



BHARAT HEAVY ELECTRICALS LIMITED
Centralised Stamping Unit, New Delhi

EXPRESSION OF INTEREST
For
SUPPLY INSTALLATION & COMMISSIONING OF DIE GRINDING MACHINE

Ref No: BHE/CSU/EOI/04

1. Expression of Interest (EOI) is invited for the following machine for manufacture of Electrical Sheet Stampings from reputed manufacturers as per enclosed Specification.

Scope of supply & services	Issue of documents from	Last Date of submission
Supply, installation & commissioning of Die Grinding Machine Quantity:1 Number	24.01.2007	14.02.2007

2. Address for purchase and submission of documents:

Office of the Sr Manager (MM), CSU
Third Floor, BHEL House
Bharat Heavy Electricals Limited
Siri Fort Road
New Delhi 110 049
Tel: +91 11 2649 2590
Fax: +91 11 2600 1167
Email: varun@bhel.co.in

3. Specifications/ documents may be obtained from the above office by hand. Bidders may also download the same from the web page of BHEL www.bhel.com (Tender Notifications) and use the documents for submission of EOI.
4. General Terms and Conditions and brief technical specifications of the machine tools are given in the Annexure.
5. Based on the submission of Expression of Interest by the bidders, BHEL will short list the parties for issue of detailed tender specifications for submission of their techno-commercial offer and price bids. Therefore, detailed techno-commercial offers and prices are not to be submitted at this stage.
6. The offers are to be submitted in a sealed envelope properly marked.

7. BHEL takes no responsibility for any delay / loss of documents or correspondence sent by courier or post.
8. BHEL reserves the right to accept or reject any of the bids / all bids with or without deviation, or cancel / withdraw the invitation for EOI without assigning any reason whatsoever and in such case no bidder shall have any claim arising out of such action by BHEL.

Enclosures:

Annexure EOI-5: General terms and Conditions

Annexure EOI-6: Brief Technical Specification of Die Grinding Machine

For & on behalf of BHEL

(P K Banerjee)
Sr Manager (MM), CSU
BHEL, New Delhi

GENERAL TERMS AND CONDITIONS

1. SUBMISSION OF OFFER

- a) The EOI shall be addressed to the official as specified in the Notice Inviting EOI and shall be submitted with one original and two copies.
- b) Sealed Offers may be submitted personally, by Courier or by registered post with due allowance for any transit/postal delay. The offers received after due date and time of opening are liable to be rejected.
- c) Bidders must fill the schedules and furnish all the required information as per the instructions given in various sections of the Specification. Each and every page of the offer must be signed, stamped and submitted by the Bidder. The information furnished shall be complete by itself.
- d) The offer shall be in English Language using international numerals. Metric system of units shall be used.
- e) All entries in the Offer shall either be typed or be written in ink. Erasures and overwriting are not permitted and may render such Offers liable to summary rejection. The Bidder shall duly attest all cancellations and insertions.

2. RECEIPT OF OFFERS

- a) The Offers shall be received in the office of the official inviting EOI till close of business (5.30 PM) on the last date of submission of EOI mentioned in the Notice Inviting EOI.

3. SHORT LISTING OF BIDDERS

- a) Only Bidders who have previous experience in the work of the nature and description detailed in the Specifications, who continue to be in business in this field and who are financially sound to undertake the work, are expected to be short listed for this work. Offer from Bidders who do not have proven and established experience in the field is not likely to be considered.
- b) Offers will be accepted from the equipment manufacturers only and not from their agents.

4. SCOPE OF SUPPLY AND SERVICES

- a) The scope of supply and services shall cover design, procurement, manufacture assembly and testing at supplier's works, packing and forwarding, supply FOB Port of Despatch (for foreign supplies) / Ex-Works Station of Despatch or FOR site (for domestic supplies), installation, commissioning and testing at BHEL works.

- b) Marine/ inland transportation, unloading and storage at BHEL Works will be taken care of by BHEL/ other contractors.
- c) Training of BHEL personnel in operation and maintenance of the machine tools is also to be provided at supplier's works as well as at BHEL works.
- d) Recommended/ mandatory spares for two years operation are to be provided.

5. DETAILED TECHNO-COMMERCIAL OFFER

- a) BHEL will issue a detailed Tender to the short listed bidders at a later date and they will be asked to submit their detailed techno- commercial and price bid. Therefore, detailed techno-commercial offer and price bid is not to be submitted at this stage.

6. DELIVERY

- a) The machine is required to be supplied FOB Port of Despatch (for foreign supplies) / Ex-Works Station of Despatch or FOR site (for domestic supplies) by December 2007/ January 2008.
- b) The machine is planned to be commissioned for commercial use at BHEL works progressively in February / March 2008.
- c) Bidders are required to indicate the delivery period/ commissioning schedule keeping in mind their current and expected order execution program and BHEL's requirement.

7. TECHNICAL SPECIFICATIONS

- a) Brief Technical Specification of the machine is given in the Annexure. The Technical Specification is preliminary and may undergo change at the time of issue of detailed tender documents.
- b) Bidders may submit their comments for modification, if any, for improved performance, technical up gradation, maintenance facilities, cost reduction etc.

8. INFORMATION TO BE SUBMITTED

The Bidder shall give full information in respect of the following. Non-submission of this information may lead to rejection of the Offer.

- a) **Details of Company/ Firm:**

Details of the company or the firm, its nature of business etc.

b) Financial Status:

Financial status of the company for the last three years (minimum) to show that the company is financially sound. Certified copies of audited accounts for last 3 years shall be submitted for this purpose.

DUNS number (allotted by M/s Dun & Bradstreet) shall be mentioned in the offer, if allotted.

c) Organisation Details:

Information to show that company has qualified and competent persons to undertake the work called for in the Specifications.

d) Previous Experience:

- I. A statement giving particulars of the various similar machine tools supplied/ under manufacture.
- II. The following information is to be submitted about the companies where machines have been supplied.
 - i. Name of the customer / company where similar machine is installed and is in operation.
 - ii. Complete postal address of the customer.
 - iii. Month & Year of commissioning.
 - iv. Application for which the machine is supplied with details of accuracies achieved on the job.
 - v. Name and designation of the contact person of the customer.
 - vi. Phone, Fax no. and email address of the contact person of the customer.
 - vii. Performance certificate from the customers regarding satisfactory performance of machine supplied to them.
- III. BHEL reserves the right to verify the information provided by Vendor. In case the information provided by the vendor is found to be false/ incorrect, the offer is liable to be rejected.

e) After Sales Setup

Existing and proposed after sales set up of the company giving details of how the company plans to support BHEL by way of supply of spares and services in case of order.

f) Delivery Schedule

Proposed delivery schedule.

g) Supplier Registration Form

The Supplier Registration Form, duly filled up, with necessary enclosures, shall be submitted.

The form may be downloaded from BHEL website www.bhel.com (Supplier Registration – New Supplier – Registration Forms).

Suppliers who are registered with other units of BHEL may also quote their registration number for reference.

BRIEF TECHNICAL SPECIFICATION OF DIE GRINDING MACHINE

(EOI Reference No: BHE/CSU/EOI/04)

1. PURPOSE

The Die Grinding Machine will be used for grinding dies used for production of stampings from electrical sheet steel for rotating electrical machines. The die face will normally be of tool steel. The material removal will be low as the dies will be ground for sharpening the cutting edges.

2. SPECIFICATION

2.1. The major specifications are as follows:

2.1.1	Work Piece Details	
	Work Piece Width	1600 mm
	Work Piece Length	3000 mm
	Work Piece Height	100 to 400 mm
	Work Piece Weight, Max	3500 kg
	Grinding Width	1350 mm
	Grinding Length	2600 mm
2.1.2	Machine Details	
	Table Width, Min	1350 mm
	Table Length, Min	2600 mm
	Height of cross rail above table top	800 mm
	Height of cross rail above magnetic table top	500 mm
	Distance between columns, min	1700 mm
	Table Speed	2 to 20 mm/Min
	No of table speed changes	Step less
	Vertical Travel over magnetic chuck	400 mm
2.1.3	Tool Spindle Details	
	No of Spindles	1
	Spindle drive capacity	12 kW
	Spindle Speed (Variable)	1000 to 2000 rpm
	Outside diameter of grinding wheel	400 to 510 mm
	Vertical Feeds	0.001to 0.1 mm/Stroke
	Vertical feed speed	2 to 500 mm/Min
	Horizontal feeds	0.002 to 50 mm/Stroke
	Horizontal feed speed	10 to 1500 mm/Min

3. CONSTRUCTION

- 3.1. The die grinding machine shall be with reciprocating table and single horizontal axis grinding head. The body frame shall be rigid and the cross rail shall be fixed type.
- 3.2. The machine bed shall be sturdy and shall have high precision guide ways. Proper lubrication of table guide ways shall be provided.
- 3.3. The drive system shall be with a variable drive AC motors and shall be suitable for all speeds and feeds.
- 3.4. CNC control shall be provided for the vertical movement of the grinding wheel head only.
- 3.5. An electro-permanent magnetic chuck shall be supplied for mounting on the table. The dimensions of the chuck shall be same as the dimensions of the table. The dies will normally be mounted on the chuck for grinding. The magnetic chuck shall be magnetised by a single shot of electrical power so that there is no heat built up even when the chuck is left on for a long periods of time.

4. OPERATION AND CONTROL SYSTEM

- 4.1. Swivelling and sliding type operator's panel having complete machine control system with CRT of required configuration shall be provided.
- 4.2. An open-type control system with a standard industrial PC and colour monitor for the visualization and control of the process shall be provided.
- 4.3. Programmable logic controllers with distributed peripherals connected with a standard field bus system for machine control shall be provided.