

## Techno-commercial Scope of Supply and Work

**Name of Work:** Repair of Column of Vertical Boring machine (Model-KY 64) Plan No- 2-195/Bl.3.

**Machine Specifications-** Double column vertical boring machine having specifications given below-

Table Dia.- 6300 mm

Machine Height- 12060 mm, Width- 14200 mm, Length- 8213 mm

Wt. - 251 Ton.

Maximum Travel of Vertical Heads – 3425 mm.

The base metal of Column is cast iron.

**Objective:**

A crack in left column of the machine has developed in middle of the column height. This crack has propagated through column guide ways. Total crack length is 4000 mm approximately. Thickness of column wall is 50 mm. Height of the column at which crack has developed is approximately 5000 mm from the base of the column. The crack in the column of the machine has to be repaired through metal stitching/metallock process.

**Scope of work& Supply:**

S.NO	Description	Remark
1.	<b>Scope of work</b>	
1.1	Cleaning of the affected area of column wall thoroughly with suitable cleaning agent.	
1.2	Performing die penetration test on affected area to assess the actual crack length and depth.	
1.3	Drilling a series of holes of suitable dia. at a suitable interval perpendicular to the crack segments.	
1.4	Joining of the holes with chisel for preparing the serrated slots of same size and profile as that of keys & locks which will be inserted in these slots.	
1.5	Spot facing on the surface and Insertion of keys & locks of matching size and profile in the serrated slots.	
1.6	Drilling a series of holes of suitable dia. at a suitable interval along the length of the crack.	
1.7	Tapping of the holes of same size and thread size as that of pins / studs which will be inserted in these holes.	
1.8	Spot facing on the surface and Insertion of pins / studs of matching size and thread in the holes.	
1.9	Filling of space between surfaces, keys/locks and pins/studs with the bonding agent/sealant suitable for metal stitching.	
1.10	Grinding of surface and projected portions of the keys/locks and	

	pins/studs to match with the parent surface.	
1.11	<b>Note:</b> Vendor may offer any alternative method of metal-stitching through which he has performed repair of similar type of cracks in the structure of machine tools and equipment satisfactorily. Vendor has to provide detailed description of the process. The vendor shall also specify the used material such as studs, pins, dowels, keys, locks, etc. with quantity and material specification. This process may be accepted subject to verification and satisfaction of BHEL.	
<b>2.</b>	<b>Scope of Supply</b>	
2.1	Supply of pins, dowels, studs, plugs etc. (preferably C / L series) made of a material (preferably EN1) suitable for metal stitching process. Vendor to specify the material grade, size and quantity required for metal stitching repair of minimum 4000mm crack length. Pins shall be designed with breakoff groove that causes each pin to break off at the predetermined torque.	
2.2	Supply of locks, keys etc. (preferably made up of heat treated 4130 steel having coefficient of thermal expansion same as that of cast iron) suitable for metal stitching process. Vendor to specify the material grade, size and quantity required for metal stitching repair of minimum 4000mm crack length.	
2.3	Supply of suitable cleaning agent and stress free uniform repair sealant / bonding agent suitable for metal stitching process. Vendor to specify the type and quantity required for metal stitching repair of minimum 4000mm crack length.	
<b>3.</b>	<b>Tools and equipment to be arranged by the vendor</b>	
3.1	Drilling machine and drilling & tapping bits of required size.	
3.2	Hand tools for dismantling/assembling and scraping of the machine.	
3.3	Hand Grinding machine.	
3.4	Dye penetration Kit for crack detection.	
3.5	Pneumatic tools to be used for installing the pins, dowels, studs, plugs etc.	
3.6	Any type of jig or fixture required for execution of work.	
3.7	Any other tool and consumable required for completion of work.	
<b>4.0</b>	<b>WARRANTY:</b>	
4.1	Vendor shall stand warranty for the complete work, including all the items and parts used, for a period of 12 months from the date of acceptance of the machine after satisfactory completion of repair work.	
<b>5.0</b>	<b>TERMS OF PAYMENT</b> shall be as under:	
5.1	Ninety percent (90%) of the contract value and 100% of Taxes and Duties shall be paid after the completion of the repair work and acceptance of the machine.	
5.2	Ten percent (10%) of the contract value shall be paid after 30 days from the date of completion of the repair work and acceptance of the machine. This payment shall be released against the PBG of equal amount. The PBG should be valid till the expiry of the warranty period.	
5.3	All the payments shall be made through e-payment after submission of following documents along with first bill. i. E-payment form duly filled (Form will be provided by BHEL). ii. Income tax exemption letter (if applicable).	
5.5	Excise duty & CST/VAT will be paid on material cost and service tax will	

	be paid on labour/repair charges at actuals. Related original documents to be submitted for availing MODVAT credit by BHEL.	
5.6	Timely submission of CENVATABLE invoices along with necessary documents to enable availing of CENVAT (Excise duty, Service Tax & VAT) credit by BHEL. <b>Note:</b> Wherever CENVAT credit cannot be availed within given time limit due to delay in submission of invoices or for any other reasons attributed to vendor, loss of such CENVAT credit will be recovered from the vendor.	
<b>6</b>	<b>EARNEST MONEY DEPOSIT:</b>	
6.1	The Earnest Money Deposit of amount is to be paid by each bidder along with Techno-commercial bid in the favour of BHEL Hardwar as per below mentioned rate and format -	
	Works costing up to 2 Lakhs- Nil Works costing more than 2 lakhs and upto Rs. 5 Lakhs : Rs. 10,000/- Works costing more than 5 lakhs and upto Rs. 10 Lakhs : Rs. 20,000/- Works costing more than 10 lakhs and upto Rs. 20 Lakhs : Rs. 40,000/- Works costing more than 20 lakhs and upto Rs. 30 Lakhs : Rs. 60,000/- Works costing more than 30 lakhs and upto Rs. 50 Lakhs : Rs. 1,00,000/- Works costing more than 50 lakhs and upto Rs. 100 Lakhs: Rs. 1,50,000/- Works costing more than 100 lakhs : Rs. 2,00,000/-	
6.2	Earnest money should be deposited in one of the following ways: Cash (As permissible under the Income Tax Act) Pay order Demand draft Tenders not submitted with earnest money are liable to be rejected. Earnest money deposit of unsuccessful offers shall be returned normally within 15 days of acceptance of award of work by the successful bidder.	
6.3	Offers without EMD will be rejected and will not be considered for evaluation. However "MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure -C where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiencies in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. "	
6.4	EMD shall be converted to security deposit if the work is awarded.	
6.5	EMD shall not carry any interest.	
6.6	EMD by the tenderer will be forfeited if: After opening of the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates. The tenderer does not commence the work within the period as per contract.	

<b>7</b>	<b>SECURITY DEPOSIT:</b> Successful bidder should have to submit the security deposit as per below mentioned rate and format -	
7.1	The rate of security deposit will be as below: Up to work order value Rs. 10 Lakhs: 10% of the total work order value work order value Above Rs.10 Lakhs upto Rs. 50 Lakhs: ` 1 Lakh + 7.5% amount exceeding ` 10 Lakhs work order value Above Rs. 50 Lakhs: Rs. 4 Lakhs + 5% amount exceeding Rs.50 Lakhs	
7.2	The security deposit should be submitted before the start of work in the following forms: i) Cash (As permissible under the Income Tax Act). ii) Pay Order, Demand Draft in favour of BHEL, Hardwar. iii) Local cheques of Scheduled Banks, subject to realization. iv) Bank Guarantee from Scheduled Banks/Public Financial Institution as defined in the companies Act. The Bank guarantee format should have the approval of BHEL.	
7.3	Security Deposit shall not carry any interest	
7.4	EMD of successful tenderer can be converted and adjusted against the Security Deposit.	
7.5	Security Deposit shall be refunded to the vendor as follows: 50% of the Security Deposit amount shall be refunded to the vendor after successful completion of the project. Balance 50% of the Security Deposit amount shall be refunded after 6 months of maintenance period.	
<b>8.</b>	<b>FACILITIES:</b>	
8.1	All perishable items, consumables like lubricants, Kerosene oil, cotton waste etc. will be supplied free of cost during metal stitching work inside BHEL premises.	
8.2	Crane facilities along with lifting tackles, trolleys, truck etc. will be available free of charges while working inside BHEL premises only.	
8.3	Facilities of minor welding, machining etc. will also be available inside BHEL premises free of cost.	
<b>9.</b>	<b>COMPLETION SCHEDULE:</b>	
9.1	Maximum four months from the date of contract agreement for supply of material and completion of repair work on the machine.	
<b>10.</b>	<b>LATE DELIVERY:</b>	
10.1	LD @ 0.50% (1/2 Percent) of the contract value per week maximum up to 10% of the contract value shall be deducted from the amount payable to the vendor if the completion of the repair work on the machine is delayed beyond the completion period.	
10.2	The time of non- availability of the machine for repair work, attributed to BHEL will be excluded from LD period.	
<b>12.</b>	<b>TRANSPORTATION &amp; TRANSIT INSURANCE:</b>	
12.1	Transportation and transit insurance of the material from vendor's works to BHEL Hardwar will be on vendor's account with proper packing.	
<b>13.</b>	<b>OFF-LOADING OF WORK:</b>	
13.1	Further off-loading of work either in part or full is not permitted in any case without prior permission of BHEL, otherwise contract is liable to be	

	terminated at the discretion of BHEL, Hardwar.	
<b>14</b>	<b>Risk Purchase Clause :</b> In case of delays in supplies / defective supplies or non-fulfillment of any other terms & conditions given in the work order the purchaser may cancel the work order in full or part thereof and may also make the purchase of the material / service from elsewhere / alternative source at the risk and cost of supplier. If the Vendor does not agree to above clause, his offer is liable to be rejected. In case any vendor accepts risk purchase clause initially and subsequently declines to honour the term in the eventuality of RISK PURCHASE, they may be banned for business with BHEL.	
<b>15</b>	<b>Packing:</b> Supplier shall arrange for adequate protection and packing of the consignment so as to avoid loss and damage during transit and also take appropriate measures to prevent metal parts from rusting and corrosion during transit. Handling instructions shall be clearly printed /painted on the packages. Each package should carry a detailed packing slip. Supplier shall be responsible for any loss/damage during transit due to defective/inadequate packing.	
<b>16</b>	<b>OFFER:</b> The offer should be submitted in two parts and in following manner.	
<b>16.1</b>	<b>Techno-commercial Bid :</b>	
16.1.1	The envelop shall contain the Techno-commercial Bid (ANNEXURE 'A') with technical details and commercial terms & conditions along with relevant documents like copies of ESI, PF code, PAN No., Service Tax Regn. No., TIN No., CST No., Experience Certificates, Audited Balance Sheet of last 3 years, P.O copies & Commissioning/ Performance certificates (against Pre-qualifying conditions) , Tender fees, EMD and Check List as per ANNEXURE 'D'.	
16.1.2	The envelop shall be super scribed with "Techno-Commercial Bid", Name of work & NIT No.	
16.1.3	Point-wise compliance of this scope of supply and work is to be given by vendors while submitting their techno-commercial offer in the format provided by BHEL. Each page of the compliance list has to be signed by the vendor.	
16.1.4	The vendor must note that no prices are to be quoted/ mentioned in the techno-commercial offer.	
<b>16.2</b>	<b>Price Bid :</b>	
16.2.1	The second envelope shall contain only the price bid with separate price for material, spares, work & applicable taxes & duties on Price Bid Format only as per ANNEXURE 'B'.	
16.2.2	Any other information in the price bid shall not be considered and the quotation is likely to be rejected. Price bid document shall be signed by the bidder at the bottom of the page.	
16.2.3	The envelope shall be sealed and super scribed with "Price Bid", Name of work & NIT No.	
16.2.4	Price bids of techno commercially accepted vendors shall be opened.	
16.2.5	Validity of the price bid submitted by the vendor should be minimum of 4 months period from the date of tender opening date (techno-commercial bid opening date.)	

16.3	Both the above two envelopes shall be kept in another sealed cover. The cover shall be super-scribed with "Quotation for (name of work), NIT No. & due date and shall be submitted in Tender Box kept in the Tender room of Purchase department at the 4th floor of the Main Administrative Building of BHEL, HEEP, Haridwar and it should also contain Bidder address.	
16.4	In case the date of tender opening happens to be a BHEL declared holiday, tenders shall be opened on the next working day.	
17.	<b>GENERAL CONDITIONS:</b>	
17.1	A point wise compliance statement shall be submitted by the party with reference to the above scope of supply against each clause/ sub-clause with relevant details & comments. Non-compliance to any of the clauses & quoting inadequate quantity can lead to dis-qualification of the offer.	
17.2	The Vendor is advised to inspect the machine before submitting the bid to ascertain all the relevant details required for successful completion of the work.	
17.4	Vendor should give the details of mechanical, physical and chemical properties of the material used for manufacturing of locks, keys, pins, dowels, studs, plugs etc. along with the offer.	
17.5	Vendor must compulsorily quote the quantity exactly as per the Scope of supply. No reduction in quantity as per the above Scope of supply is permissible.	
17.6	BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA . Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.	
17.7	The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site <a href="http://www.bhel.com">www.bhel.com</a>	
17.8	<b>The award of works will be made on basis of the total of Material cost, and installation charge and all taxes, duties as applicable (Cost to BHEL).</b>	
17.9	The Vendor should submit their best price at this stage itself and they will not be allowed to revise the price. Any revision / discount given by the vendor subsequently will be ignored.	
17.10	Check List as per Annexure 'C' must be enclosed with techno-commercial bid.	
17.11	The risk of delay/loss in transmission by post/courier rest with the bidder.	
17.12	Conditional tender is likely to be rejected.	
17.13	BHEL reserves the right to reject the lowest or any tender or accept any tender in full or in part without assigning any reasons whatsoever.	
17.14	If any information/documents submitted by the contractor are found false/fake at any stage, the tender will be rejected and earnest money deposited shall be forfeited debarring from the future participation in tenders.	
17.15	In case more than one contractor quotes equal L-1 rates, lottery shall be drawn among L-1 parties to decide one L-1 party.	

17.16	The material will be dispatched to Central Plant Stores, HEEP, BHEL, Haridwar with instructions to forward the same to Engineer (WEX-MCR), HEEP, BHEL, Haridwar-249403.	
<b>18.</b>	<b>Qualifying Criteria</b>	
18.1	Vendor should have successfully executed a work for crack repair of any part of a machine tool or equipment through metal stitching/metalock process.	
18.2	Name, address, email and phone no. along with copy of PO / WO / MOM of the customer(s) where the above work has been successfully executed shall be submitted by the vendor along with the techno-commercial offer.	
18.3	BHEL may verify the information provided by the vendor. The offer of the vendor shall not be considered, if it is found at any time that the vendor has submitted false information.	