	At any time prior to the date submission of bids, the purchaser, may, for any reason, whether at its own initiative or in response to a clarification sought by a prospective bidder, amend bid document by issuing corrigendum. The corrigendum will be notified/ published in e-tendering website <a href="http://www.eprocure.gov.in/epublish/app">www.eprocure.gov.in/epublish/app</a> and Institute website only.

6	<b>Price Bid</b>	<p>a The Prices should be quoted in Indian Rupees only.</p> <p>b Purchaser (being a research Institution) is registered with the Department of Scientific &amp; Industrial Research (DSIR) for the purpose of availing custom duty exemption in terms of GoI Notification No. 51/96-Customs dated 23 July 1996. The bidder should quote their prices considering the exemption certificate. If any certification needed by bidder, may be given to avail this benefit.</p> <p>c Government of India, Ministry of Finance (Department of Revenue) Notification No: 47/2017 integrated Tax dated 14/11/2017, the NITs are exempted from GST in excess of the amount calculated at the rate of 5 per cent under the following categories:  (a) Scientific and technical Instruments, Apparatus, Equipment (including Computers);  (b) Accessories, Parts, Consumables and live animals ( experimental purpose);  (c) Computer Software, Compact Disc-Read only Memory (CD-ROM), recorded magnetic tapes, Microfilms, Microfiches;  (d) Prototypes, the aggregate value of prototypes received by an institution does not exceed fifty thousand rupees in financial years.</p> <p>The bidder should quote their prices considering the exemption. If any certification needed by bidder, may be given to avail this benefit.</p> <p>d Bidder shall take into account all costs including unloading at the location of purchaser, cartage etc. for giving delivery of material at site(s) before quoting the rates. In this regard no claim what so ever shall be entertained.</p> <p>e The bidders are advised not to indicate any separate discount. Discount, if any, should be merged with the quoted unit prices.</p> <p>f The price quoted in price bid shall be firm but subject to change in rate of applicable taxes if any.</p> <p>g The Bidder should avoid the use of vague term such as “Extra as applicable”. Such offers shall be treated as non-responsive.</p> <p>h No extra payment shall be paid on account of any discrepancy in nomenclature of items. The bidder shall seek clarifications if any before submitting the tender.</p>
7	<b>Bid Submission:</b>	<p>The tender must be placed in a properly sealed envelope super-scribed “<b><i>Tender for the Supply of Goods.</i></b>” with tender inquiry number and its due date addressed to The Director, Maulana Azad National Institute of Technology- Bhopal- 462003 and must reach the office of the <b>Assistant Registrar- Stores &amp; Purchase, Maulana Azad National Institute of Technology, Bhopal</b> by 26/09/2019 up to 17.00 hours. The sealed Envelop should be consisting of followings:</p> <p>a <b>INSTRUCTION TO BIDDERS</b> duly signed and accepted</p> <p>b <b>ANNEXURE-I</b> duly signed and accepted.</p> <p>d Copy of Certificate of Registration of Company/ firm/ Agency</p> <p>e Copy of valid GST Number &amp; PAN both.</p> <p>f Certificate mentioning of Turnover for the last year.</p> <p>g Copy of OEM Authorization Letter</p>

	h	The bidder would have to quote the prices for the total scope of work in the <b>ANNEXURE-II</b> . Partial quote are liable to be rejected
8	<b>Evaluation of Bids:</b>	
	The Institute shall evaluate all the items together or separately depending upon nature of items of circumstance and compare the quotations determined to be substantially responsive i.e. which	
	a	are properly signed;
	b	Confirm to the eligibility criteria of the vendor; and
	c	Confirm to the terms & conditions, and technical specifications.
9	<b>Validity of Tender:</b>	
	a	The tender shall be valid for a period of 60 days from the date of opening of the bid of tender. Terms and financial details submitted in the bid shall be treated as firm during the 60 days period.
	b	In exceptional circumstances, prior to the expiry of the bid validity period, the purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing.
10	<b>Notification of Award:</b>	
	a	Prior to the expiry of the period of bid validity, the purchaser shall notify the successful bidder, in writing, that its bid has been accepted. The notification letter shall specify the sum that the purchaser will pay to the bidder in consideration of the <b>Supply of Goods/ Items</b> with the details of selected location.
11	<b>Penalty Clause:</b>	
	a	The bidder shall indicate the period within which the ordered quantity will be supplied along with Installation & Commissioning of Goods/ Items. The bidder shall note that in case bidder fails to do so within the period of delivery indicated by the bidder in bid of this tender, penalty @ 01% of value of the order per week of delay would be levied subject to maximum 10 weeks. It means, the bidder shall have the liability of delayed supply to the maximum of 10 weeks after expiry of scheduled delivery date.
12	<b>Terms of Payment:</b>	
	a	The Payment shall be made within 30 days by purchaser after supply and installation of Goods/ Items.
	b	The payment of AMC shall be staggered over the period of AMC and be made at the end of each Quarter.
13	<b>Jurisdiction:</b>	
	a	In the event of any dispute the legal matter shall be subjected to the jurisdiction of Bhopal court only.
We confirm with our acceptance to the instructions (Sl.No-1 to 13 above) as given above.		
Date:		BIDDER'S NAME & SIGNATURE WITH SEAL
<i>These duly signed "Instructions to the Bidders" as under shall be attached with bid of the tender as a mark of acceptance of bidder and any tender not confirming the instructions as under is liable to be rejected.</i>		

*Maulana Azad*  
National Institute of Technology Bhopal- 462 003

Technical Specification of “***Magnesium Melting Furnace (1200 C) with Protective Atmosphere***”

We need a “***Magnesium Melting Furnace (1200 C) with Protective Atmosphere***”, and a mechanical stirrer is to be attached with the furnace for stirring the liquid metals / alloys. Provision should be available in the furnace for melting under protective atmosphere. The detailed technical specifications of the above mentioned equipment is given below:

S.No	Broad Specification of Goods/ Items	Quantity	Remarks	
1	<b>Body of the Furnace:</b> Mild steel shells with powder coated and with appropriate thickness to hold the load.	01		
2	<b>Outside structure size :</b> \ 525x525x 975 mm Inside size: 210 mm dia and 360 mm height.			+/- 1 mm acceptable
3	<b>Insulation:</b> High quality insulation liners			Temperature just out side of the furnace should not more than 5 °C from ambient temperature
4	<b>Quantity of Magnesium</b> to be melted is 2 kg in each heat			
5	<b>Crucible:</b> 2 No of INCONEL – 600 Crucibles to be supplied for melting of Magnesium alloy. Size of Crucible: 200 mm diameter 350 mm Height.			Size of the crucible should hold 2 kg of Mg during stirring the melt at 600 RPM.
6	<b>Maximum working temperature</b> of the furnace is 1000 °C			Uniform heating in all four sides of the furnace
7.	<b>Heating Rate</b> 10 °C/min programmable			
8	<b>Heating Element:</b> Kanthal wire should be used as heating purpose.			<i>(One set of coil should be supplied along with the furnace as extra)</i>



9	<b>Pouring System:</b> Bottom pouring	Metal should not leak during melting of metal.		
10	<b>Temperature Controller:</b> PID automatic controller and Digital temperature recorder. Power control through phase angle controlled thyrister	Temperature should not vary more than +/- 1°C		
11	Built-in protection for the over-heated and broken thermocouple			
12	<b>K type thermocouple</b> with digital temperature recorder (Accuracy: 1° C)	<i>One no of thermocouple with digital temperature recorder to be supplied as an extra to record the melt temperature.</i>		
13	<b>Die Material:</b> Cast iron and die size : 80 mm dia and 200 mm height.			
14	<b>Mechanical Stirrer:</b> up and down by lead screw with push botton operation <i>One stirrer should be supplied as extra along with the furnace</i>  <i>Inconel material should be used for making the stirrer. A suitable motor sould be attached with the stirrer.</i>	Stirrer should not bubble and not touch the side of the crucible at 600 PRM. Blades of the stirrer are welded at 45 degree with the srirrer rod. Stirrer blade neither touch the inner surface of the crucible nor the bottom portion of the crucible.		
15	<b>Warranty:</b> 1 Year warranty for all the parts of the Furnace including the heating coils and stirrer assembly, motor etc. Mechanical stirrer should be attached to the motor with threaded.	In warranty period any brakedown of the Furnace and strrer assenbly must be attended by the supplier with in 48 hrs otherwise penalty will be charged @ of Rs. 5000/- per day.		
16	After Installation and commissioning, 1 day training will be given by the supplier to the faculty / technical staff of MANIT Bhopal	During training period 6 kg Mg alloy will be melted and stirring operation will be demonstrated by the supplier.		
17	Power supply available	Single phase 220 Volts and 3 Phase 440 Volts		

		and current 5 and 15 Amp. Frequency: 50 Hz <i>Please Note if the machine draws high Amp current than 5 and 15 amp on that case MCB with required higher amp. Should be supplied by the supplier.</i>		

NB: Drawing/ Design is enclosed herewith.-nil

We confirm with our acceptance to the technical specification as given above.		
Date:		BIDDER'S NAME & SIGNATURE WITH SEAL

		<b>ANNEXURE- II</b>
<b>FORMAT FOR SUBMISSION OF BID PRICE</b>		
To,		
The Director		
MANIT- Bhopal- 462 003		

<b>Sub:</b>	Price Bid with reference to Tender Document No: _____ dated _____
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SN	Product Description with make & Model	Discounted unit price	Qty	Qty Price	GST	Total Price
1	2	3	4	5	6	7(5+6)
<b>Total offered Price</b>						
<b>Total ( In Words)</b>						

<b>The followings things are confirmed and undertake by us that:</b>	
a	The price quoted above are inclusive of basic price, statutory levies and taxes, duties, Transportation, Incidental services (including Insurance, Loading/ unloading, Packing & Forwarding charges, Installation etc.) at site.
b	Taxes are subject to change/ revision.
c	Offer price shall be valid for a period of 60 days from the date of opening of bid of this tender.
d	We will be agreed to offer services for on-site comprehensive warranty on the Goods/ Items supplied through this tender for one (01) year.
e	We agree with the terms and conditions specified in "Instructions to Bidders" and if selected, the execution of supplies would be made in compliance.

<b>Date:</b>	<b>Signature of Authorized Bidder with proper rubber stamp</b>
	<b>Name:</b>
	<b>Designation:</b>
	<b>Mobile No:</b>