



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 7421/4102/7833 Email : ykaruna@bhel.in : hemalatha@bhel.in : vijayak@bhel.in Website : 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	2741900015	26.04.2019	20.05.2019

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	Portable Pipe Cutting and Bevelling Machine with Outside Clamping as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com and https://eprocure.gov.in)	1 No.

Important points to be taken care during submission of offer

1. Delivery terms shall be FOR BHEL Stores, PPPU, Thirumayam-622507.
2. Compliance Form No: TRY/IND/08T to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
3. Delivery period required is 2 months from the date of Purchase Order.
4. Erection and commissioning shall be done at BHEL Thirumayam by the supplier.
5. Time period required for Erection and Commissioning shall be 2 weeks from the date of intimation by BHEL
6. EMD not applicable.
7. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above 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 compliance form and technical specification can be downloaded from BHEL web site <http://www.bhel.com> and <https://eprocure.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference "2741900015".

(This is not an E – Tender. Please submit your offer in hard copies)

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


S. PARTHASARATHY
MANAGER
CAPITAL EQUIPMENT / MM
BHEL, TRICHY-620014.

Technical Specification for
**Portable Pipe cutting & bevelling machines with outside
clamping**

Part – A

Technical specification

Description of the product

Portable cutting and bevelling machine for cutting and edge preparation of pipes.

S.No	BHEL Specification	Vendor's Offer
1.0	QUALIFYING CRITERIA	
1.1	The BIDDER / VENDOR (OEM) shall have at least FIVE Years of Experience in the Design, Manufacture & Supply of "Pipe cutting and bevelling machines".	
1.2	Only those vendors (OEMs), who have Manufactured, supplied and commissioned at least ONE Pipe cutting and bevelling machines similar to the machine specified under Part B, in the last Ten years [as on date of this tender opening(first date)] should quote.	
1.3	Vendor has to submit at least ONE Performance Certificate from their customer, for satisfactory performance of Pipe cutting and bevelling machines supplied to them and such equipment is working satisfactorily for a minimum period of one year [as on date of this tender opening (first date)]. For obtaining the Performance certificate, a suggestive format is provided at the end of part-A.	
1.4	BHEL reserves the right to verify the information provided by the Vendor. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected.	

2.0	INFORMATION TO BE PROVIDED BY VENDOR	
2.1	Vendor shall provide contact details (phone no & email id) including the address of his Agents / Service Centres in India.	
2.2	Details of Pipe cutting and bevelling machines supplied to BHEL units, if any. (Year of commissioning, Application, Type)	
2.3	Number of Pipe cutting and bevelling machines supplied and commissioned till date (to quote the equipment supplied during the last three years only)	
2.4	The BIDDER/VENDOR to furnish Reference List of Customers (max 10 customers) including Contact details (phone no & email id).	

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श्री. तमिलवानन / J. THAMILVANAN
 उप प्रबंधक / Deputy Manager
 उत्पादन, टूल इंजीनियरिंग एवं ड्रयूटीसी
 Production, Tool Engineering and WTC
 बीएचईएल - पीपीपीयू / BHEL - PPPU
 तिरुमयम / Thirumayam - 622 507

Suggestive Format of Performance Certificate:

The performance certificate should be produced **on Customer's Letter Head**.

PERFORMANCE CERTIFICATE

- 1 Supplier of the machine
- 2 Make & Model of the M/C
- 3 Month & Year of Commissioning
- 4 Application for which M/C is used
- 5 Weight of the machine
- 6 Performance of the Machine
(Strike off whichever is not applicable) Satisfactory / Not Satisfactory
- 7 After sales service
(Strike off whichever is not applicable) Satisfactory / Not Satisfactory
- 8 Any Other remarks

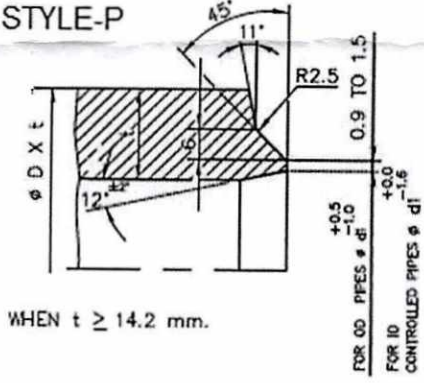
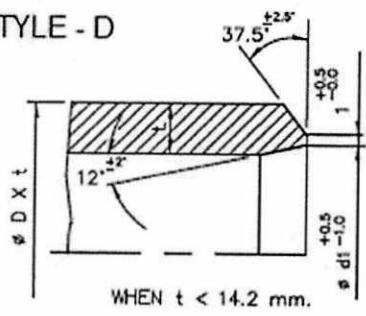
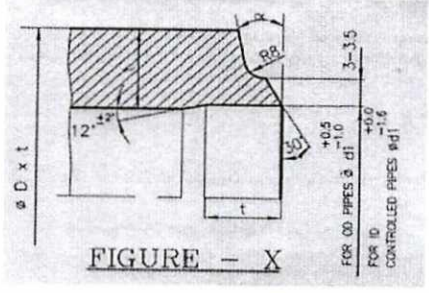
Performance certificate issued date:

Signature & Seal of the Authority
Issuing the Performance
Certificate

Contact details of issuing authority
Name & Designation:
Office No/ Mobile no:
Email ID:


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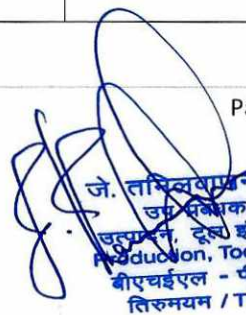
Technical Specification Part-B
Portable Pipe cutting & bevelling machine with outside clamping
OD 550 TO 800mm

Sl. No	BHEL Specification	Vendor Spec / comments
1.0	APPLICATION	
1.1	Electrically run hydraulic operated portable pipe cutting and bevelling machine, clamped to outside diameter of pipe. The machine should be capable of cutting and bevelling operations as per style- P, D & X as shown in the below sketch STYLE-P  WHEN $t \geq 14.2$ mm. STYLE - D  WHEN $t < 14.2$ mm. FIGURE - X 	

Technical Specification Part-B
Portable Pipe cutting & bevelling machine with outside clamping

OD 550 TO 800mm

Sl. No	BHEL Specification	Vendor Spec / comments
2.0	JOB DETAILS	
2.1	<u>Pipe outside diameter</u> Machine should be capable of performing cutting and bevelling operation on pipes with outside diameter from 550mm to 800mm. However the OD range shall be 160mm minimum in the indicated limits of 550mm to 800mm. Vendor to specify the actual range.	
2.2	<u>Pipe Thickness</u> Machine should be capable of performing cutting operation on pipe with thickness up to 80mm and bevelling operation on pipes with thickness up to 50mm. Vendor to specify the actual range.	
2.3	<u>Materials to be machined</u> Carbon steel, alloy steels SA335P22, SA335P91, SA335P92 & Stainless Steel.	
3.0	PIPE CUTTING & BEVELLING UNIT	
3.1	<u>Brand & Model</u> Vendor to specify. The unit shall be portable in nature and rigid/ rugged in construction. It shall be of split frame type with two segments. It shall be handled by a single operator and fixed on the outer-diameter of the pipe. Vendor also shall specify pipe clamping jaw details for various OD range of pipes and the type of clamping over the pipe OD. The machine shall be suitable for fitting at any point along the length of pipe for pipe slicing and edge preparation at ends.	
3.2	<u>Minimum straight length of pipe required for clamping</u> Vendor to specify	
3.3	<u>Material removal rate</u> Vendor to specify the actual range.	
3.4	<u>Minimum depth of cut and feed rate</u> <u>Depth of cut:</u> 3mm minimum. Vendor to specify the actual range. <u>Feed rate:</u> 0.3mm/revolution minimum. Vendor to specify the actual range.	
3.5	Vendor to specify coolant requirement for machining (Yes / No). Recommended Coolant details to be provided if needed.	
3.6	<u>Weight of machine</u> Vendor shall specify the weight of the total unit. If weight exceeds 20 kg, a provision shall be given for handling with a lifting device.	
3.7	<u>Speed of Spindle in RPM</u> The working range of spindle RPM should be 1 to 10. Provision should be given to vary the speed during operation. Vendor to specify actual values.	
3.8	<u>Feeding Mechanism</u> Automatic feeding mechanism is required for feed rate.	


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Sl. No	BHEL Specification	Vendor Spec / comments
4.0	CUTTING TOOL	
4.1	Vendor to confirm that whether the tool holders fitted with suitable cutting tools/ inserts will cover all the bevelling styles indicated in EP sketches.	
4.2	<u>Tool Material</u> Vendor to specify	
4.2	<u>Tool type</u> Insert tool type for both point and form tools. Vendor to specify and provide details.	
5.0	HYDRAULIC POWER PACK	
5.1	<u>Operation Mode</u> Through electrical power. The Input power supply will be 415 V with a voltage fluctuation of +/- 10%, 50HZ with a fluctuation of +/-2%, 3 Phase AC. Power supply will be provided by BHEL at a single point near the machine.	
5.2	<u>Electrical Power Rating</u> Bidder to specify.	
5.3	<u>Electrical Control Panel</u> The electrical control panel with display meters shall be provided and mounted on the oil tank at a suitable location.	
5.4	<u>Remote Control Unit</u> In addition to the provisions in the control Panel, the remote control unit shall have the machine operating provisions and with an extension cable length of minimum and site usage.	
5.5	<u>Emergency Stop</u> The Control Panel and remote pendant should have EMERGENCY STOP Buttons.	
5.6	<u>Hydraulic Oil Pressure</u> Bidder to specify the Operating pressure range.	
5.7	<u>Pressure Gauge</u> Pressure gauge/ meter shall be provided for indicating working oil pressure, with a suitable pressure range. Gauge isolator to be provided.	
5.8	<u>Hydraulic Oil Tank Capacity</u> Bidder to specify.	
5.9	<u>Hydraulic Oil Specifications</u> Bidder to specify the Internationally used selection chart. Preferably ISO VG-32/46/68	
5.10	<u>Type of Hydraulic Oil Pump</u> Bidder to specify the type.	
5.11	<u>Hydraulic Oil Flow Rate</u> Bidder to specify.	

Technical Specification Part-B
Portable Pipe cutting & bevelling machine with outside clamping
OD 550 TO 800mm

Sl. No	BHEL Specification	Vendor Spec / comments
5.12	<u>Hydraulic Oil Inter Cooler</u> Bidder to furnish technical details (to ensure that temperature of the Oil in the Hydraulic Power Tank does not exceed 60 Deg. C at any time for continuous operation)	
5.13	<u>Oil Cooling Mechanism</u> Air cooling only.	
5.14	<u>Oil Level Gauge & Oil Drain Valve</u> A transparent and visually seen oil level gauge and a contaminated oil drain valve shall be provided at right locations in the power-pack oil tank.	
5.15	<u>Inter-connecting Hydraulic Hose</u> The Hydraulic Hose interconnecting the Hydraulic Power-Pack and the Bevelling Head shall be flexible and of lengths 5 m and 10 m (two sets to suit shop requirement). Bidder to provide hose and end-couplings specifications and safety standards/codes adopted.	
5.16	<u>Transportability</u> - The hydraulic power-pack shall be movable by hand on the shop floor with a skid mounted frame provided with swivelling type rubber lined castor wheels and pushing handles. - For lifting by an over-head crane the Hydraulic Power-Pack shall be provided with lifting hooks. - For keeping output hydraulic hoses & remote control unit along with the power-pack when not in operation, there shall be wound hose holding hooks/lugs in the hydraulic tank framework.	
6.0	MACHINE SPARES (TO BE QUOTED SEPARATELY. ORDER MAY NOT BE PLACED ALONG WITH MAIN ORDER. PRICE QUOTED WILL NOT BE CONSIDERED FOR BID VALUE)	
6.1	Vendor to quote the list of spares with break-up of mechanical, hydraulic, electrical and electronic spares used in the machine in sufficient quantity as per recommendation for 2 years of trouble free operation on three shifts continuous running basis.	
6.2	Vendor to specify the complete list of spares for machine and accessories, with part no / specification / type / model, along with name & address of the spare supplier.	
6.3	A set of service Tools for Operation and Maintenance of the equipment shall be quoted by the vendor.	

Technical Specification Part-B
Portable Pipe cutting & bevelling machine with outside clamping
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Sl. No	BHEL Specification	Vendor Spec / comments
7.0	DOCUMENTATIONS	
7.1	The following documents in English language should be supplied along with the machine: Hard Copies - 3 Sets In CD form - 1 Set - GA Drawing of the complete machining system. - GA Drawing of Individual Mechanisms. - Operating manuals of Machine. - Maintenance manuals with all drawings of machine sub-assemblies with parts list. - Electrical circuit diagrams with bill of materials. - Hydraulic circuit diagrams with bill of materials. - Preventive Maintenance check list for Electrical and mechanical System. - Trouble shooting chart for Main and all sub systems. - Catalogues, O&M manuals for all bought out items used in the machine.	
8.0	PRE-DISPATCH INSPECTION	
8.1	The equipment shall be tested for its performance at supplier's work prior to dispatch of the equipment and test certificate shall be provided.	
9.0	COMMISSIONING	
9.1	Vendor to prove out on the job trials during commissioning of the machine at BHEL, Thirumayam for both the maximum and minimum size jobs as offered by BHEL for each style. The tools required during commissioning is in supplier scope. The vendor shall supply 5 sets of cutting and 5 sets of bevelling tools after commissioning.	
10.0	TRAINING	
10.1	Vendor to give training to BHEL's Staff on Machine Operation and Maintenance (Mechanical & Electrical) during commissioning of the Machine at BHEL Thirumayam.	
11.0	GUARANTEE	
11.1	Performance Guarantee to be given for 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier, for the total machine or any sub-systems, components forming part of the machine for rendering the prescribed performance / rating values.	