



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

### ENQUIRY NOTICE INVITING TENDER

Phone: +91 431 257 7360  
Email : [ajayasalkar@bheltry.co.in](mailto:ajayasalkar@bheltry.co.in)  
: [vijayak@bheltry.co.in](mailto:vijayak@bheltry.co.in)  
Website : [www.bhel.com](http://www.bhel.com)

| TWO PART BID                        | Enquiry Number: | Enquiry Date: | Due date for submission of quotation: |
|-------------------------------------|-----------------|---------------|---------------------------------------|
| Tender to be submitted in two Parts | 2631800053      | 21.07.2018    | 17.08.2018                            |

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

| Item | Description                                                                                                                                                                                                                                                                      | Quantity |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 10   | <b>Bench Top Type Tungsten Electrode Grinding Machine</b> as per the technical specification & commercial conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> and <a href="https://eprocure.gov.in">https://eprocure.gov.in</a> | 1 No.    |

#### Important points to be taken care during submission of offer

1. Delivery terms shall be FOR BHEL Stores, Trichy .
2. Compliance Form No: TRY/IND/08 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
3. Delivery period required is 2 months from the date of Purchase Order.
4. Erection and commissioning shall be done at BHEL Trichy by the supplier.
5. Time period required for Erection and Commissioning shall be 3 weeks from the date of intimation by BHEL
6. EMD not applicable.
7. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions compliance form and technical specification can be downloaded from BHEL web site <http://www.bhel.com> and <https://eprocure.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference "2631800053".

(This is not an E – Tender. Please submit your offer in hard copies )

Tenders should reach us before 14:00 hours on the due date  
Tenders will be opened at 14:30 hours on the due date  
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.

Yours faithfully,  
For **BHARAT HEAVY ELECTRICALS LIMITED**

**AJAY V. ASALKAR**

Sr. MANAGER

Sr. Manager Capital Equipment / MM  
BHEL, Tiruchirappalli - 620 014

**PART - A**  
**QUALIFYING CRITERIA FOR**  
**BENCH TOP TYPE TUNGSTEN ELECTRODE GRINDER**

| S.No       | BHEL Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Bidder's Offer |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>1.0</b> | <b>QUALIFYING CRITERIA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |
| 1.1        | Bidder / OEM must have manufactured, supplied and commissioned <b>at least ONE BENCH TOP TYPE TUNGSTEN ELECTRODE GRINDER –Electrically Operated</b> are eligible to quote.                                                                                                                                                                                                                                                                                                                                                                                                 |                |
| 1.2        | <p>Bidder has to submit at least ONE Performance Certificate from their customer (end user), for satisfactory performance of <b>BENCH TOP TYPE TUNGSTEN ELECTRODE GRINDER –Electrically Operated</b> meeting the following conditions:</p> <p>a) The Equipment must have been supplied within the last five years as on the first date of tender opening.</p> <p>b) The Equipment must have performed satisfactorily for at least one year during this period.</p> <p>For obtaining the Performance certificate, a suggestive format is provided at the end of part-A.</p> |                |
| 1.3        | PO document for the above mentioned supplied equipment to be enclosed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |
| 1.4        | BHEL reserves the right to verify the information provided by the Bidder. In case the information provided is found to be false/ incorrect, the offer is liable for rejection.                                                                                                                                                                                                                                                                                                                                                                                             |                |

|            |                                                                                                                          |  |
|------------|--------------------------------------------------------------------------------------------------------------------------|--|
| <b>2.0</b> | <b>INFORMATION TO BE PROVIDED BY BIDDER</b>                                                                              |  |
| 2.1        | Bidder shall provide contact details(phone no & email id) including the address of his Agents / Service Centres in India |  |
| 2.2        | Details of Bench Top Type Tungsten Electrode Grinder –Electrically Operated supplied to other BHEL units if any          |  |
| 2.3        | The BIDDER to furnish Reference List of Customers(max 10 customers) including Contact details(phone no & email id).      |  |

### **SECTION 3**

The BIDDER to note:

| <b>S. No.</b> | <b>PARTICULARS</b>                                                                                                                                                    | <b>Bidder's offer</b> |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 3.1           | The BIDDER shall submit the offer in <b>Two Parts</b> –<br>1. Technical [with PART A & PART B] &<br>2. Commercial and Price Bid.                                      |                       |
| 3.2           | The Bidder's offer against each clause in PART A & B of the offer should be filled by the BIDDER compulsorily with complete details.                                  |                       |
| 3.3           | The BIDDER shall assure a continuous support for Spares and Service for Five Years, from the date of commissioning of the equipment at BHEL Works.                    |                       |
| 3.4           | The Technical Offer shall be supported by Product Catalogue and Data Sheets in original and complete technical details / literature on the quoted model of equipment. |                       |
| 3.5           | The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation.                    |                       |

Suggestive Format of Performance Certificate:

The performance certificate to be produced on **Customer's Letter Head**.

**PERFORMANCE CERTIFICATE**

- |    |                                                                          |                                 |
|----|--------------------------------------------------------------------------|---------------------------------|
| 1  | Description of the equipment                                             |                                 |
| 2  | Make & Series of the equipment                                           |                                 |
| 3  | Month & Year of Commissioning                                            |                                 |
| 4  | Application for which the equipment is used                              |                                 |
| 5  | Electrically operated type<br>(Strike off whichever is not applicable)   | YES / NO                        |
| 6  | Bench top type<br>(Strike off whichever is not applicable)               | YES / NO                        |
| 7  | Performance of the equipment<br>(Strike off whichever is not applicable) | Satisfactory / Not Satisfactory |
| 8  | Service support after sales<br>(Strike off whichever is not applicable)  | Satisfactory / Not Satisfactory |
| 9  | Any Other remarks                                                        |                                 |
| 10 | This performance certificate was issued on:                              | ..... (DD/MM/YYYY)              |

Signature & Seal of the Authority  
Issuing the Performance Certificate

Contact details of issuing authority  
Name & Designation:  
Office No/ Mobile no:  
Email ID:

# BENCH TOP TYPE TUNGSTEN ELECTRODE GRINDER

## PART B - TECHNICAL SPECIFICATION

| S No. | Item Description                                                                                                                                                                                                                                                                                                                             | Specification                                                                                                                                                                                                                            | VENDOR'S RESPONSE   |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1.0   | <b>Purpose:</b> The bench top type electrically driven Tungsten Electrode Grinder will be used for grinding of the Tungsten Electrode tips used in TIG /PTA Welding machines – vendor to confirm and must indicate the make and model. Also User manual of the offered model to be enclosed to understand all the features of the equipment. |                                                                                                                                                                                                                                          |                     |
| 1.1   | Sizes of electrodes to be ground- vendor to confirm                                                                                                                                                                                                                                                                                          | <b>Diameter</b>                                                                                                                                                                                                                          | <b>Length (Max)</b> |
|       |                                                                                                                                                                                                                                                                                                                                              | 1.6 mm                                                                                                                                                                                                                                   | 150 mm              |
|       |                                                                                                                                                                                                                                                                                                                                              | 2.0 mm                                                                                                                                                                                                                                   | 150 mm              |
|       |                                                                                                                                                                                                                                                                                                                                              | 2.4 mm                                                                                                                                                                                                                                   | 150 mm              |
|       |                                                                                                                                                                                                                                                                                                                                              | 3.2 mm                                                                                                                                                                                                                                   | 150mm               |
|       |                                                                                                                                                                                                                                                                                                                                              | 4.0 mm                                                                                                                                                                                                                                   | 150 mm              |
|       |                                                                                                                                                                                                                                                                                                                                              | 4.8 mm                                                                                                                                                                                                                                   | 300 mm              |
|       |                                                                                                                                                                                                                                                                                                                                              | 6.0 mm                                                                                                                                                                                                                                   | 300 mm              |
| 1.2   | Included angle to be ground at the electrode tip                                                                                                                                                                                                                                                                                             | 15, 30, 45 and 60 deg.<br>Provision for making the tip flat either by providing 90 deg angle or by equivalent means. Vendor to confirm and provide details.                                                                              |                     |
| 1.3   | Minimum electrode length that can be ground                                                                                                                                                                                                                                                                                                  | Vendor to specify. Vendor to offer optionally any additional accessories required for smaller length electrode along with details.                                                                                                       |                     |
| 1.4   | <b>Electrode holder and clamping arrangement:</b> Universal chuck / holder for holding different diameter electrodes / collets /sleeves for different diameters mentioned in clause 1.1. -- Vendor to specify.                                                                                                                               |                                                                                                                                                                                                                                          |                     |
| 1.5   | Adjustment angle                                                                                                                                                                                                                                                                                                                             | Protractor scale/Angle indication to be provided for setting the desired angle.                                                                                                                                                          |                     |
| 2.0   | <b>Grinding machine configuration</b>                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                          |                     |
| 2.1   | Type                                                                                                                                                                                                                                                                                                                                         | <b>Electrically driven- DRY type grinder</b>                                                                                                                                                                                             |                     |
| 2.2   | Grinding wheel material                                                                                                                                                                                                                                                                                                                      | Diamond Grinding Wheel only. Double sided type. Vendor to specify recommended makes and model of wheels for offered equipment                                                                                                            |                     |
| 2.3   | Grinding wheel Dia and Grit size                                                                                                                                                                                                                                                                                                             | Dia: Minimum 80mm OD<br>Grit size: vendor to specify. Must be suitable for grinding operation of all the electrode sizes mentioned in clause 1.1                                                                                         |                     |
| 2.4   | Enclosure                                                                                                                                                                                                                                                                                                                                    | The grinding wheel and Electrode area to be fully enclosed and a window covered with Plexi glass/equivalent shall be provided to view the grinding operation. The vendor to specify the provision for cleaning the glass inside surface. |                     |
| 2.5   | Grinding                                                                                                                                                                                                                                                                                                                                     | Longitudinal type                                                                                                                                                                                                                        |                     |
| 2.6   | Grinding wheel speed                                                                                                                                                                                                                                                                                                                         | Vendor to specify in RPM.                                                                                                                                                                                                                |                     |

| S No. | Item Description                                                                                                                                                                                                                                             | Specification                                                                                                                                                        | VENDOR'S RESPONSE |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 2.7   | Portability                                                                                                                                                                                                                                                  | The grinder shall be of bench top type. Vendor to provide mounting details, If mounting is mandatory for the offered equipment,                                      |                   |
| 2.8   | Over all dimensions of the unit                                                                                                                                                                                                                              | Vendor to furnish details                                                                                                                                            |                   |
| 2.9   | Weight of the unit                                                                                                                                                                                                                                           | Vendor to specify                                                                                                                                                    |                   |
| 3.0   | <b>Electrical specification</b>                                                                                                                                                                                                                              |                                                                                                                                                                      |                   |
| 3.1   | Motor power in watts                                                                                                                                                                                                                                         | Vendor to specify                                                                                                                                                    |                   |
| 3.2   | AC input power supply                                                                                                                                                                                                                                        | 230V $\pm$ 10 V, 50 $\pm$ 3 Hz, single phase                                                                                                                         |                   |
| 3.3   | Power supply cable                                                                                                                                                                                                                                           | The grinding machine shall have min 5 meter long input power supply cable.                                                                                           |                   |
| 4.0   | <b>Consumables</b>                                                                                                                                                                                                                                           |                                                                                                                                                                      |                   |
| 4.1   | Consumables                                                                                                                                                                                                                                                  | Grinding wheels : 1 set with equipment and another one set as additional quantity.                                                                                   |                   |
| 5.0   | <b>Spares</b>                                                                                                                                                                                                                                                |                                                                                                                                                                      |                   |
| 5.1   | Additional Collets for holding 3.2mm, 4.0mm, 4.8mm and 6.0mm dia electrodes-1 set shall be quoted as spares - Vendor to confirm and must provide the details of the collets quoted                                                                           |                                                                                                                                                                      |                   |
| 5.2   | Filter for grinding particle                                                                                                                                                                                                                                 | Grinding particle collector/filter details to be provided. Vendor to specify the procedure of cleaning and disposing along with consumables list if any for filters. |                   |
| 5.3   | Carbon Brush: 02 sets.                                                                                                                                                                                                                                       | Vendor to confirm                                                                                                                                                    |                   |
| 5.4   | If any other spares required for two year trouble free operation?                                                                                                                                                                                            | Vendor to furnish a list                                                                                                                                             |                   |
| 5.5   | Each machine shall be supplied with standard accessories and tools                                                                                                                                                                                           | Vendor to confirm and list to be provided.                                                                                                                           |                   |
| 6.0   | <b>Additional items to be offered by the Vendor</b>                                                                                                                                                                                                          |                                                                                                                                                                      |                   |
| 6.1   | Tungsten electrode Tip – Flat diameter measuring unit: Qty 1 No                                                                                                                                                                                              |                                                                                                                                                                      |                   |
| 6.2   | Magnifying lens with light- Qty 1 No                                                                                                                                                                                                                         |                                                                                                                                                                      |                   |
| 6.3   | Vacuum system if needed to filter grinding particles from the enclosed area to be offered separately. Vendor to mention whether this vacuum system is an additional optional facility apart from the grinding particle filter specified in clause 5.2 or not |                                                                                                                                                                      |                   |
| 7.0   | <b>General</b>                                                                                                                                                                                                                                               |                                                                                                                                                                      |                   |
| 7.1   | <b>Operation &amp; Maintenance manuals:</b> Three hard copies of detailed O & M manuals and safety instructions and one soft copy of the same in CD or pen drives to be provided along with the equipment.                                                   |                                                                                                                                                                      |                   |
| 7.2   | <b>Test Certificate :</b> The equipment shall be tested for its performance by the Vendor at Vendor's work and test certificate mentioning Sl.No of the equipment to be provided prior to dispatch of the equipment                                          |                                                                                                                                                                      |                   |
| 7.3   | <b>Commissioning &amp; Prove out:</b> Must be done at BHEL,Trichy by the Vendor                                                                                                                                                                              |                                                                                                                                                                      |                   |
| 7.4   | <b>Training:</b> Must be provided by the Vendor during commissioning                                                                                                                                                                                         |                                                                                                                                                                      |                   |

| S No. | Item Description                                                                                                                                                                                                                                              | Specification | VENDOR'S RESPONSE |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| 7.5   | <b>Guarantee:</b> The equipment shall be guaranteed for minimum period of twelve months from the date of commissioning.                                                                                                                                       |               |                   |
| 7.6   | <b>Contact Person and Service centre details:</b> Vendor to provide Contact person/s details (Name,Phone no, mail id etc) along with service centre addresses available in tamilnadu/near trichy to contact them for future procurement of spares/consumable. |               |                   |