



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
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TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation :
Tender to be submitted in Two Parts	2711200003	20.03.2012	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

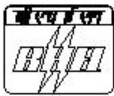
Item No.	Item Description	Quantity
10	Supply of Scrap Tube Conveyor for Cold Saw Machine at SSTP BHEL, Trichy as per the technical Specification, & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	01 No.

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

1. Delivery Period: 6 months from the date of Purchase Order is the project requirement. Delivery period earlier than 6 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 "2711200003"

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
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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 hot rolling Mill in Seamless Steel Plant in BHEL, Tiruchirappalli, for conveying Scrap tubes after cutting in Cold saw machine.
- 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)

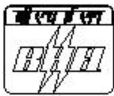
1.5.2 Part B: Price bid for all items with split of major components:

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 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]



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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 systems 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.	



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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 6-24 tubes forming a horizontal layer by circular saws of width 10mm. After cutting operation the end bits of length from 50 mm to 3 M are slipped down to the conveyor for scrap removal by tilting the main conveyor of the tube cutting line. A system is required to remove the cut bits from the machine and convey the tubes to a disposal yard adjacent to the work shop.	
3.1	Details of Product handled:	



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	1. Tube diameter	min. mm	31.8	
		max. mm	133	
	2. OD tolerance	+/-	- 0.1 to +0.4 mm.	
	3. Tube bending	max mm	2 mm/M, 15 mm max.	
	4. Tube temperature	≤ °C	70	
	5. Wall thickness	min. mm	3	
		max. mm	14	
	6. Layer width	min. mm	350	
		max. mm	800	
	7. No. of tubes per layer	Min.	4	
		Max.	24	
	8. Scrap length	min. mm	50	
		max. mm	3000	
	9. Production rate	3 min. per batches		
	10. Quantum of scrap	4000-5000 tube pieces / day in 3 shifts		
3.2	Design			
	A Preliminary conceptual design is shown in at the end of this document which shows the general arrangement of the conveyor as proposed and detailed below.			
	One conveyor segment shall be placed between and connecting the 2 saws below the tilting slide table for scrap disposal. Another segment shall be paced right angle to this one at the southern side such a way as to collect the scrap from the first one and deliver at an elevated level suitable for discharging on to bins.			
4	Scope of supply			
4.1	The scope of supply shall include design, procurement, manufacture and supply of the items and installation, commissioning and performance proving for a define period of time. The equipment may essentially consist of: Base structure, Conveying system made of chain, cleat or plate conveyor suitable for handling tube cut bits, necessary escape mechanism, actuators, motors, control system, switch gear, Electrical panel, Cabling etc. Power supply with 440V, 3 phase and Compressed air At 5kg/sq.cm pressure will be available from BHEL side. In the first conveyor segment the tubes will be collected with axis perpendicular to the travel direction and in the second segment the tubes will be collected with the tube axis in the direction of travel of the conveyor. Suitable interface mechanisms shall be provided at the collecting and discharge end. The installation of the conveyor shall be in the scope of the supplier.			
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			



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	minimum 2 year period shall be listed down in the offer.	
4.5	The integration of the conveying system with our existing sawing line must be carried out.	
4.6	Tube feed tilting table at collecting end and Bins at the discharge end of the conveyor are not in the suppliers scope.	
5. General requirements:		
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	



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7	<u>INSTALLATION, PERFORMANCE & ACCEPTANCE OF THE SYSTEM</u>	
7.1	The system 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 system shall be installed and commissioned by the manufacturer of the system.	
7.3	<p>The system performance shall be checked at BHEL after installation on a set of tubes of 3 different Diameters covering the entire range of tube sizes. Functioning of the system 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	Service shall be provided by the supplier during guarantee period and also later through AMC. The system supplied must be supported by way of spares, availability and service for a minimum period of 10 years.	
7.5	<p>Guarantee for the trouble free performance of the system 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> <p>Acceptance Test quality of operation life time performance and any other aspect agreed upon</p>	
8	<u>Training:</u>	
8.1	Supplier shall provide operational and first level system maintenance training for 4 persons at BHEL.	

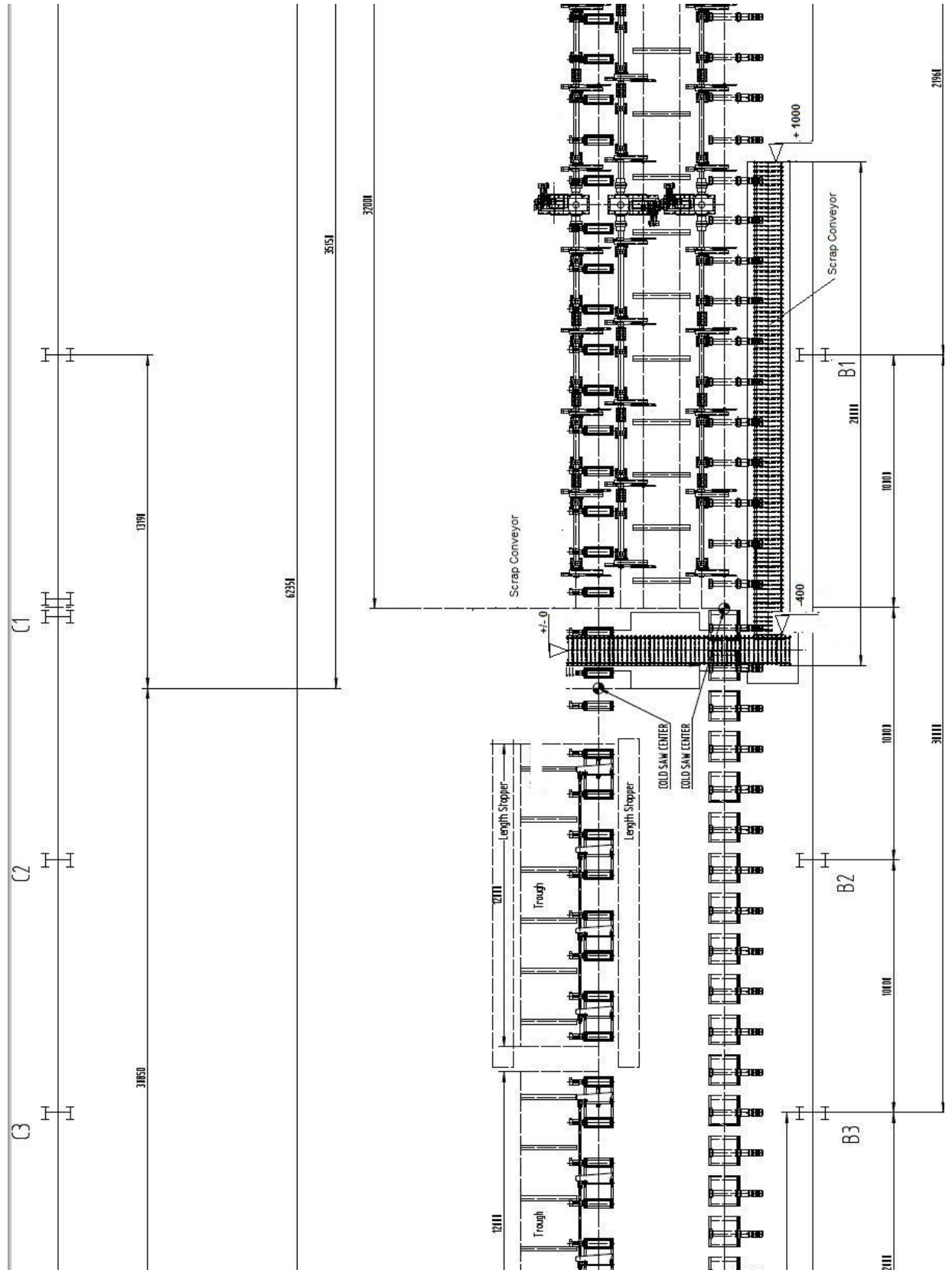
Prepared

Reviewed and approved

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Annexure 1

Scrap tube conveyor for Cold Saw machine

Scope:

Design, manufacture, supply, erection and commissioning as per general technical delivery condition Ref. No.: SSTEP: HMM: 002/00, Dt. 29.02.2012

QTY : 1 No.

Operation:

Scrap tube conveyor has to take away the end cuttings of the stretched tubes. Stretched tubes will have uneven wall thickness at the ends and has to be cut and removed to get the required length. The tubes will be cut in batch of 6 to 24 with scrap tube length of 50mm to 3000mm with a circular saw of 10mm thick blade. The system is required to remove the cut bits from the machine which slip down by tilting the roller conveyor and convey the tubes to a disposal yard adjacent to the work shop.

Technical data:

Tube diameter	: min 31.8mm to max 133mm.
Wall thickness	: min 3mm to max 14mm.
Tube bending	: 2mm/m, 15 mm max
Tube temperature	: 70 °C
Layer width	: 350 to 800mm
No. Of tubes/ layer	: 6 to 24
Scrap tube length	: 50mm to 3000mm
Production rate	: 3 min. per batch
Quantum of scrap	: 4000-5000 tube pieces / day in 3 shifts

Scope of Equipment:

Scrap tube conveyor for Cold Saw machine, consisting of

- Scrap tube conveyor
- Electric motor with speed reducer for conveyor
- Supporting structures
- Electrical panel and switches with Overload protection system