



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

### ENQUIRY

### NOTICE INVITING TENDER

Phone: +91 431 257 76 53

Fax : +91 431 252 00 31

Email : [skaruna@bheltry.co.in](mailto:skaruna@bheltry.co.in)

Web : [www.bhel.com](http://www.bhel.com)

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two parts.	2621300074	27.12.2013	04.02.2014

You are requested to quote the Enquiry number date and due date in all your correspondence. 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	Description	Quantity
10	<b>Panel Abrasive Cutting Machine</b> as per the technical specification & commercial conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	01 No.

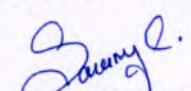
#### Important points to be taken care during submission of offer

1. The rate of EMD for this Tender will be (INR) – Nil.
2. The Compliance Form for Commercial Terms & Conditions to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
3. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer MM/CE/GENL/001) including bank guarantee formats and list of consortium banks, commercial terms check-list 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) under Enquiry reference "2621300074".

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

  
Engineer / MM / Capital Equipment

**C. SARANYA**  
Engineer  
Capital Equipment / MM  
BHEL, Tiruchirappalli - 620 014.

## Panel Abrasive Cutting Machine

### Part A – Qualifying Criteria / Information required

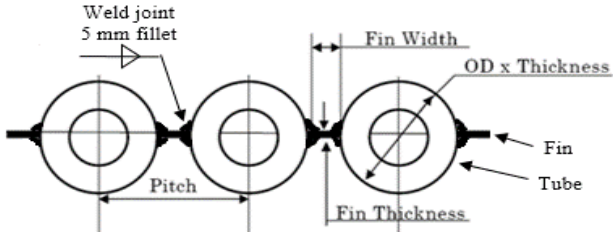
The BIDDER / VENDOR are requested to provide the following information:-

S No.	REQUIREMENTS	VENDOR'S RESPONSE
1.0	The BIDDER / VENDOR (OEM) shall indicate the no. of <b>Panel Abrasive Cutting Machine</b> supplied by them till the date of opening of this tender.	
2.0	The BIDDER / VENDOR to furnish reference list of Customers, with complete address, details of contact person, where <b>Panel Abrasive Cutting Machine</b> have been supplied in the past.	
3.0	Details on SERVICE-AFTER-SALES Set-up in India including the Address of Agents / Service Centres in India.	
4.0	Any additional data to supplement the manufacturing capability of the BIDDER for the subject equipment.	
5.0	One Performance certificate for satisfactory performance of the quoted model for one year, from any of the customers shall be submitted along with the offer.	

### Part B - Technical Specification

S No.	PARTICULARS	BHEL SPECIFICATION	VENDOR'S COMMENTS
1.0	<b>Application:</b>	For straight cutting along the width of tubular panels by abrasive wheel cutting action without the use of coolant to obtain square cut and smooth finished tube ends. The tubular panels are formed by weld joining of tubes and fins of various thicknesses longitudinally to form Boiler water wall panels.	
2.0	<b>Job Details:</b>		
2.1	Material to be cut	Alloy steel – T11/T22/T23.	
2.2	Tube OD range	38.1 to 63.5 mm	
2.3	Tube Thickness range	4.0 to 12 mm	
2.4	Fin width range	10 to 110 mm	
2.5	Fin Thickness range	5 to 12 mm	
2.6	Panel width range	Minimum panel width: 1000mm Maximum panel width: 24000mm (to be cut in stages)	
2.7	Squareness of cut	The cut surface shall be square to the tube axis.	

Technical specification of Panel Abrasive Cutting Machine

S No.	PARTICULARS	BHEL SPECIFICATION	VENDOR'S COMMENTS
2.8	The following figure shows a cross section of the job:		
3.0	<b>Machine Operation</b>	Machine should be pneumatically operated	
3.1	Inlet air supply pressure	60 – 70 psi Air consumption to be specified by vendor.	
3.2	Filter Regulator & Lubricator (FRL) unit	A suitable air regulator, filter and lubricator unit with metallic casing shall be provided.	
4.0	<b>Machine Configuration</b>	The machine shall be of compact and robust construction with high output air motor to deliver high cutting speed for a continuous duty to meet the job application.	
4.1	Air motor capacity	Between 4 to 5 hp at the specified inlet air supply pressure.	
4.2	Lubrication for air motor	Lubrication consumption rate of the air motor to be minimum. Vendor to provide details.	
4.3	Air consumption (CFM) at 70 psi	Vendor to specify	
4.4	Abrasive wheel diameter	Suitable to cut the job sizes as mentioned in Clause 3.0. Preferably 14" wheel. Vendor to specify.	
4.5	Wheel thickness	Vendor to specify	
4.6	Arbor hole size	1 inch. Vendor to specify standard hole size.	
4.7	Abrasive wheel RPM	Vendor to specify	
4.8	Life of abrasive wheel	In terms of the number of tubes of OD 38.1mm × Thickness 10mm that can be cut by abrasive wheel. Vendor to specify	
4.9	Make of Abrasive wheel	Vendor to specify the make of abrasive wheel and part number.	
4.10	Trigger type switch with lock	For start and stop of motor.	

Technical specification of Panel Abrasive Cutting Machine

S No.	PARTICULARS	BHEL SPECIFICATION	VENDOR'S COMMENTS
4.11	Pneumatic hose diameter	¾" Preferably	
4.12	Pneumatic Hose length	15 m length with quick fix couplings. Vendor to specify.	
4.13	Transport handle	For manually carrying the machine.	
4.14	Operating Handle	For manually lowering the rotating blade during cutting operation.	
4.15	Hinge support	The motor drive, handles and abrasive wheel assembly should be mounted on the arm. This arm should be spring loaded type mounted to the base on a hinged support.	
4.16	Support with guiding system	The panel cutting machine comprising of Motor mounted with abrasive wheel, handle and hinge assembly should be mounted on a support which guides the machine to traverse over the rails while being driven manually.	
4.17	Rigid Guide Rail track	<p>Rigid Guide Rails in segments. Material of the guide rails shall be specified.</p> <p>The length of each guide rail segment shall be specified by the Vendor. The required length of the rail track shall be formed by joining the guide rails segments for traversal of the abrasive cutting machine for straight cutting along the width of the panel.</p> <p>Rail segments for 10m long traversal will be required.</p> <p>Vendor to Confirm.</p>	
4.18	Job Clamping - Angle bar and coupling device	For tight contact between the rails and job (panels) via angle bars etc. for a rigid support during cutting operation. Clamping mechanism should be simple to enable quick clamping/unclamping. Vendor to specify	
4.19	Stoppers	To be provided at both the ends of the rails	
4.20	Weight	Vendor to specify the weight of the abrasive cutting machine without guide rails.	

Technical specification of Panel Abrasive Cutting Machine

S No.	PARTICULARS	BHEL SPECIFICATION	VENDOR'S COMMENTS
<b>5.0</b>	<b>Safety features</b>		
5.1	Protective Guard	To be provided over the abrasive wheel for safety of the operator during cutting operation. Material to be specified.	
5.2	Other Safety features	Vendor to specify	
6.0	Air couplings	Quick disconnect couplings (2 nos.) are to be provided with the machine for air hose connection.	
7.0	Spares	List of spares comprising of quantity of air motor bearings, seals, Switches, handle, fasteners etc. The offer shall contain list of recommended spares (both electrical and mechanical) for two years of trouble free operation. The price for spares shall be quoted item wise.	
8.0	List of accessories	Vendor to provide	
9.0	Pre Dispatch inspection	The machine shall be offered for inspection by BHEL Engineers at supplier's works for performance evaluation prior to despatch.	
10.0	Factory Inspection certificate	The total assembly of equipment ordered shall be tested and the test certificates shall be provided to BHEL prior to despatch.	
11.0	Performance Prove out	The performance prove out of the machine should be carried out by cutting panels to a width of 10m containing dia. 38.1mm or 41.3mm x Th. 8mm - alloy steel tubes, by the supplier's representative at BHEL, Trichy.	
12.0	Commissioning	Vendor to supervise the commissioning of the machine at BHEL, Trichy.	
13.0	Performance guarantee	Performance of the equipment shall be guaranteed for a minimum period of 12 months from the date of commissioning of the equipment at our works or 18 months from despatch.	

Technical specification of Panel Abrasive Cutting Machine

S No.	PARTICULARS	BHEL SPECIFICATION	VENDOR'S COMMENTS
14.0	Operation and Maintenance	2 nos. of Operation & Maintenance Manual or the Instruction Manual with Trouble Shooting Chart (in English Language) shall be given with the machine.	
<b>15.0</b>	<b>Scope of Supply</b>		
15.1	Abrasive Cutting machine	1 No	
15.2	Pneumatic Hose (15m) with quick disconnect couplings	1 Set	
15.3	FRL Unit	1 No	
15.4	Total length of Guide rails in segments	10 metres	
15.5	Angle bar, coupling devices, stoppers and any other accessories found suitable	1 Set	
15.6	Spares	1 Set	
15.7	Abrasive Wheel	10 Nos	
15.8	O&M Manuals with trouble shooting chart	2 Sets	
15.9	Commissioning and Prove-Out at BHEL works	For 1 set	
15.10	Guarantee	Performance of the equipment shall be guaranteed for a minimum period of 12 months from the date of commissioning of the equipment at our works or 18 months from despatch.	
16.0	The offer shall contain technical catalogue for the offered abrasive cut off machine and the blow up diagram with part identification.		
17.0	The offer shall contain item wise list.		
18.0	Offer which is not complete w.r.t. the above points are liable for rejection, without notice.		

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