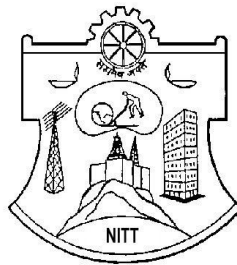


NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI – 15

Department of Metallurgical and Materials Engineering

Web : www.nitt.edu

Phone : 0431 - 2503150



TENDER DOCUMENT

Tender Notification No.: **NITT/ICSR/MME/SK/ARDB/2009 -2010/5**

Dated : 5.5.2009

- Name of the component(s) : 1. Magnesium Melting Furnace
2. Double Disc Polishing Machine
3. Belt Grinder
4. Inverted Microscope with Image Analyzing Software
- Quantity required : Items 1,3 and 4, One each and item 2, two Nos
- EMD Amount : Rs. 6000/- for Item 1 and Rs. 7000/- for Items 2,3 and 4
- Delivery : 6 to10 Weeks after placing the purchase order
- Last Date of submission of Tender : **26.5.2009 upto 3.00 p.m.**
- Address for submission of Tender : Dr. S.Kumaran,
Dept. of Metallurgical and Materials Engg.
National Institute of Technology
Tiruchirappalli – 620 015
E-mail : kumara@nitt.edu
Phone No: 0431- 25013463
Mobile : 09944434705
- Date of opening of bid : **26.5.2009 at 3.30 p.m**



**NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI – 15**

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Tender Notification No.: NITT/ICSR/MME/SK/ARDB/2009 -2010/5

Dated : 5.5.2009

NOTICE INVITING TENDER

The National Institute of Technology, Tiruchirappalli (NITT) is an autonomous body under MHRD, GOI, imparting Technical Education and engaged in Research Activities. It is proposed to procure the following component for the departmental academic/research activities.

Sealed Quotations are invited for the following component subject to the following terms and conditions, from the reputed manufacturers or their authorized dealers so as to reach this office on or before scheduled date and time. The quotations will be opened on the same day in the presence of bidders or their authorized agents who may choose to be present.

Name of the component : 1. Magnesium Melting Furnace
2. Double Disc Polishing Machine
3. Belt Grinder
4. Inverted Microscope with Image Analyzing Software

Quantity required : Item 1,3 and 4, One each and item 2, two Nos

EMD : Rs. 6000/- for Item 1 and Rs. 7000/- for Items 2,3 and 4

Time for completion of supply after placing purchase order : 6 to10 Weeks

Last Date of submission of Tender : **26.5.2009 upto 3.00 p.m.**

Tender to be submitted at the following address : Dr. S.Kumaran,
Dept. of Metallurgical and Materials Engg.
National Institute of Technology
Tiruchirappalli – 620 015
E-mail :kumara@nitt.edu
Phone No: 0431- 25013463
Mobile : 09944434705

Place, Date and time of opening of bid :

Date: 26.5.20009 Time: 3.30 p.m Venue : Store Section, NITT

Note : The Institute shall not be responsible for any postal delay about non-receipt / non delivery of the bids or due to wrong addressee.

SECTION: 1 INSTRUCTION TO BIDDER

1. The bidders should provide list of customers of previous supply of similar items to Universities, Institutes or Government Departments/Undertakings/public sectors with contact details. The details of the bidder/profile should be furnished along with the copy of all related documents.

1.1 Documents to be submitted in the Bid:

- (i) The bidder should furnish copy of licence certificate for manufacture/supply of the item.
 - (ii) The bidder should furnish Income Tax PAN number
 - (iii) Catalogue of the product with detailed product specifications
 - (iv) Shelf-life of the chemicals offered for supply is to be specified.
 - (v) EMD, if applicable, by Demand draft drawn on any scheduled bank in favour of "**The Director, NIT, Trichy**" payable at Trichy should be submitted. EMD shall bear no interest. Any bid not accompanying with EMD is liable to be treated as non-responsive and rejected.
2. The bidder should submit their rate as per the format given in Section 4 of the Notice Quotation in this cover. Rate should be quoted in Indian Rupee. The rate should be quoted both in words and figures. All the pages of the bid should be signed affixing the seal. All corrections and overwriting should be initialed.

The bid cover should be duly superscribed with the following details.

(1) Quotation Notification Number (2) Quotation for the supply of (3) Date of opening

Mention "Kind Attention: Contact's person's name and phone number", and submit at the address given in the quotation Notice.

3. The quotation will be acceptable only from the manufacturers or its authorized supplier.
4. The bid shall be in the format of price schedule given in Section 4. The contract form as per format given in section 5 shall be submitted. Incomplete or conditional quotation will be rejected.
5. Details of quantity and the specifications are mentioned in Section 3 appended to this quotation Notice.
6. The item to be used is strictly according to the specification and subject to test by the Institute/concerned authorities.
7. The Institute reserves the right to cancel or reduce the quantity included in the schedule of requirements at any time after acceptance of the quotation with a notice. The Contractor/Supplier shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work/supply in full but he did not derive in consequence of the foreclosure of

the whole or part of the works.

8. 5% of the supply value will be retained by the Institute towards Performance Security and will be returned to the supplier after the period of warranty.
9. **Release of EMD:** The EMD shall be released after receipt of performance security from successful bidder.
10. **Validity of bids:** The rate quote should be valid for a minimum of 60 days. No claim for escalation of rate will be considered after opening the Quotation.
11. **Imports:** In case, goods are to be imported, the Indian agent should furnish authorization certificate by the principles abroad for submission of the bid in response to this Quotation Notice.
12. **Clarification of Quotation Document:** A prospective bidder requiring any clarification of the Quotation document may communicate to the contact person given in this notice inviting quotation.
13. **Amendment of quotation document:** At any time prior to the last date of receipt of bids, Institute may for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the Quotation document by an amendment.
14. ***The Institute may at its own discretion extend the last date for the receipt of bids.***
15. The bids shall be written in English language and any information printed in other language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.
16. The Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids. The decision of the Institute Purchase Committee is final in all matters of quotation and purchase.
17. The bidder should give the following declaration while submitting the Quotation.

DECLARATION

I/we have not tampered/modified the quotation forms in any manner. In case, if the same is found to be tampered/modified, I/we understand that my/our quotation will be summarily rejected and full Earnest Money Deposit (EMD) will be forfeited and I/we am/are liable to be banned from doing business with NIT, Trichy and /or prosecuted.

Signature of the Bidder :

Name and Designation :

Business Address :
.....
.....

Place :

Date :

Seal of the Bidder's Firm

18. Any other details required may be obtained from the contact person given in the notice inviting quotation during the office hours.

SECTION : 2 CONDITIONS OF CONTRACT

1. The rates should be quoted in Indian Rupee FOR NIT, Trichy for supply within India.
2. In case of import both CIF and / or FOB rate should be quoted. All components of expenditure to arrive at Chennai need to be explicitly specified.
3. The bidder shall indicate the excise duty exemption for the goods if applicable
4. The Institute is eligible for customs duty and excise duty exemption.
5. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any.
6. Rate quoted should be inclusive of Testing, commissioning and installation of equipment and training.
7. **Payment**: No advance payment will be made. Payment will be made only after the supply of the item in good and satisfactory condition and receipt of performance security by supplier. In case of imports, the payment will be made through LC after installation and performance security need to be submitted at the time of LC commitment.
8. Guarantee and Warrantee period should be specified for the complete period conforming to the section 3 of this quotation document.
9. Period required for the supply and installation of item should be specified conforming to the section 3 of this quotation document.
10. In case of dispute, the matter will be subject to Tiruchirappalli, Tamil Nadu Jurisdiction only.

SECTION : 3 SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS

1.Name of the Component to be procured : **Magnesium Melting Furnace**

Technical Specification

STRUCTURE

1. General sketch : Crucible furnace with auto flushing of the melt
2. Outer shell size : $\approx 600 \times 600 \times 600$ mm
3. Useful volume : Crucible inner dimension 200mm dia x 300 mm height with conical bottom
4. Shell Construction : M. S. Body and M. S. Angle's structure with proper stiffeners and neat powder coat painting
5. Furnace stands & panel box : Control panel box with a door coupled with furnace stand to a height of 0.75 meter
6. Crucible material : Stainless steel 310 grade, Low Alloy Steel and Graphite (two Number each)
7. Stirrer : High speed stirrer with various speed 300 to 500 RPM
8. Stirrer material ; Made with mild steel with zirconia coated (300 micron thickness)
9. Furnace insulation : Mechanically pressed zirconia blend ceramic fiber.
10. Controlled atmosphere : Furnace portion is suitably sealed to have a controlled atmosphere
11. Fittings for controlled atm : Stainless steel fittings are provided.
12. Melt discharge system : Automatic close / open mechanism provided at the bottom of the crucible with pneumatic will be arranged along with the suitable pipe line.
13. Mould : Necessary 3 numbers steel mould will be supplied to shape the melt.
14. Material input : 1 to 2 Kg

HEATING SYSTEM

1. Heating elements : Powder metallurgical grade kanthal
2. Operation : THREE PHASE / AC /230V
3. Power : 6 kW
4. Maximum temperature : 1100°C
5. Working temperature : 1000°C

CONTROL SYSTEM

1. Temperature control : PID programmer cum Digital Temperature controller cum Indicator
2. Temperature sensor : K type thermocouple
3. Accuracy : $\pm 1^\circ\text{C}$
4. Power control : through the phase angle controlled thyrister
5. Indications : a) Ammeter
b) Mains Indicator c) Out put Indicator
6. Control switches : Mains on, Furnace on, melt discharge on, melt discharge off
7. Safety : Input, out put fuses

VACUUM PUMP

1. Model : Rotary
2. Vacuum ; 10^{-2} torr

Quantity : One

Any other details/requirement : Nil

Warranty period required : Three years

Delivery schedule expected after release of purchase order (in weeks) : 6 – 10 Weeks

EMD (in Rupees) : Rs 6,000/-

2. Name of the Component to be procured : **Double Disc Polisher**

Technical Specification

8" double disc polisher

Variable speed from 50-1000 RPM

Corrosion Resistant wash bowl free flow drain

Suitable water jet with control valve

Aluminium Disc 8"Dia (Interchangeable)

Stainless Steel Holding Ring (Press Type)

Front Control Panel with feather touch buttons

Additional Aluminium Disc Set (with Holding ring & Spring)
ON-OFF Switch

DC Drive

Two Sets of start off Consumables for polishing (Dozen Emery papers, polishing cloths, Diamond paste, fluid, etc, 2Kg fine Alumina Powders)

Quantity : Two

Any other details/requirement : Nil

Warranty period required : Two Years

Delivery schedule expected after release of purchase order (in weeks) : 6 – 10 Weeks

EMD (in Rupees) : Rs. 2000/-

Performance Security to be given by Successful bidder after release of purchase order (in Rupees) :

3. Name of the Component to be procured : **Belt Grinder**

Technical Specification

Sturdy Table Top Model for Pre-Grinding of Metallurgical Specimen

1440 RPM

Standard Endless Belt

Constant Tension Spring Loaded mechanical system

Idler Pulley Mechanism

Simplified Belt release mechanism

On-Off Switch

5 sets of consumables for grinding

Quantity : One

Any other details/requirement : Nil

Warranty period required : Two Years

Delivery schedule expected after
release of purchase order (in weeks) : 6 – 10 Weeks

EMD (in Rupees) : Nil

Performance Security to be given by
Successful bidder after release of
purchase order (in Rupees) :

4. Name of the Component to be procured :

Inverted Microscope with Imaging Analyzing Software

Technical Specification

MICROSCOPE

Objectives: 10X, 20X, 40X, 100X (Oil or Dry)

Eyepieces: Widefield WF-10X

Magnification Range: 100X - 1000X (standard)

Magnification Changer: Quadruple ball bearing revolving changer for perfect alignment

Suitable Observation Tube

Illumination: Built in Koehler's incident illuminator with suitable halogen lamp, field and aperture diaphragm with yellow, green and blue filters

Camera Adaptor: C-Mount lens adaptor

IMAGE ANALYSIS SYSTEM

Digital CCD Camera with PC interfacing for digital Imaging

Complete Image Analysis and measurement Software Enhanced Image Processing

Phase Analysis: Delineates phases as per ASTM E-566 &

E-1245 Standard

Nodules: Nodularity as per ASTM A-247 Standard

Porosity: As per ASTM 276 Standard

Grain Size: As per ASTM E-112 Standard

Coating Thickness: As per ASTM B-487 Standard

Decarburisation Depth: as per ASTM E-1077 Standard

Inclusion: Non-Metallic Inclusion rating measurement as per ASTM E-454, E-1245 Standard

Measurement tools: For Calibration, Length, Angle, Perimeter, Width, Area and Radius

Graphite Flakes: Maximum flake length measurement

Additional Tools: Hardness Testing, Inclusion as per Din Standards (50602), Special Filters

Report Generation: Exports to MS Office or Excel

COMPUTER

CPU: Pentium IV 3 GHZ Dual Core or Hyper Threading Processor

RAM: 512 MB or higher

VGA: True Colour (32 bit,16M),Direct draw VGA

HDD: 40GB or higher

Monitor: 17" Flatron Monitor - resolution 1280x1024

OS: Windows XP with Service Pack 2

CD ROM Drive

AGP Graphic Card with 128 MB Memory

PCI - USB 2.0 Compliant slots

Quantity : One

Any other details/requirement : Nil

Warranty period required : Two years

Delivery schedule expected after
release of purchase order (in weeks) : 6 – 10 Weeks

EMD (in Rupees) : Rs 5000/-

Performance Security to be given by
Successful bidder after release of
purchase order (in Rupees) :

SECTION: 4 PRICE SCHEDULE

[To be used by the bidder for submission of the bid]

- 1. Component Name :
- 2. Specifications (confirming to Section 3 of Quotation document-enclose additional sheets if necessary) :
- 3. Currency and Unit Price :
- 4. Quantity :
- 5. Item cost (Sl.No.3 & Sl.No.4) (in Indian Rupee) :
- 6. Taxes and other charges :
 - (i) Specify the type of taxes and duties in percentages and also in figures
 - (ii) Specify other charges in figures :
- 7. Warranty period (confirming to the Section 3 of Quotation document. This should be mentioned in Technical bid also in order to get qualified for Financial bid) :
- 8. Delivery Schedule (confirming to the Section 3 of Quotation document) :
- 9. Name and address of the firm for placing purchase order :
- 10. Name and address of Indian authorized agent (in case of imports only) :

Signature of the Bidder :

Name and Designation :

Business Address :
.....
.....

Place :

Date :

Seal of the Bidder's Firm

SECTION : 5 CONTRACT FORM

[To be provided by the bidder in the business letter head]

1. {Name of the Supplier's Firm) hereby abide to deliver theby the delivery schedule mentioned in the Section 3 quotation document for supply of the items if the purchase order is awarded.
2. The item will be supplied conforming to the specifications stated in the quotation document without any defect and deviations.
3. Warranty will be given for the period mentioned in the quotation document and service will be rendered to the satisfaction of NIT, Trichy during this period.

Signature of the Bidder :

Name and Designation :

Business Address :
.....
.....

Place :

Date :

Seal of the Bidder's Firm