



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 7421/7775

Fax : +91 431 257 6826

Email : vkarna@bhel.in

: kumar.virendra@bhel.in

Web : www.bhel.com

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two parts	2622000021	18.09.2020	12.10.2020

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	Description	Qty.	Item to be Delivered at
10	Procurement Portable MPI 1500 Amps with demagnetization facility as per the technical specification, BHEL commercial terms & conditions applicable (to be downloaded from web site www.bhel.com and https://eprocure.gov.in/epublish/app)	06 Nos.	FOR, BHEL, Stores, High Pressure Boiler Plant, Tiruchirappalli - 620014

Important points to be taken care during submission of offer

1. Material shall be delivered to (By indigenous vendors): As stated above.
2. Delivery required 2 months from the date of purchase order.
3. Erection & Commissioning period required 2 weeks from the date of intimation by BHEL to vendor for deputation of their Engineers for E&C.
4. EMD for this Tender will be (INR): 40,000.00.
5. Compliance Forms No. ATP /IND/03A to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
6. 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 (Refer MM / CE / GENL /001 – EMD) 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 Central Public Procurement Portal website <https://eprocure.gov.in> under Enquiry above enquiry reference.

Note:

- 1) this is not an E-tender, hence Vendors are requested to ensure that the offer is reaching physically at our office before 14:00 Hrs. on the date of tender opening.
- 2) This tender is an Indigenous open Tender as per Department of Promotion of Industry and Internal Trade, Govt. of India Latest Order No. P-45021/2017-pp(BE-II) dated 04.06.2020.

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

V. KARUNAKARAN
Dy. General Manager
Capital Equipment / MM
BHEL / Tiruchirappalli - 620 014

BHARAT HEAVY ELECTRICALS LIMITED

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TIRUCHIRAPPALLI-620014

PORTABLE MPI EQUIPMENT (1500 AMPS) WITH DEMAGNETIZATION FACILITY

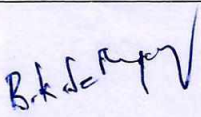
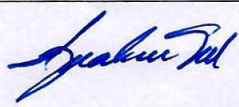
Qty. 6 nos.

Part A

SECTION – 1: Qualifying Criteria

The BIDDER / VENDOR has to compulsorily meet the following requirements to get qualified for technical evaluation: -

S. No.	BHEL REQUIREMENTS	BIDDER'S RESPONSE
1.1	The BIDDER / OEM shall have a minimum of last FIVE Years of Continuous Experience in the Design, Manufacture and supply of Portable MPI Equipment. Vendor to indicate the actual no. of years of experience in this field.	
1.2	Only those BIDDER / OEM, who have manufactured, supplied and commissioned at least 2 Nos. of Portable MPI Equipment 1500 Amps or above rating in the last 5 years as on the first date of tender opening.	
1.3	Bidder has to submit at least 1 Performance Certificate from any of their customers, for satisfactory performance of Portable MPI Equipment 1500 Amps or above rating meeting the following conditions: (a) The Equipment must have been supplied within the last 5 years as on the first date of tender opening. (b) The Equipment must have performed satisfactorily for at least 1 year during this period. For obtaining the Performance certificate, a suggestive format is provided at in Annexure 1.	
1.4	BHEL reserves the right to verify the information provided by the Bidder. In case the information provided is found to be false/ incorrect, the offer is liable for rejection.	

Prepared By	Reviewed By	Reviewed By	Approved By	Approved By
 Glisten Abraham, Sr Engineer/NDTL	 S Siyamala SDGM/M&S	 B K Sethupathy Manager/ NDTL	 K Palanivel AGM/M&S	 R Anil Prabhu DGM/NDTL

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TIRUCHIRAPPALLI-620014

SECTION – 2

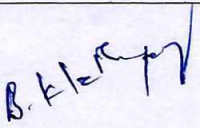
Bidder to provide the following details:

S. No.	BHEL REQUIREMENTS	Bidder's Response
2.1	Year of launch of the model quoted against this enquiry	
2.2	Number of Portable MPI Equipment supplied and commissioned till date in the quoted model	
2.3	The Bidder/vendor to furnish reference list of customers including Contact details (phone no & email id)	
2.4	Details of Portable MPI Equipment supplied to other BHEL units (if any)	
2.5	Bidder shall provide contact details(phone no & email id) including the address of his Agents / Service Centre's in India	

SECTION – 3:

Bidder to note the following:

S. No.	BHEL REQUIREMENTS	Bidder's Response
3.1	The BIDDER shall submit the offer in Two Parts – 1. Technical [with PART A & PART B] & 2. Commercial and Price Bid.	
3.2	The Bidder's offer against each clause in PART A & B of the offer should be filled by the BIDDER compulsorily with complete details.	
3.3	The BIDDER shall assure a continuous support for Spares and Service for Ten Years, from the date of commissioning of the equipment at BHEL Works.	
3.4	The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation.	
3.5	The Technical Offer shall be supported by Product Catalogue and Data Sheets in original and complete technical details / literature on the quoted model of equipment.	

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Annexure 1

Suggestive Format of Performance Certificate:

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

PERFORMANCE CERTIFICATE

- 1 Make & Model of the equipment :
- 2 Month & Year of Commissioning :
- 3 Equipment description :
- 4 Max. Current rating :
- 5 Application for which the equipment is used:
- 6 Performance of the equipment : Satisfactory / Not Satisfactory
(Strike off whichever is not applicable)
- 7 Service support after sales : Satisfactory / Not Satisfactory
(Strike off whichever is not applicable)
- 8 Any Other remarks :
- 9 This performance certificate was issued on : (DD/MM/YYYY)

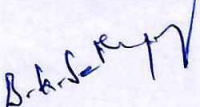
Signature & Seal of the Authority
Issuing the Performance Certificate

Contact details of issuing authority

Name & Designation:

Office No/ Mobile no:

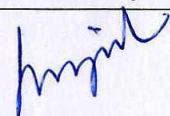
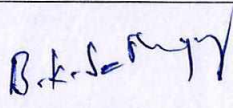
Email ID:

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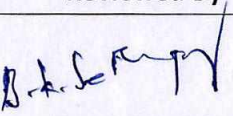
PORTABLE MPI EQUIPMENT (1500 AMPS) WITH DEMAGNETIZATION FACILITY, Qty. 6 nos.

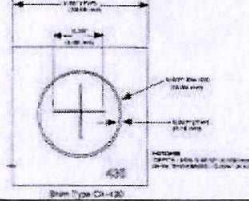
PART B - Technical Specification

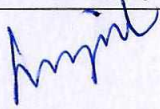
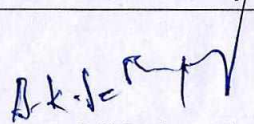
S. No.	BHEL SPECIFICATIONS		Bidder's OFFER [With Complete Technical Details]
1	Application	For Magnetic Particle Inspection of butt, nozzle, fillet welds using prods and also to be used for demagnetization requirements.	
2	Prod spacing	Maximum prod spacing used for examination will be 200 mm (8")	
3	HWDC output	Bidder to specify maximum output for 50% duty cycle ^{at} and 2 x 10 meter cable ^{and} _{end.} _{C.E}	
4	Max. ON & OFF time	Adjustable to at least 0-60 s (Timer Control). Bidder to specify	
5	Cable size	Bidder to specify and give details	
6	Current control	Step less, Solid state SCR control using Thyristors	
7	Ammeters	AC and HWDC Ammeters. Bidder to confirm	
8	Trigger control at prod side	24 V or less. Bidder to confirm	
9	Weight of equipment	Shall be of Light weight preferably around 50 kg. Bidder to specify	
10	Facility for Demagnetization	Suitable Control to be provided for using the equipment for demagnetization. Bidder to confirm and give details	

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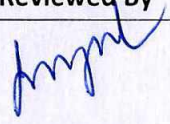
S. No.	BHEL SPECIFICATIONS	Bidder's OFFER [With Complete Technical Details]
11	Suitable portable Transport trolley to accommodate the unit with cables. The trolley should have four wheels of revolving type and rubberized wheels of min 200 mm dia. (Sketch of trolley to be enclosed). Suitable hooking arrangement to be provided for lifting the complete unit with trolley. Vendor to provide details	
12	Specification for Light meter UV-light meter specifications (To measure accurately ultraviolet light emission from UV-A lamps) <i>Complying to</i> for ASTM E2297- Standard Guide for Use of UV-A and Visible Light Sources and Meters used in the Liquid Penetrant and Magnetic Particle Methods • 320-400 nm range • +/-5% accuracy. • Range selection options: 0 to 2000 $\mu\text{W}/\text{cm}^2$ • Adjustable digital readout ranges x1, x10, x100 and x1,000 • UV-365 sensor (320–400 nm) • Back-lit 4-digital LCD display • <u>The Calibration certificates of the Equipment shall traceable to national or international standards.</u> • <u>AMC Details & details of calibration centers/OEM Authorized calibration facilities available in India for calibrating the light meter periodically (6 months' span) shall be submitted along with the Bid</u> Visible light meter Specifications (To measure accurately visible white light emission)- • Photo diode sensor	

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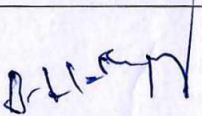
S. No.	BHEL SPECIFICATIONS		Bidder's OFFER [With Complete Technical Details]
	<i>Complying to</i> 400-760 nm range for ASTM E2297- Standard Guide for Use of UV-A and Visible Light Sources and Meters used in the Liquid Penetrant and Magnetic Particle Methods +/-5% accuracy. - Range selection 0 to 2,000 ft-candles / 0 to 20,000 lux - Adjustable digital readout ranges: 20, 200 & 2,000 ft.-candles or 200, 2,000 & 20,000 lux - Back-lit 4-digital LCD display - The Calibration certificates of the Equipment shall traceable to national or international standards. AMC Details & details of calibration centers/OEM Authorized calibration facilities available in India for calibrating the light meter periodically (6 months' span) shall be submitted along with the Bid		
13	MPI shims- CX430, manufactured to the requirements of AS 5371. Shims shall be low carbon steel, AMS 5062 or equivalent.	 Technical drawing of MPI shim CX430. The drawing shows a circular shim with a central cross. Dimensions include: outer diameter 1.000 (25.40 mm), inner diameter 0.500 (12.70 mm), and thickness 0.005 (0.127 mm). Material specification is AMS 5062. The drawing is labeled 'Shim Type CX-430'.	
14.0	Supplier to specify the following for their model		
14.1	Make and Model	Bidder to specify	
14.2	Class of insulation	H class only. Bidder to confirm	
14.3	Tapping for Inspection Lamp	24 V Tapping Point to be provided. Bidder to confirm	

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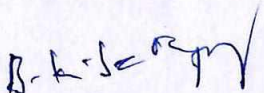
S. No.	BHEL SPECIFICATIONS		Bidder's OFFER [With Complete Technical Details]
14.4	Automatic over load protection	Bidder to specify	
14.5	Forced air Cooling	Suitable Fan shall be provided to have an effective Air Cooling means. Bidder to specify	
14.6	Over heat protection	Bidder to specify	
14.7	Lamp indication	Bidder to specify	
14.8	Dimensions of equipment	Bidder to specify	
14.9	kVA rating	Bidder to specify	
15	External Hardware: Unit ON/ OFF switch :	Current control, Timer control switch, Trigger switch on prods, Remote cable connector on unit side. Prod assembly connectors on unit side, connectors on prod side, cable lugs which are frequently handled and used shall be sturdy and supplier shall assure that these parts are not flimsy. These should be reliable and suitable for trouble free operation in shop floor conditions.	
16	Internal Hardware	All electrical /electronic components shall be of high quality and should be reliable, trouble free for shop floor conditions.	
17	Input power supply	230 V $\pm$ 10%, 50 Hz $\pm$ 3%, 1Ph AC power supply (Phase, Neutral & GND)	

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S. No.	BHEL SPECIFICATIONS		Bidder's OFFER [With Complete Technical Details]
18.10.4	trigger switch	12 Nos.	
18.10.5	Ammeter AC	12 Nos.	
18.10.6	Ammeter DC	12 Nos.	
18.10.7	Current control PCB	03 Nos.	
18.10.8	Diodes	06 Nos.	
18.10.09	Thyristor	06 Nos.	
18.10.10	Shunt for DC Ammeter	06 Nos.	
18.10.11	ASTM Centrifuge tube 100ml with stand (For Fluorescent Path)	06 Nos.	
18.10.12	MPI shims- CX430	06 Nos.	
19	Accessories	Any Optional / Compulsory Accessories shall be quoted separately with unit price	
20	Documentation (in ENGLISH Language)		
20.1	Operation, Maintenance & Service Manuals containing Electric Schematics, Circuit Diagrams, Drawings, Trouble Shooting Charts, Mechanical Sub-Assemblies, Rating of Bought-Out Items, etc. shall be supplied, at the time of inspection by BHEL Engineers. Calibration certificate of Light meter, UV & visible sensor Hard copy of the above – 3 sets Soft copies in CD – 2 nos.		
20.2	Test report of transformer for internal circuit check and short circuit check		
20.3	Dimensional report for Magnetic particle field indicator as per ASTM E 1444		

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S. No.	BHEL SPECIFICATIONS		Bidder's OFFER [With Complete Technical Details]
21	Safety and Quality Standards	Supplier to ensure that Safety and Quality of system and accessories (consisting of the items mentioned in the scope of supply) shall conform to International Standards. Conformance certificate to be provided along with the equipment.	
22	Installation and commissioning	The system and accessories (consisting of the items mentioned) is to be installed & commissioned at BHEL Works, by the Service Engineer of the SUPPLIER.	
23	Performance Prove out	Vendor to perform the job trails and to prove out the performance of the equipment at BHEL works	
24	Training on Operation & Maintenance	Complete Training for BHEL Engineers is to be given on Operation, NDTL & Maintenance of the OFFERED equipment at BHEL, after the successful commissioning of the Equipment & Accessories.	
25	Guarantee	The equipment shall be guaranteed for its performance for 12 months from the date of commissioning at BHEL Works or 18 months from dispatch whichever is earlier.	
26	Annual Maintenance Contract – AMC(Optional)	The BIDDER has to QUOTE for AMC for 3 years with a detailed scope of work from the date of completion of the guarantee period.(AMC to be quoted separately)	

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