



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

ENQUIRY NOTICE INVITING TENDER

Phone: +91 431 257 7653
Fax : +91 431 252 0719
Email : skaruna@bheltry.co.in
Web : www.bhel.com

TWO PART BID

Tender to be submitted in Two Parts

Enquiry
Number:

2711200004

Enquiry
Date:

20.03.2012

Due date for submission of
quotation :

20.04.2012

You are requested to quote the Enquiry number date and due date in all your correspondences. 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 No.	Item Description	Quantity
10	Supply of Circular Saw Blade Sharpening Machine at SSTP BHEL, Trichy as per the technical Specification, & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	02 Nos

Important Points to be taken care during the submission of offer:-

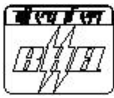
1. Delivery Period: 4 months from the date of Purchase Order is the project requirement. Delivery period earlier than 4 months is also acceptable.
2. The Technical Specification to be duly filled (as Point wise reply) and enclosed with offer.
3. Check list to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.

BHEL's General guidelines /instructions including bank guarantee formats and list of consortium banks, commercial terms checklist can be downloaded from BHEL web site <http://www.bhel.com> or from the government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) Tender Enquiry reference "2711200004"

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


Manager / MM / Capital Equipment



Specification for Saw Sharpening Machine for the grinding of circular saws & segmental saw in Tool
Engineering – SSTP

Document No. : SSTP.TE.SSM.01

Dt. 12/03/2012

1. GENERAL:

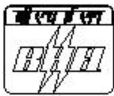
- 1.1 This document deals with requirements for submitting offers and executing the order on placement of Purchase order / Contract for the subject item. The equipment under this specification is required for the grinding of circular saw blades used in the Cold saw machine for length cutting of tubes in Hot rolling Mill in Seamless Steel Plant in BHEL, Tiruchirappalli.
- 1.2 Bidders have to submit the offers as below by filling in the "Vendor's response" column with relevant information against each point in the respective sections below by providing information on model no, parameters etc. The technical requirements shall also be confirmed for each clause.
- 1.3 Note: A just 'CONFIRMED' or 'COMPLIED' or 'YES' or 'NO-DEVIATION' or similar words in the "Vendor's response" column is not acceptable and may lead to disqualification of the Technical Offer.
- 1.4 Brand and model No. of the items offered must be indicated in the offer
- 1.5 The offer shall Consist of Sections:
- 1.5.1 Part A:
- a. General Requirements
 - b. Technical offer
 - c. Commercial terms and conditions
 - d. Un-priced Price bid as per Part B (i.e. Price bid as per list shown in Part B of this Specification with the price value blanked)
- 1.5.2 Part B: Price bid for all items with split of major components:

Sl.No	Particulars	Qty	Rate
01			
02			
03			
04			
05			
06			

- 1.6 Necessary Documents, records, drawings, catalogues as required shall also be referenced in the response column and attached with the offer.
- 1.7 The supplier may visit SSTP and understand the requirements before bidding.
- 1.8 The requirements to be met for submitting the offer and the execution of the order are laid out below.

2. QUALIFYING CRITERIA FOR THE SUPPLY

- 2.1. The VENDOR has to necessarily provide the following details, for making an assessment of the firm's capability and competency: [The VENDOR is expected to give complete details



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Engineering – SSTP

Document No. : SSTP.TE.SSM.01

Dt. 12/03/2012

against each clause in the table given below and wherever necessary an additional sheet may be attached (giving clear reference number) to cover the required details]

Sl. No.	PARTICULARS	Vendor's response with ref. cl. No. of detailed offer.
1.0	Number of Years of Experience of the VENDOR in the field of design, manufacture and supply of similar equipment to similar industries	
2.0	Number of machines supplied, installed and commissioned till date, in the QUOTED MODEL / Technology. Attach a reference list of customers with equipment type, model, year of supply and contact address.	
3.0	Details of Design Set-Up and Technology Back-Up if any for the PRINCIPAL Equipment Maker	
4.0	Details on International Standards followed in Design of the Equipment.	
5.0	Confirmation to performance testing requirement of the equipment prior to dispatch from supplier's end	
6.0	Details of Quality System followed (Kindly furnish the salient aspects of the QA system followed)	
7.0	Details on SERVICE-after-SALES Set-Up in India including the addresses of Agents/Service Centers in India and Asia	
8.0	Any Additional Data to supplement the manufacturing capability of the VENDOR	

- 2.2. The VENDOR has to compulsorily meet the following requirements to get qualified for submitting an offer for this test system. Confirmation against each clause is to be indicated in the space provided.

Sl. No.	REQUIREMENTS	Vendor's confirmation and ref. to detail enclosed
9.0	The VENDOR shall have a minimum of <u>2 Years</u> of Continuous Experience in the Design, Manufacture & Supply of 'equipments for similar purpose and industries'. Indicate the actual experience.	
10.0	The VENDOR shall have supplied at least 2 number of machines utilizing Technologies to be used in the offered equipment (including Hydraulics, Pneumatics, PLC, etc.), within the last five years. The equipment shall be working satisfactorily at least for the past 2 years. Indicate the number of equipment (of quoted model / Technology) sold in India & Other Countries.	



Specification for Saw Sharpening Machine for the grinding of circular saws & segmental saw in Tool Engineering – SSTP

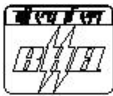
Document No. : SSTP.TE.SSM.01

Dt. 12/03/2012

11.0	Performance Certificate in original from CUSTOMERS (minimum 2 Customers) for satisfactory working of the machine as above for the past 1 years with full contact details of CONTACT PERSON for cross reference by BHEL shall be submitted with the offer. Please confirm. <u>Offers received without this certificate will be summarily rejected.</u>	
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2.3. The VENDOR has to comply with the following, for accepting the Technical Offer for scrutiny by the Purchaser. Confirmation against each clause is to be indicated in the space provided.

Sl. No.	REQUIREMENTS	Vendor's confirmation and ref. to detail enclosed
12.0	The Technical Offer shall be supported by Product Catalogue and Data Sheets in ORIGINAL and complete technical details. A schematic diagram shall be provided in the offer indicating all the items to be supplied.	
13.0	The Commercial Offer (given with the Technical Offer – Part I) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation of Scope of Supply.	
14.0	The points confirmed by the supplier based on the clarifications sought for the original offer shall be incorporated in the revised final offer wherever applicable. Pl. confirm	
15.0	The Vendor shall provide a complete list of out sourced / Bought-Out-Items: electrical, electronic and mechanical components with Source name, Model no., Specification, catalog and drawings. This shall be included in the offer. Pl. confirm.	
16.0	Break up cost for Mechanical, Drives, Electricals, etc. shall be furnished. Optional Systems / items shall be indicated separately. Pl. confirm	
17.0	An approximate break up of weight of each sub-system as above shall be indicated in the offer for comparison purpose. Pl. confirm	
18.0	Portion of Supplies from Foreign countries and from Indian source shall be separately grouped both in the Technical offer (Part I) and in the price bid (Part II).	
19.0	The Technical requirement below shall be commented clause wise as compared to the offered system in the space provided against each point.	
3.0	Job Details	
	Seamless Steel Tubes are made by hot rolling in long lengths from billets. After hot rolling the tubes are moved to cold saws for end cutting. End cutting is carried out in batches of 10-18 tubes forming a horizontal layer by segmental circular saws of width 10mm. Pre finished segments are assembled in theses saws and ground to the required form and rake angle for the effective cutting of tubes. Due to continuous cutting the teeth became blunt and need re sharpening. To grind the new segments as well as to regrind the teeth of used blades special saw blade grinding machines are required. To cater the higher production of 80,000 Tons after modernization, more no. of blades are to be ground for an uninterrupted production. Hence we need these I	

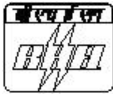


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Dt. 12/03/2012

	saw sharpening machines.																																																																			
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3.2	Design																																																																			
4	Scope of supply																																																																			
4.1	The scope of supply shall include manufacture, supply of the items and installation, commissioning and performance proving for a define period of time. The equipment may essentially consist of: Basic machine, Dust extraction unit, Wheel dressing unit, Lubrication system for cams, shafts, gears, bearings etc., Safety devices such as guard for grinding wheel, bimetallic relays for protection against overload, Indexing plate for high precision grinding of new blades and used blades with damaged / broken teeth																																																																			
4.2	The layout and footprint area shall be described using drawings to identify space requirement and feasibility of incorporating in the existing set up. This shall be provided with the offer.																																																																			
4.3	Operating instruction / maintenance manual to be supplied along with relevant drawings at the time of equipment delivery.																																																																			
4.4	Recommended spares for the smooth running of the system for minimum 2 year period shall be listed down in the offer.																																																																			
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5. General requirements:																																																																				



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Dt. 12/03/2012

5.1	The schematic drawing and operational features, catalogues etc. shall be provided in the offer	
5.2	Supplier shall prepare quality plan covering major items indicating critical quality characteristics, method of measurement, reference standard, acceptance norms and to BHEL before starting the manufacturing activities.	
5.5	List of spares with part identification no. (Tools, Mechanical, Electrical & Electronics) to be maintained for ensuring continuous operation with least delay time shall be provided in the offer with price.	
5.6	Supply of required commissioning spares for proving the performance of the m/c at SSTP is supplier's scope	
6	<u>DOCUMENTATION</u>	
6.1	<u>With the offer:</u> Preliminary design, Quality plan covering major items indicating critical quality characteristics, method of measurement, reference standard, acceptance norms. List, source and model of bought out items like drives, Hydraulic, Pneumatic Electrical and electronic items. Internationally reputed brands shall be used.	
6.2	<u>After order:</u> Activity schedule, Detailed drawings, Specification, Foundation drawings, Detailed Quality plan, Periodic status report.	
6.3	<u>Along with the supply:</u> The documentation shall be, one-fold on paper and one-fold on CD-Rom in English language consisting of the following: installation manual, assembly drawing and part lists general description of function and function cycle maintenance instructions lubrication instructions operating instructions circuit diagram, cable list, etc. Installation drawings, which contain all sizes, cable channels and final layout	
6.4	The documentation sent through e-mail or CD-ROM shall be in the following format: Documents and lists in PDF format Drawings in DWG format Layout and foundation plan in DWG format	
7	<u>INSTALLATION, PERFORMANCE & ACCEPTANCE OF THE SYSTEM</u>	
7.1	The machine shall be shipped after inspection and testing at Suppliers works by BHEL. 20 days prior notice shall be given for this inspection.	
7.2	The machine shall be installed and commissioned by the manufacturer of the machine.	



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Document No. : SSTP.TE.SSM.01

Dt. 12/03/2012

7.3	<p>The machine performance shall be checked at BHEL after installation on a set of saws of 3 different Diameters / tooth profile. Functioning of the machines to be demonstrated for a period of at least 3 shifts continuously.</p> <p>Testing methods and acceptance norms for each subsystems for tests at Suppliers works and after installation shall be detailed out in the offer.</p>	
7.4	<p>Service shall be provided by the supplier during guarantee period and also later through AMC. The machines supplied must be supported by way of spares, availability and service for a minimum period of 10 years.</p>	
7.5	<p>Guarantee for the trouble free performance of the machine shall be provided for min. 1 year for 3 shift operation. This shall be by way of performance Bank guaranty as applicable. The guarantees of the seller refer to</p> <ul style="list-style-type: none">Acceptance Testquality of operationlife time performanceand any other aspect agreed upon	
8	<u>Training:</u>	
8.1	<p>Supplier shall provide operational and first level system maintenance training for 4 persons at BHEL.</p>	

Prepared

Reviewed and approved

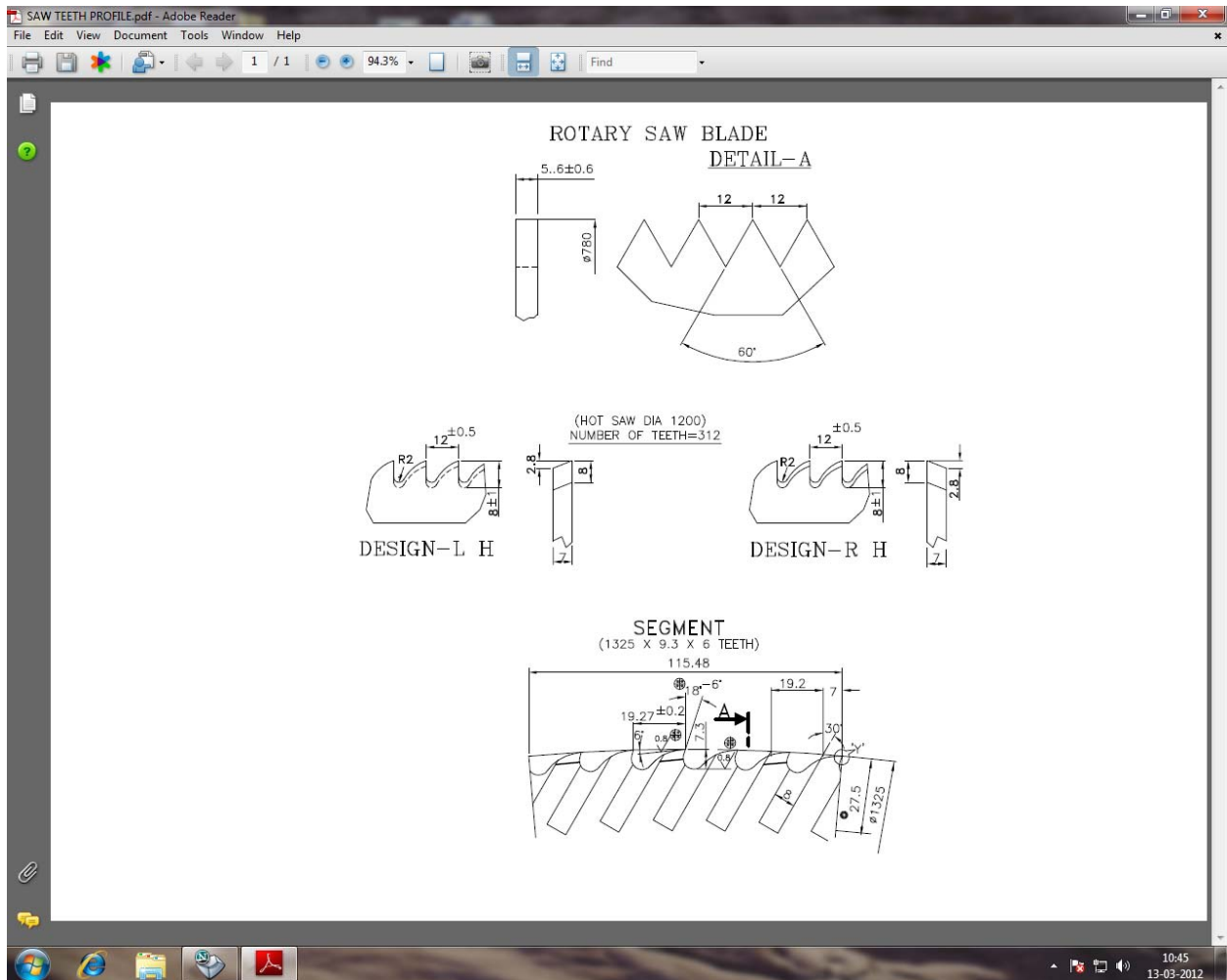


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Annexure



CIRCUALR SAW BLADE SHARPENING MACHINE

Scope :

supply, erection and commissioning as per requirement mentioned below

Quantity : 2 Nos.

Drg. No. Nil

Operation:

To grind the teeth profile of various saws viz. Segmental circular saw blade of dia. 1325 mm, Circular saw blade of dia. 1200 & 780 mm.

Technical data

Diameter of saw blade	:	750 -1350 mm
Width / Thick of blade	:	6 to 10 mm
No. of teeth	:	200 to 350 Nos.
Pitch of teeth	:	12 to 20 mm
Depth of teeth	:	6 to 12 mm
High low teeth – Automatic	:	0 to 0.6 mm
Rake angle	:	0 to 30 degree
No. of teeth ground/minute	:	20 to 80 Nos.

MOTORS

Grinding wheel	:	0.75 Kw/2800 RPM
Feed Mechanism(through A.C drive)	:	0.75 Kw/1400 RPM
Dust Extractor	:	0.75 Kw/2800 RPM
Blade rising mechanism	:	0.37 Kw geared motor
Cross slide for saw setting	:	0.18 Kw geared motor
Total connected load	:	3.0 Kw