

Name of Work: Scope of supply and work for retrofitting of a new Steady Rest on USSR-make Centre Lathe; Mfr- M/S Kramatorsk, Ukraine; Model 1A665, Plan No. 2-181, Block-3

Objective : A new Steady Rest is required for use on Centre Lathe Plan No.2-181, Model-1A665 to enhance the capacity of the machine to turn rotors having dia. upto 770 mm and of weight 30 Ton

I. TECHNICAL PART:

A. DESCRIPTION OF EXISTING MACHINE / SYSTEM:

Main specifications of C.Lathe, Model 1A665

1. Max. Dia. of the work piece admitted on the bed	:	1600 mm
2. Max. Dia. of work over the saddle	:	1250 mm
3. Distance between centres at extreme position of the tailstock(spindle in)	:	8000 mm
4. Dia. of spindle bore	:	80 mm
5. Max. weight of work machined	:	40 Ton
6. Max. length of machining over the saddle	:	8000 mm

B. SCOPE OF SUPPLY: Qty-01 No. with following details:

Sl. No.	Technical Specifications of Steady Rest		Compliance (agreed/ not agreed)
1.	Steady rest shall be designed to support a 30T Rotor of dia upto 770 mm max (when the component is supported on steady with other end in chuck) With maximum dia of the rotor as stated above, vendor should indicate the minimum component dia at steady rest with a suitable pad thickness. Total Quill movement traverse achievable on the new steady rest shall be indicated. Proposed 'including angle' between the axes of the quills shall be mentioned.	Vendor to confirm	
2.	Steady rest should have three nos. adjustable quills one at the bottom and one each on both sides at the semi-circular periphery of the steady rest. These quills shall be adjustable via lead screw and nut arrangement so as to accommodate various diameters of jobs. Adjustment of quills shall be done	Vendor to confirm	

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	manually for which appropriate arrangement such as square piece shall be provided. Steady should have white metal pads fixed on to the top of the removable shoe, which in turn is fitted on the top of jaws(quills), to support heavy jobs.		
3.	Steady rest shall be Cast Iron body casting suitable to withstand the load coming on the steady. Material of the adjusting barrels shall be case hardened steel.	Vendor to Offer & specify material grade	
4.	The Steady rest shall move on the existing rack fitted on machine bed guide ways. Bottom of the steady rest shall be matched with the existing bed guideways of the machine. A suitable pinion drive shall be provided in steady rest along with an arrangement for the operator to move the steady manually.	Vendor to confirm	
5.	Design of the new steady rest shall be in accordance with that of the existing steady rest working on the machine with the difference that it shall now be able to support a rotor of dia upto 770 mm at its pads. OEM drawing no. 1A665.100 600 000C6 of the existing steady is enclosed. No other drawing is available. Centre bore diameter of the existing steady rest is 730 mm which can support a rotor of maximum dia of 600 mm at its pads. However, vendor is advised to visit the machine for final/accurate dimensions required for manufacturing the steady rest. Responsibility of ensuring correct dimensions shall be of the vendor.	Vendor to comply and confirm	
6.	Automatic lubrication system comprising of a tank, motor-pump and hoses for job (component) lubrication shall be provided. Lubrication system should be of closed circuit type and must use ServoWay 100 or equivalent for job lubrication. For Steady parts' lubrication, hand pumps may be provided for steady rest jaws and bed guideways lubrication	Vendor to confirm	
7.	Steady rest shall be so designed as to allow free movement of the machine tool carriage across it.	Vendor to confirm	
8.	The steady should be rigid & sturdy enough to avoid any vibrations and deflection during the machining. Minimum plate thickness at any section in the steady rest shall be indicated in the drawing.	Vendor to confirm	
9.	The steady rest is to be painted after red oxide primer with finish coat of Verdigris Green Paint.	Vendor to confirm	
10.	BHEL reserves the right to reject any or all bids without assigning any reason thereof.	Vendor to confirm	

C. SPARES (As used on Steady Rest):

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Sl. No.	Description	Qty.		Compliance (agreed/ not agreed)
1.	Automatic lubrication system comprising of a tank, motor-pump and hoses for job (component) lubrication.	01 set	Vendor to confirm	
2.	Removable shoes having white metal pads on top.	06 sets	Vendor to confirm	

D. SCOPE OF WORK / COMMISSIONING:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Erection, commissioning and proving of the steady for desired performance is to be done by the manufacturer at BHEL works.	Vendor to confirm	

E. ACCEPTANCE CRITERIA:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Using the new steady rest, complete turning of one no. rotor weighing upto 30T and having diameter upto 770 mm (at steady rest) will be carried out. The acceptance of steady rest will require compliance with above requirement. It takes about 35 days to complete turning of such rotor.	Vendor to confirm	

F. DELIVERY:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Material delivery period: Ten (10) months from the date of award of the Work Order to the date of dispatch of the steady rest to BHEL, Hardwar. <i>Early delivery is acceptable.</i>	Vendor to confirm	
2.	Commissioning period: 01 week. Vendor shall depute their manpower within 15 days of intimation for commissioning of the steady rest on the machine at BHEL, Hardwar.	Vendor to confirm	

G. DOCUMENTATION:

Sl. No.	Description	Qty.		Compliance (agreed/ not agreed)
1.	Vendor to provide the Operation and Maintenance manual of the supplied item.	03 sets	Vendor to confirm	
2.	Operation and Maintenance manual should contain the drawing of the steady rest and manufacturing drawing of the fast wearing items.		Vendor to confirm	
3.	Operation and Maintenance manual should have part number of all the components used. It should also have the detail/catalogue of bought-out items, if any.		Vendor to confirm	

H. GUARANTEE:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Vendor shall stand guarantee for a period of 12 months from the date of successful commissioning on the machine for smooth functioning of the supplied steady rest.	Vendor to confirm	

I. PRE-DESPATCH INSPECTION:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Pre-despatch inspection (PDI) of the steady rest will be carried out at the vendor's works by BHEL. It includes functional test of steady rest. In addition, job holding capacity, quill movements, load bearing capacity and geometrical dimensions as per design & drawing will also be checked. Vendor shall inform BHEL atleast 15 days in advance from the date of PDI. Boarding & lodging charges of BHEL personnel will be borne by BHEL.	Vendor to confirm	

J. SUBMISSION OF BILL OF MATERIAL (BOM):

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Before inviting BHEL for Pre-dispatch inspection, vendor shall submit to BHEL the Bill of Material (BOM) for scrutiny.	Vendor to confirm	

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K. TRAINING:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Party shall impart training to BHEL staff, for operation & maintenance of the Steady Rest supplied by them during installation & commissioning.	Vendor to confirm	

L. RISK PURCHASE CLAUSE:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	In case of delays in supplies / defective supplies or non-fulfilment 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 vendor does not agree to this clause, their 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.	Vendor to confirm	

M. GENERAL CONDITIONS:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Vendor can inspect the existing steady rest and the lathe machine on which it is used on any working day.	Vendor to confirm	
2.	Vendor shall mention in the offer the strategy proposed to design a new steady rest to achieve higher supporting diameter of 770 mm. For example, steady centre bore diameter will need to be increased from the existing 730 mm without reducing the size of the body casting while maintaining sufficient clearance between the steady and the tool carriage.	Vendor to provide details	
3.	Vendor shall submit to BHEL detailed drawing of the steady rest after placement of the Work Order. The drawing shall indicate all necessary dimensions as also the clearance between the carriage and the steady rest.	Vendor to confirm	
4.	Design of the Steady rest should be such as to ensure operation at required size and weight of the job and deliver required accuracies.	Vendor to confirm	
5.	Processes such as heat treatment and selection of material of critical components is to be strictly adhered to and mentioned in quotation itself. All	Vendor to confirm	

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	wearing parts should be hardened and tempered for max. life.		
6.	All the documents being sent herewith should be returned back to us duly signed on each paper along with your offer.	Vendor to confirm	
7.	Packing & Forwarding, Transportation & transit insurance will be on vendor's account. Prices to be quoted by the vendor shall be FOR, BHEL, Hardwar.	Vendor to confirm	
8.	Further off- loading of work either in part or full is not permitted in any case without prior permission of Sr Engineer (WEX-MCR), otherwise contract is liable to be terminated at the discretion of BHEL, Hardwar.	Vendor to confirm	

N. OFFER

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	The offer should be submitted in two parts and in following manner.	Vendor to confirm	
	<u>Techno-commercial Bid :</u>		
2	The envelop shall contain the Techno-commercial Bid 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, and EMD .	Vendor to confirm	
3.	The envelop shall be super scribed with "Techno-Commercial Bid", Name of work & NIT No.	Vendor to confirm	
4.	Point-wise compliance of this scope of supply and work is to be given by vendors while submitting their techno-commercial offer.	Vendor to confirm	
	<u>Price Bid :</u>		
5.	The second envelope shall contain only the price bid with separate price for material & work on Price Bid Format as per <u>ANNEXURE 'B'</u> .	Vendor to confirm	
6.	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.	Vendor to confirm	
7.	The envelope shall be sealed and super scribed with "Price Bid", Name of work & NIT No.	Vendor to confirm	
8.	Price bids of techno commercially accepted vendors shall be opened.	Vendor to confirm	

9.	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 addressed to Shri Prafulla Chandra Sinha, Sr. Engineer (WEX-MCR/E), Block-6 Annexe, HEEL, BHEL, Haridwar-249403 and it should also contain Bidder address.	Vendor to confirm	
10.	Price bid must be valid for at least 120 days from the date of opening of tender.	Vendor to confirm	

O. VENDOR’S OBLIGATION:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	The vendor should have/arrange facilities, so that PDI can be done as per Para I. The same should be communicated with PDI call.	Vendor to confirm	
2.	The vendor shall bring all tools, tackles and testing equipment with them for successful commissioning of supplied system.	Vendor to confirm	

P. BHEL’S OBLIGATION:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Crane facility and lifting tackles like slings, rope, D-Shackles shall be provided.	Vendor to confirm	
2.	Any machining facility required for rectification/fitting of supplied material, subject to the extent available in BHEL, shall be provided.	Vendor to confirm	
3..	Electricity, water, fasteners, welding sets, Gas cutting equipment, general purpose welding rods and holders required during commissioning shall be provided.	Vendor to confirm	
4.	All perishable items, consumables like lubricants, Kerosene oil, cotton waste etc. will be supplied free of cost during commissioning of the steady rest inside BHEL premises. However the vendor should make his own arrangements for all types of hand tools including pneumatic/electrical drill machines, grinders, scraping machines etc. along with the necessary tooling, general purpose measuring instruments, straight edges etc.	Vendor to confirm	

Q. QUALIFYING CONDITIONS:

Sl. No.	Description		Compliance (agreed/ not agreed)
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1.	Average annual financial turnover during the last three years ending 31 st March of the previous financial year, should be at least Rupees Ten lakhs. Copies of balance sheets and P & L statements shall be submitted. Note: Establishment having turnover of 40 lakhs or more shall submit audited balance sheet and P & L statements.	Vendor to provide details.	
2.	Experience of having successfully completed similar works during last 7 years ending on 30 April 2012 should be either of the following:	Vendor to provide details.	
2.1	Three similar completed works costing not less than the Rupees Twelve lakhs	Vendor to provide details.	
	OR		
2.2	Two similar completed works costing not less than the Rupees Fifteen lakhs	Vendor to provide details.	
	OR		
2.3	One similar completed work costing not less than the Rupees Twenty four lakhs	Vendor to provide details.	
	<u>Definition of similar works:</u> Similar works shall mean manufacture, supply and commissioning of either of following (a) Steady rests supporting at least 600 mm diameter components (b) Chuck jaws of lathes having turning capacity of at least 30 T dia 1200mm. (c) Manufacturer of lathes of capacity at least 30 T.		
3.	Following information should be furnished by the vendor about the customer for whom similar works have been executed. (a) Name of the customer (b) Address of the customer (c) Month and year of commissioning (d) Name and designation of the contact person, his telephone no and email id (e) Performance certificate from the customer/commissioning certificate on completion of the work/letter of successful commissioning	Vendor to provide details.	
4.	BHEL reserves the right to verify the information provided by the vendor. Vendor shall agree to arrange a visit by a BHEL executive to his customer's premises for verification of details provided, if BHEL so desires.	Vendor to confirm	
5.	Note: M/S Kramatorsk Heavy Machine Tool Building Plant, Ukraine being OEM is qualified to participate in the tender.	Vendor to confirm	

COMMERCIAL PART

R. LATE DELIVERY CLAUSE:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Penalty against LD shall be deducted from the amount(s) payable by BHEL to the vendor if the delivery of the steady rest is delayed beyond the delivery period. LD shall be applicable as 0.50% (1/2 Percent) per week of the Contract value. Maximum amount of the LD shall be limited to 5% (Five Percent) of the Contract Value.	Vendor to confirm	
2.	Late Delivery @ 2% per week subject to a max. of 10% of the Commissioning Charges shall be applicable for delay beyond scheduled commissioning date for reasons attributed to the party.	Vendor to confirm	

S. EARNEST MONEY DEPOSIT (EMD):

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Vendors have to deposit the EMD. EMD may be deposited in cash, through pay order in favor of BHEL, Hardwar or through demand draft only. The rate of EMD will be as below: • Work costing upto ₹2 Lakhs : Nil • Work costing more than ₹2 Lakhs & upto ₹5 Lakhs : ₹10,000/- • Work costing more than ₹5 Lakhs & upto ₹10 Lakhs : ₹20,000/- • Work costing more than ₹10 Lakhs & upto ₹20 Lakhs : ₹40,000/- • Work costing more than ₹20 Lakhs & upto ₹30 Lakhs : ₹60,000/- • Work costing more than ₹30 Lakhs & upto ₹50 Lakhs : ₹1,00,000/- • Work costing more than ₹50 Lakhs & upto ₹100 Lakhs : ₹1,50,000/- • Work costing more than ₹100 Lakhs : ₹2,00,000/-	Vendor to confirm	
2.	EMD shall be converted to security deposit if the work is awarded.	Vendor to confirm	
3.	EMD of unsuccessful bidders shall be refunded back normally within fifteen days of acceptance of award of work by the successful bidder.	Vendor to confirm	
4.	EMD shall not carry any interest.	Vendor to confirm	
5.	EMD by bidder will be forfeited as per tender document, if	Vendor to confirm	
6.	After opening the tender, the tenderer revokes his tender within the validity period or	Vendor to	

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	increases his earlier quoted rates	confirm	
7.	The tenderer does not commence the work within the period as per LOI/contract.	Vendor to confirm	
8.	Offers without EMD will be rejected and will not be considered for evaluation.	Vendor to confirm	

T. SECURITY DEPOSIT (SD):

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Successful vendor shall deposit security. The rate of security deposit will be as below:	Vendor to confirm	
2.	- For work Up to ₹10 Lakhs : <u>10% of work order value</u> - Above ₹10 Lakhs upto ₹50 Lakhs : <u>₹1 Lakh + 7.5% amount exceeding ₹10 Lakhs</u> - Above ₹50 Lakhs: <u>₹4 Lakhs + 5% amount exceeding ₹50 Lakhs</u>	Vendor to confirm	
3.	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.	Vendor to confirm	
4.	Security Deposit shall not carry any interest.	Vendor to confirm	
5.	EMD of successful tenderer can be converted and adjusted against the Security Deposit.	Vendor to confirm	
6.	100% of the Security Deposit amount shall be refunded to the vendor after post commissioning successful running of the machine for one month. SD shall be released after the submission of Performance Bank Guarantee(PBG) by the vendor	Vendor to confirm	

U. PERFORMANCE BANK GUARANTEE (PBG):

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	Vendor shall be required to submit a performance bank guarantee (PBG) for 10% of the total work order value which shall be valid for a period of 12 months from the	Vendor to confirm	

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	date of commissioning.		
2.	The PBG shall be submitted on a non-judicial stamp paper of value not less than Rs.80/- issued by any one of the nationalised banks.	Vendor to confirm	

V. PAYMENT TERMS:

Sl. No.	Description		Compliance (agreed/ not agreed)
1.	1 st payment of 80% of material cost along with 100% taxes & duties (Excise duty, CST / VAT as applicable) may be made after inspection & acceptance of material at BHEL Haridwar.	Vendor to confirm	
2	After settlements of all pending issues related to work & supply as mentioned in this Annexure, a Certificate of completion of works in all respect shall be released within fifteen days by production and maintenance personnel of BHEL which will be required for final payment under clause no U.3.	Vendor to confirm	
3.	Final payment of balance 20% of material cost +100% of commissioning charges +service taxes as applicable shall be payable after final acceptance of the machine (refer clause no E “Acceptance Criteria”) and release of Certificate by production and maintenance personnel of BHEL as envisaged under clause no U.2. This payment shall be released against the PBG (as per clause no T).	Vendor to confirm	
4.	Following documents shall be submitted by the vendor to enable Finance deptt of BHEL to make the payment: i) BAR chart showing important milestones related to retrofitting of the new steady rest on Centre lathe 2-181 ii) Details of excise duty, Service Tax etc. iii) Income tax exemption letter, if applicable iv) Regular Invoice v) E-payment form filled and signed by the vendor. (Format to be provided by BHEL). Payment will be credited directly to vendor’s bank account To enable us to avail CENVAT credit for excise duty, service tax etc, all the relevant papers are to be submitted to BHEL.	Vendor to confirm	

W. PRICE BID FORMAT:

As per Annexure-B

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